WILLIAM J HUGHES TECHNICAL CENTER




INTERCOM

February-March 2005 Volume 8, Issue 1

RVSM Goes Live!

Tech Center Instrumental In Accomplishing System Change

By Dr. Anne Harlan

FAA air traffic controllers began applying the Reduced Vertical Separation Minima (RVSM) throughout the National Airspace System at 4:01 a.m. EST on Thursday, January 20, 2005. RVSM is the use of a 1,000-foot vertical separation standard from flight levels 290 (29,000 feet) through 410 (41,000 feet), and replaced the previous 2000-foot standard in use since 1958.

In fact, RVSM was introduced simultaneously in all airspace throughout the North American, Caribbean and South American International Civil Aviation Organization (ICAO) regions, marking the most significant cooperative airspace change in the history of the Americas. The intent of RVSM is to allow aircraft to safely fly more optimal profiles, gain fuel savings and increase enroute airspace capacity.

This transition was accomplished smoothly because of the hard work of many people representing a wide range of FAA organizations. Here at the Technical Center, many folks worked exceedingly hard to ensure this change was well planned and executed.

The System Analysis Division's **Human-in-the-Loop Simulation and Analysis Group** conducted several real-time simulations of RVSM to aid in making strategic decisions about the RVSM concept of operation. Further simulations were used by air traffic controllers (ATC) to "train the trainers" as a way of beginning the massive controller-training work necessary for the implementation.

The Systems Analysis Division's **Separation Standards Group** helped to develop several international standards associated

Brian Colamosca is the manager of the Separation Standards Group

with RVSM and to support the introduction of RVSM in the Caribbean and South America; and also established the North American

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A Brief History: Separation Standards Program at theTechnical Center

By Brian Colamosca

Separation standards govern the minimum permissible spacing between the flight-planned routings of a pair of aircraft. Thanks to the efforts of Tech Center Employees past and present, including **Brian Colamosca**, **Allen Busch**, and **John Vanderveer**, the Center has been at the forefront of developments in separation standards for more than 30 years.

Airspace planners space pairs of parallel routes in light of the pertinent lateral separation standard. The applicable vertical separation standard determines the usable altitudes on a given route, and the longitudinal separation standard specifies the minimum distance that air traffic controllers may use when clearing consecutive aircraft onto a route at a given altitude. Controllers sequence the flight-planned positions of two co-altitude aircraft on intersecting routes in accordance with rules developed in light of the applicable lateral and longitudinal separation standard values. As long as the planned positions of a pair of aircraft are at least one separation standard apart in any dimension, the aircraft are separated safely. Separation standard values greatly influence operation of the air traffic control system. If a separation value is too small, the system might not be safe; if the value is too large, the system may be inefficient.

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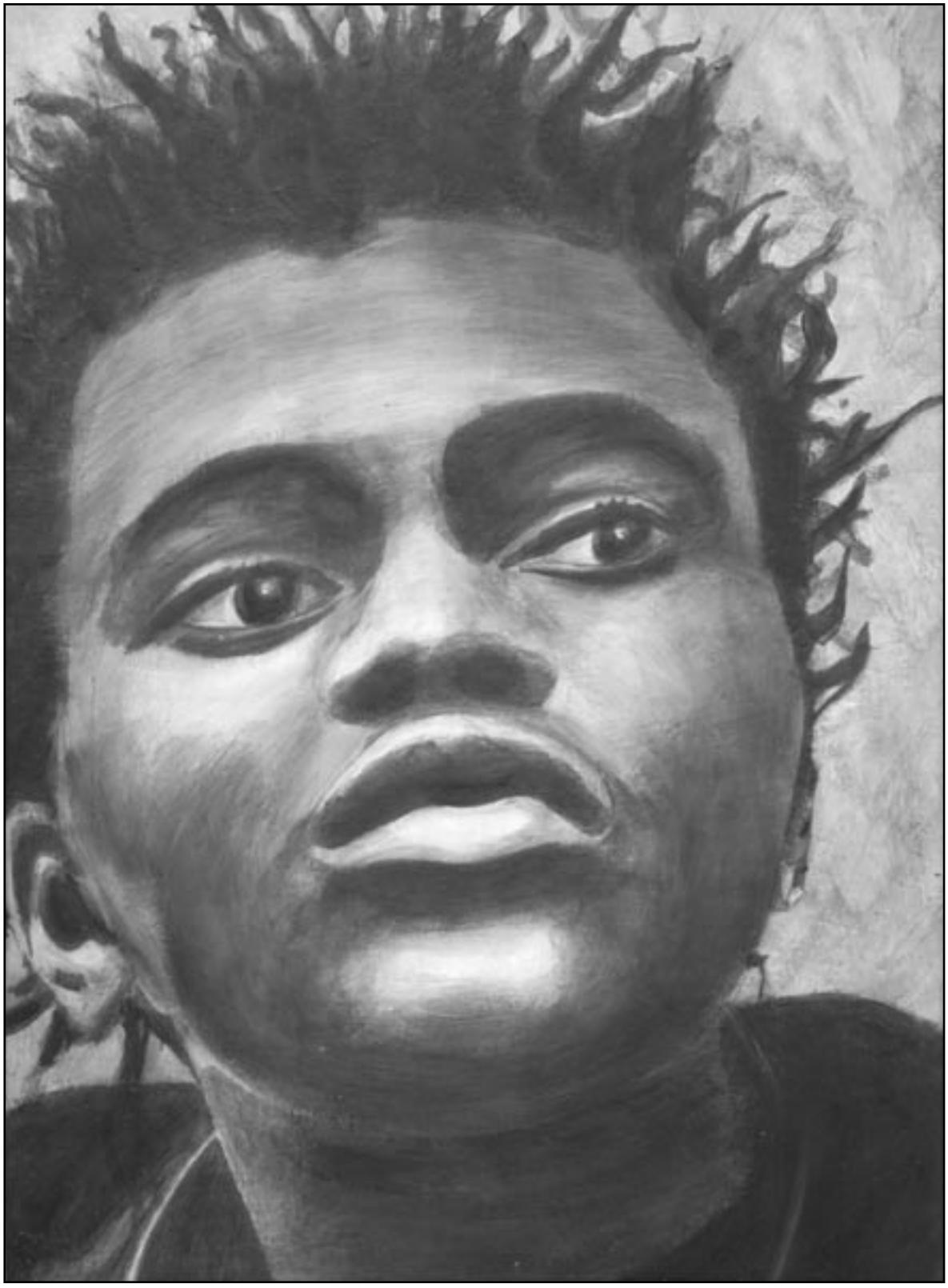

Laurie Zaleski, ArtZ Graphics, painted this portrait of jazz singer Tracy Chapman in 1992.

The Intercom Salutes Black History Month and Women's History Month

Black History Museum of Southern NJ Opens

***New Museum**: Museum Director Ralph Hunter (left) and retired Center employee, Ellis Peopples, show one of the art works on display at the new African American Heritage Museum of Southern NJ. The museum is at the Dr. Martin Luther King, Jr. Community Center, 661 Jackson Road, Newtonville, Buena Vista Twp. It contains more than 3,000 items related to the African-American experience during the 20th century. Highlights include turn-of-the-century appliances, advertising materials, artworks, and dental equipment used by Ida Gray Nelson Rollins, the first black woman to receive a doctorate degree in dentistry.*

RVSM Goes Live!

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***All Smiles**: The Separation Standards Group posed for a photo on January 20, the day the FAA applied RVSM throughout the NAS*

Approvals Registry and Monitoring Organization, the safety-support activity required for the North American implementation. The work of this team included production of RVSM operator-readiness and safety assessments for U.S., Canadian and Mexican airspace; building a complex database of RVSM approvals issued by FAA Flight Standards and all other countries' regulatory organizations; and monitoring of the height-keeping performance of thousands of U.S.-registered aircraft, as well those from other countries in the Americas.

The Laboratory Division's R&D Lab Group helped with the height-monitoring work, developing and fielding a ground-based system that provides independent measurements of aircraft height used in assessing the performance of aircraft altimetry systems that have been approved for RVSM operations. The Verification Service Division's Weather Group also was instrumental in the fielding of this system.

Many other Center staff supported the RVSM work directly and indirectly by providing their expertise in major system procurement, telecommunication services and Internet telecommunication design.

This is a major FAA milestone, affecting virtually everyone in the U.S. who is served by air transportation. The Technical Center as a whole can take pride in having made a major contribution, sustained over many years, in accomplishing this system change.

Tech Center to host April Human Factors Conference

By Stan Ciurczak

The South Jersey Human Factors and Ergonomics Society is presenting **Dr. Raja Parasuraman**, of George Mason University, as the keynote speaker at the *Human Factors In Complex Sociotechnical Systems Mini-Conference*, at the Technical Center, on April 28-29. This is a unique opportunity for human factors professionals who work with complex systems to share their research ideas. Research papers, posters, panel discussions and technical tours of FAA facilities and labs are all part of this first-time conference, which organizers hope will become a regular event.

Dr. Parasuraman won the National Academy of Science award for Behavioral Sciences in 1984. His research interests include neuroergonomics (the merging of ergonomics and cognitive neuroscience), which can be used, for example, to develop new insights into the computational and neural basis of spatial navigation. This in turn can be used to develop improved virtual reality systems. Among the books he has written are *Automation and Human Performance* (Erlbaum, 1996) and *The Attentive Brain* (MIT Press, 1998).

So what is a complex sociotechnical system? It is a system that involves tools, individuals and groups. The tools often (but not always) are computer-based; the individuals have varying levels of knowledge and ability; and the groups have different organizational structures, practices and goals. As you might imagine, errors within a complex sociotechnical system typically have serious consequences.

The registration deadline is March 18. For more information, contact **Ken Allendoerfer**, president, South Jersey Human Factors Chapter, at extension 5-4864, or check for updates online at www.sjhfes.org/.

Employee Profile: Gerry Campbell, the Tech Center's most famous Eagles Fan

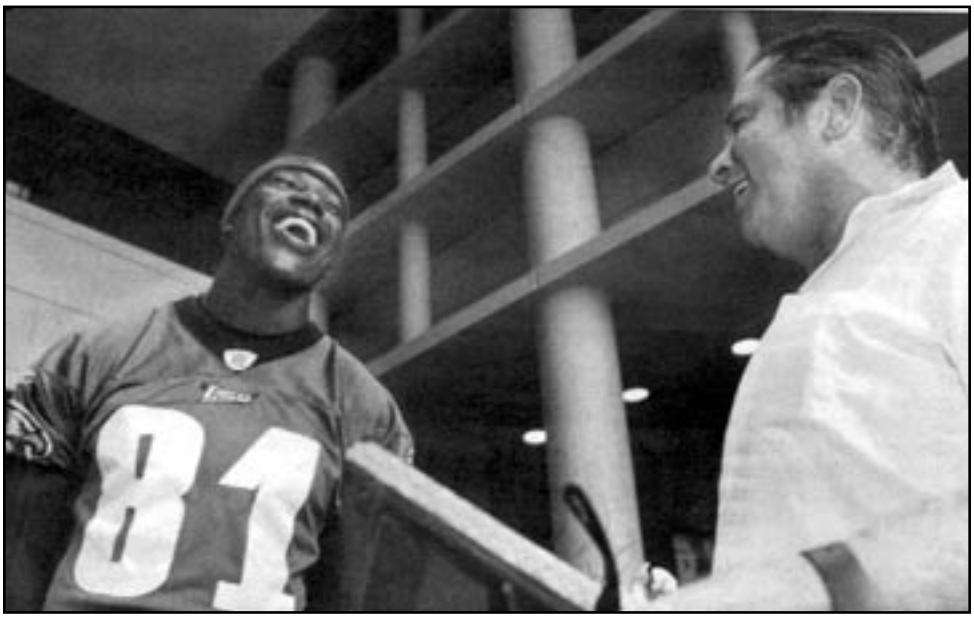
By Pete Castellano

This month's employee profile is about a truly interesting guy, **Gerry Campbell**. Gerry has worked for the Tech Center for 14 years. He is a materiel expeditor in the Transportation and Mail Services Group at the Tech Center, which is responsible for the transportation of items in support of FAA programs.

Gerry is a Philadelphia native and a life-long Eagles fan. While we all dream of meeting our heroes or idols, Gerry has gone one step above. He has made a true friend of Eagles star receiver Terrell Owens. As all true fans know, part of being an Eagles fan includes, shall we say, "disliking" the Dallas Cowboys. And that's where our story begins.

During the 2000 season, while Owens was playing for the San Francisco 49ers, he caught a touchdown pass while the team was thoroughly clobbering the Dallas Cowboys 41-24 in Dallas. After the catch, Owens celebrated by running back to midfield and "spiking" the ball right on the large Cowboys star. While many, including many Eagles fans, thought this was all in good fun, the 49ers saw things differently and suspended Owens for one game, and fined him $24,294.00.

Watching the game, Gerry Campbell felt that the Cowboys had always conducted such displays of machismo, and that they deserved a "taste of their own medicine." Learning of the fine, Gerry sent Owens a check for $5 to help defray the cost. The memo on the check read, "for spiking the star."



E-a-g-l-e-s: Gerry Campbell shares a laugh with his friend Terrell Owens.

The following spring, and much to his surprise, Gerry received a package from Owens containing the check - un-cashed, a letter of thanks, an autographed picture and a trading card. Gerry has since framed all these things together to create a very special collector's item. But it gets even better. Gerry was able to meet Owens at an event in August 2004. The two hit it off instantly, and made a really honest connection. Owens remains truly appreciative of that check as a gesture of support.

Owens suffered a potentially season-ending leg injury on December 19, where else, playing the Dallas Cowboys. Gerry sent him a get-well mug of flowers with a note saying, "I'd send you my leg if I could – but I'm only 5'6" and you'd limp around like crazy!"

Assistant Editor Note: GO EAGLES!!!

Larry Levy Gets 30-Year Award

Congratulations: Larry Levy of the Innovations & Solutions Acquisition Group recently received a 30-year Service Award from Shelley Yak, Acting Managing Director of the Office of Operations, Technology and Acquisition.

Separation Standards Program at theTechnical Center

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In 1973, added military traffic due to the Vietnam War, coupled with increased civil traffic, had stressed the existing set of four parallel routes to the point where delays and inefficient routings were commonplace. Composite separation held out the prospect of placing six routes in the same volume of airspace used by the existing four-route structure. It consisted of the simultaneous application of lateral and vertical separation standards between pairs of parallel routes. Two aircraft on adjacent routes would, at a minimum, have planned separation of both one-half the existing lateral and the existing vertical separation standards.

The six-route Central East Pacific composite system was developed in mid-1976, and **John Vanderveer** received a Presidential citation for having developed one of the best innovations in Government that year. That same year, the North Atlantic Minimum Navigational Performance Specification was established. This specification permitted reduction of the existing 100-nautical-mile lateral separation applied in North Atlantic airspace to 60 miles, the value that is used to this day.

In 1977, the Center began to work on the Reduced Vertical Separation Minimum (RVSM). The RVSM was intended to replace the 1958-vintage 2000-foot vertical separation standard applicable between pairs of aircraft operating between 29,000 and 41,000 feet, inclusive, with a 1000-foot value. The latter standard is used below 29,000 feet. Within six months, the Center had begun data collection on the West Coast and in Hawaii, and within 18 months, the Center had preliminary findings showing that applying the proposed composite separation technique would satisfy international safety criteria.

In the early 1980s, the Center developed an analysis showing that the 15-minute longitudinal separation standard used in the North Atlantic could be reduced safely to 10 minutes. The Center also conducted a safety assessment that led to the replacement of an overtaxed four-route system between Anchorage and Tokyo with a six-route composite structure.

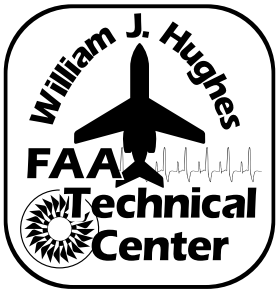
Starting in the mid-1980s, the Center conducted a three-year data collection study in order to understand aircraft height-keeping performance. By 1988, the International Civil Aviation Authority (ICAO) concluded that the RVSM was technically feasible, which meant that aircraft could perform well enough so that the 1000-foot standard would be safe at high altitude. By 1991, ICAO published guidance material for the global and regional implementation of the RVSM, adopting system performance specification and aircraft height-keeping performance requirements that were developed by the Center and proposed by the FAA.

The North Atlantic was the first portion of worldwide airspace chosen for RVSM introduction. By 1994, the FAA had finished leading an international effort to develop U.S. regulatory material to govern the approval of operators and aircraft for operations in any volume of airspace where the RVSM would be applied. By 1996, aircraft manufacturers had begun to produce service bulletins telling their customers how to comply with aircraft requirements. In parallel, the United Kingdom's National Air Traffic Services and the FAA were making the necessary preparations for North Atlantic RVSM. The Center's contribution was the development of a GPS-based Monitoring System that collects satellite-based estimates of aircraft position without the need to install permanent GPS receivers on an aircraft.

The RVSM was introduced into North Atlantic airspace on March 27, 1997. In 1998, the FAA sponsored a reinvigorated Separation Standards Program. The Center became the lead research and acquisition organization for the program. In April 1998, the lateral separation standard in the North Pacific was changed from 100 to 50 nautical miles. In February 2000, the RVSM was introduced into all international airspace over the Pacific, and in October 2002, over the South China Sea.

The Center's major near-term goal in the separation standards arena is supporting introduction of the RVSM into the National Airspace System (NAS), beginning January 20, as part of a simultaneous implementation of the RVSM in North America. The Center is the regional monitoring agency for this larger effort, and will help introduce the RVSM into all of the airspace in the Caribbean and South America at the same time as the planned change in North American airspace.

Beyond this work, there are plans for more changes in oceanic separation standards based on new technology. Even after more than 30 years, it seems as if the need for the contributions of the Separation Standards Program has not been exhausted.



Axiem Award

***Team Honored**: Dr. Anne Harlan recently presented the Axiem Award to a joint NEXCOM – Advanced Imaging Division team that produced a new NEXCOM video. The team members are (left to right): Back Row: Tim Henry, John Tepper, John Petro, Robert Marks, Dr. Anne Harlan and Dale Dingler; Front Row: Phil Randazzo, Steve Taht, Pete Muraca and Andy Colon.*

Keegan Named ATO VP for Operations Planning

By Stan Ciurczak

Charlie Keegan, currently director of the FAA's Joint Planning and Development Office, has been named the Vice President for Operations Planning in the FAA Air Traffic Organization (ATO-P). The JPDO will remain a separate entity, which reports to the FAA Administrator, and Keegan will wear two hats. He now is responsible for both short and near-term planning for the ATO as well as longer-term planning for the JPDO.

The JPDO is an interagency organization that is developing a long-term plan for the Next Generation Air Transport System. Earlier this month, the U.S. Chamber of Commerce announced its support for the Next Generation Air Transportation System Integrated Plan.

Keegan was vice president for En Route and Oceanic Operations in the ATO before becoming JPDO Director. Prior to the formation of the ATO, he was the FAA Associate Administrator for Research and Acquisition, the agency's top research and development post.

FAA Researchers Earn Patent

By Dr. Terry Kraus

Fire safety researchers **Dave Blake** and **Rich Lyon** recently received a U.S. patent for an invention that will help increase aircraft safety. To ensure the effectiveness of aircraft cargo detectors to detect both smoldering (early stage) and flaming (late stage) fires, they designed a test that can simulate either type of fire.

They also developed a reference combustion test sample that generates, as closely as possible, the same mixture of products of combustion as would be found in a fire in an aircraft cargo hold. This combustion sample will facilitate the development of new detectors with multiple sensors that can discriminate between real fires and nuisance alarm sources, such as dust and moisture. United States Patent No. 6,812,834 was awarded on November 2, 2004 for a reference sample for generating smoky atmosphere.

Fires in aircraft cargo holds are difficult to detect before they reach the stage where they endanger the safety of the aircraft. Sometimes cargo fires begin slowly in the bottom of the hold, generating gases with little or no flames, heat, or visible smoke for a considerable length of time. A reliable detector for this early stage of fire development would provide additional time for a safe landing. False alarms in cargo compartments are a nuisance and a persistent problem, with approximately 200 false alarms for every real fire detected.

Dr. Richard Lyon holds two other patents for his fire safety work.

ACY Takes Off into the New Millennium

By Pete Castellano

ACY: This is one of Spirit Airline's new Airbus 321s. Spirit's fleet consists of McDonnell Douglas MD-80s and Airbus A321 aircraft, and the company is working towards a fleet transition to all Airbus aircraft. It has placed an order for 35 Airbus aircraft with options for an additional 50. Spirit introduced its first Airbus A321 aircraft in October 2004.

This is the first in a series of stories about tenant organizations at the Tech Center.

Atlantic City Airport originally was located at Bader Field in Atlantic City, but two things happened, in the late 1970s, that triggered the need for a larger facility. Casino gaming was established in Atlantic City and the airline industry was deregulated.

Atlantic City owned and operated a small municipal terminal at the airport (ACY) in Egg Harbor Township beginning in the 1930s. This airport became part of the Naval Air Station Atlantic City during World War II, the National Aviation Facilities Experimental Center in 1958, the FAA Technical Center in 1980 and the South Jersey Transportation Authority (SJTA) in 1991. SJTA was created to manage both the airport and the Atlantic City Expressway. When the airport became part of the Tech Center it was renamed the Atlantic City International Airport. By 1996, the old terminal at the airport was expanded and a second level was added.

As long as the Federal government owned and operated the airport, there were strict limits on commercial activity. In 1998, the FAA turned over operations of ACY, and leased the land to the SJTA, thereby allowing the authority to issue bonds for commercial expansion. By turning the airport over to an independent state authority that was similar to the Port Authority of New York and New Jersey, the SJTA was able to proceed with aggressive development and expansion of ACY, as well as surrounding land for commercial activities. An interagency agreement was signed between the FAA and the SJTA, ensuring that the airport would still be available for any FAA mission related to research and development, and test and evaluation activities.

Currently, there are two major carriers flying out of ACY. Spirit Airlines flies 10 to 11 flights daily, direct to Myrtle Beach, West Palm Beach, Ft. Myers, Orlando, Tampa, and Detroit and onto Los Angeles and Las Vegas, and direct to Ft. Lauderdale and onto San Juan, Santo Domingo, Cancun, and in January, Nassau, Bahamas. Spirit flies MD-80s, which carry 150 passengers, but recently added two new Airbus 321s that can accommodate 198 passengers to Ft Myers, and Ft. Lauderdale. The other major carrier is Delta, which began flying out of ACY in 2002. Delta flies passengers to a major hub in Cincinnati, and from there flies passengers to 134 cities worldwide, including Rome, Amsterdam, and Paris.

When ACY first ran commercial flights from the Center, it flew 281,000 passengers per year. Last year, a million passengers flew out of the airport. ACY offers a safe, convenient, and often less expensive alternative to Philadelphia and Newark. ACY plans to double its size in the next five years, and ultimately, would like to add up to seven more gates, with significant economic benefits to the region.

Technology Transition Program Expansion

By Elizabeth Soltys

In November 2004, the Tech Center's Innovations Division expanded its Technology Transition Program by signing an interagency agreement with Air Mobility Command's Communications and Information Directorate (AMC/A6) at Scott Air Force Base in Illinois. As forecasts for aviation demands increase, forging such relationships is imperative.

The agreement allows for the FAA and AMC/A6 to collaborate on Air Traffic Management (ATM) and Communications, Navigation and Surveillance (CNS) Systems. The Tech Center's Information Systems Security Group, under the direction of **Vic Patel**, will provide technical support and policy direction for information system security efforts.

Follow-on work will include research, development and implementation of standards from the International Civil Aviation Organization, civil aviation authorities and the military; along with systems engineering with a specialty in human factors, systems integration and test and evaluation.

The Technology Transition Program, managed by **Elizabeth Soltys**, was created in July 1998 as a means for the Tech Center and NASA Ames Research Center to work together on increasing capacity in the National Airspace System. Projects advanced under this program include Multi-Center Traffic Management Advisor, En Route Descent Advisor, Airspace Modeling, Algorithm Enhancements, Human Performance Modeling and Dynamic Density, with significant contributions from various groups including Simulation and Analysis, Human Factors and Systems Engineering. Expansion of the program now includes work with DOD to further collaborative efforts to achieve advancements in aviation.

While the FAA and the military traditionally have worked together in a number of areas to enhance operational safety, security, efficiency, and capacity of the air transportation system, this agreement encourages a more synergistic relationship. The staff of the Technology Transition Program is looking forward to closely working with AMC/A6 to help meet our nation's impending aviation demands.

SAFE Association meets in Atlantic City

By Ginger Cairnes

The East Coast Chapter of the Space and Flight Equipment (SAFE) Association recently held their bi-annual meeting in Atlantic City at the Hilton Hotel. Two Technical Center employees had the honor of being featured speakers.

John Wiley gave an overview of the work that is done by the FAA and the Tech Center. **Mark Torbeck**, Transportation Security Laboratories (TSL), presented information on the TSL Infrastructure Program and the Airport Surface Detection Equipment (ASDE-3) Ground Radar Project, which will have dual-use for perimeter intrusion detection. The group toured the Tech Center to conclude their activities for the week.

The SAFE Association is comprised of industry and military members who are dedicated to ensuring personal safety and protection in air, land and sea. The chapter holds two meetings per year for the purpose of exchanging information between members, and invites experts from related fields to share new developments in areas of interest.

SAFE Visits: Amlan Duttchoudhury discusses some of the equipment in the Tech Center's Full-Scale Aircraft Structural Test Evaluation and Research Facility (FASTER). The FASTER facility has been instrumental in the successful completion of several initiatives pertaining to fatigue damage assessments. The FASTER test fixture combines mechanical, fluid and electronic components to apply internal pressure, longitudinal, hoop, frame and shear loads to a curved panel.

Ernie Pappas on Photography: Past, Present and Future

By Barbara Harris-Para

Ernie Pappas recently participated in the Technical Center's Speaker Series. Pappas works in the Tech Center's Advanced Imaging Division. He is a self-taught photographer, the third generation in his family to pursue this profession. He has worked for many different employers, in the past, including the renowned National Geographic Society.

Pappas passed around various cameras and a viewer from the early 1900's. One of his favorite areas is portrait photography. He also has shot many photos for editorial purposes throughout his career.

The differences between film and digital cameras were discussed at length. Digital images can be altered, for one thing. Pappas told the story of a person whose image was altered to make her appear beautiful. He asked if one changes an image, "Are you accurately telling that story?" He also explained that, while working at the Tech Center on an FAA project on icing, he learned that digital cameras do not work well below 32 degrees Fahrenheit.

Tech Center Speaker Series: Center photographer Ernie Pappas is greeted by Dr. Fred Snyder before discussing the history and future trends of photography.

He discussed various photographers, such as Joseph Pulitzer, who put a picture in his newspaper in 1883, and Life magazine's Alfred Eisenstat and others, who have made photographic history.

New Center Van

New Center Van: The Tech Center has acquired a new van for assisting people who are wheelchair-bound. Shown here showing how the new system works is Civil Rights specialist Tammy Lusk, who is being assisted by the drivers of the new van.

Stephen Levitski Graduates with "Highest Honors"

By Stan Ciurczak

Technical Center employee, **Stephen Levitski**, recently graduated from the Rutgers University Master of Business Administration (MBA) program in Camden. He graduated with Highest Honors and a perfect 4.0 GPA. Rutgers MBA students that complete their course work with a cumulative GPA of 3.95 or higher graduate with the "highest honors" distinction.

Levitski completed additional coursework, above and beyond the MBA requirements, to graduate with dual concentrations in Finance and Management. Levitski was inducted into the Beta Gamma Sigma Honor Society, which reserves membership for the best students in business programs accredited by the Association to Advance Collegiate Schools of Business (AACSB). Beta Gamma Sigma membership is the highest recognition business students throughout the world can receive in programs accredited by AACSB International, including Rutgers.

Levitski is a Senior Electronics Engineer in the Spectrum and Specialty Engineering Group. In addition to the MBA, he holds an MSEE degree from Drexel University.

Left: Stephen Levitski

Smoke-Free in '05: Keep It In Mind

By Paul Lawrence

If I can make one prediction that likely will come true in 2005, I think the phrase, "Thank you for not smoking," will become a catch phrase at the Tech Center in 2005. The reason for my optimism is that beginning January 3, the Technical Center is a smoke-free facility. That is right, by the time you read this article the smoking rooms and related accommodations to smoke inside the buildings at the Center will have been closed.

Recognizing that the closure of the smoking rooms at the Technical Building, the Hangar and the Technical Services Facility will create a hardship for people who like to smoke, it is important to recognize the greater need of providing a safe and healthy work environment for the majority of the Center's workforce. Numerous studies and findings on the health effects of smoking, and the exposure to second-hand smoke, made the decision to prohibit smoking in all Center buildings an easy one to make.

From a worksite safety perspective, smoking is one of those potential hazards that can be abated with minimal impact to the work or mission of the Center. The key to maintaining a smoke free work environment is the Center's workforce! Whether you smoke or not, your support of the Center's no smoking policy is needed. "Thank you for not smoking" is the phrase that we all can and should use to remind people, especially our guests and visitors who choose to "light up," that they must refrain from doing so inside all Center buildings.

On a final note, to help remind all employees that smoking is prohibited inside the Technical Building, "No Smoking" signs have been posted at the main entrances. So if "Thank you for not smoking" does become a catch phrase in 2005, as predicted, then the Center's New Year's resolution - to have a safe and healthful work environment - will become fulfilled.

Keeping a resolution always is difficult, but it is very gratifying when you do keep one. By working together, we can make, "Thank you for not smoking," more than just a catch phrase; we can make the Technical Center a healthier, more gratifying place to work. Now that is a resolution with which we all can work and live!

Employee Profile: Nellie Mattson, 75 Years Young

By Stan Ciurczak

Center Director, **Dr. Anne Harlan**, Acting Senior Corporate Officer for Transition, **Ron Esposito**, Service Liaison Office Staff Manager, **Dawn Zimmer**, and other co-workers and friends of **Nellie Mattson** gathered for a very special occasion. It was Nellie's 75th birthday, and her friends at the Airport Operations Center gave a luncheon in her honor.

If you have flown the Tech Center Shuttle in the past six years, you probably know Nellie. She has worked in Airport Operations for 20 years, and was on the team that helped make the shuttle a reality six years ago. But she has worked here a lot longer than that.

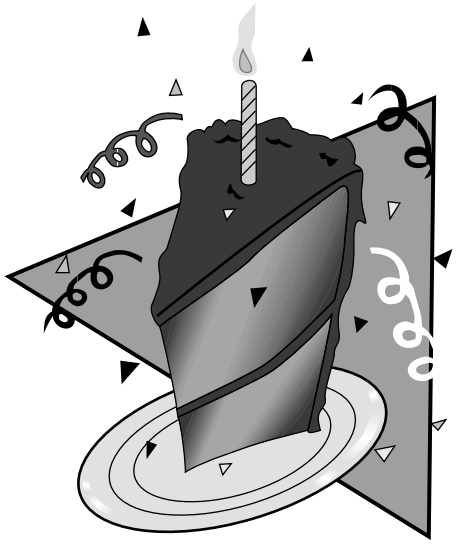
Nellie has worked here for nearly 44 years, ever since she signed on with the National Aviation Facilities Experimental Center (NAFEC) in 1960. **Capt. Alden Packard** was the NAFEC Director at that time. In fact, Nellie has worked for 13 of the 14 people who have served as director of NAFEC or the Tech Center. The only one she did not work for was **William S. Cowart**, the very first director of NAFEC.

Nellie Mattson and her Tech Center family celebrate her 75th birthday

Nellie worked in the Telephone Office for many years, until there was a reduction-in-force in 1981. Eventually she was hired back, by the Tech Center, and worked in Technical Operations and the Print Shop. She has the distinction of being the first female Wage Grade employee to have been hired by the Tech Center, and she was one of the first contractor employees to become a civil servant. She plans to work 7 more years here for a total of fifty years of service.

Prior to going to work for NAFEC, Nellie and her husband operated Matts Bar in Gloucester City. She reminisced about Fridays at Matts, when mothers would push their children in strollers and park the strollers outside the bar. The mothers would bring in their empty pots from home and purchase clam chowder to go.

Today Nellie makes her home in Brigantine. I believe I saw a little twinkle in her eye when she told me that she was looking forward to an evening at Harrah's later in the day on her birthday. Happy Birthday, Nellie, from all your friends at the Tech Center!



Richard Stockton College President Visits the Technical Center

By Pete Castellano

Dr. Herman Saatkamp, President of the Richard Stockton College of New Jersey visited the Tech Center on November 4. Saatkamp began his day in meetings with members of the Center's management team, as well as members of the FAA Contractors Consortium. Following the meetings, he continued on with a busy day of tours and demonstrations.

Recently, the Tech Center entered into a partnership agreement with Stevens Institute of Technology, to offer graduate education in Systems Engineering at the Center. This agreement marked the first step in a long-term commitment toward the development of strategic partnerships to continually educate employees of the Center, other government agencies, as well as residents of the surrounding Southern New Jersey region, by creating a dynamic research and education community. Toward that end, Program Director, Office of Human Capital Strategies, **Terry DiPompo** made a presentation to the group on the Center's vision for an aviation research park.

Dr. Saatkamp has been building strong relationships with public and private sector entities throughout the region. Based on Stockton's outstanding reputation for academic excellence, as well as its proximity to the Center, it is hoped that this visit will lead to a formal partnership agreement between Stockton and the Tech Center. He told the group, "I am really very much interested in developing a relationship between Stockton College and the FAA. I would love to see us having, not just a typical relationship for schools located some distance, but since we are side-by-side; we could have a different relationship."

Dr. Saatkamp is the fourth President of the Richard Stockton College of New Jersey, which currently is ranked 5th nationally among public liberal arts colleges by *U.S. News and World Report*. Dr. Saatkamp helped develop research parks at Texas A&M and Ohio State Universities.

Stockton graduates 25% of all science and math majors of all state colleges and universities in this state, and currently is developing a new professional science Master's Program that combines technical courses with business-related and policy courses.

Dr. Herman Saatkamp, President of the Richard Stockton College of New Jersey

Patti Grace Smith

***Tech Center Speaker**: FAA Associate Administrator for Commercial Space Transportation, Patti Grace Smith, recently participated in the Center's Speakers Series. Smith was welcomed to the Center by Dr. Fred Snyder (left) and Center Director, Dr. Anne Harlan*

Technical Center Speaker Series: "The Weather"

By Barbara Harris-Para

Bill Benner and **Steve Maciejewski** recently gave a presentation, as part of the Tech Center's Speaker Series, about something that affects all of us everyday, the weather. Some people say that weather forecasting is a license to lie. In fact, Meteorologists usually get a grade of 50% accuracy when predicting what the weather will be in the coming days, but Bill and Steve described some of the new ways of predicting weather outcomes.

First, they let us know that each and every one of us will be affected by the weather, some time in the near future. A brief description of terms and cloud types helped many in the audience understand this phenomenon, including a graphic depiction of fronts, dry lines, and what occurs before, during and after these changes to our daily weather patterns.

Tornadoes and hurricanes have a rating scale to tell us their severity. A Japanese scientist developed the tornado scale called the Fujita Scale in 1972. It shows how much damage can occur from an F-1 to F-5, and recently, different types of radar are predicting where one of these damaging tornadoes will take place. Hurricanes also have a damage scale. On the northeast side of the hurricanes, we sustain more damage from wind and storm surge due to the rotation of the system.

They mentioned that in the Philadelphia area we get approximately 21.6" of snow per year. However, it is predicted that this year will be 50% colder than previous years. This can be determined from various predictions, but new radars, satellites, and trends help all meteorologists to determine the type of weather and systems we will experience this winter.

What does this have to do with the Center? Well, lots of new systems help us to enjoy uninterrupted air travel. For general aviation, the Automated Surface Observing System (ASOS) and the Automated Weather Observing System (AWOS) systems help us know what weather phenomenon are taking place at a particular airport. Nexrad Doppler radar helps a weather briefer to give their customer accurate information about a destination or departure point.

Airport Surveillance Radar, Level 9 (ASR-9) helps larger airports with commercial aircraft that move about their environment, the National Lightning Detection Network (NLDN) gives us the needed information about lightning data in order for aircraft to avoid such areas, and the Low Level Wind Shear Alert System (LLWAS) give us the low level wind shear data crucial to landing and departing aircraft. The old saying, "If you have time to spare go by air" would prevail without these aids, but today's advancements have made air travel much more reliable and smoother for the flying public.

Successful CFC Campaign Ends

By Stan Ciurczak

The Combined Federal Campaign (CFC) total for the William J. Hughes Technical Center as of the week ending December 31, 2004 was $110,756.22. By the week ending January 7, the total had climbed to $116,495.30.

On February 3, Imaging Technology Division Manager, **Pat Mabis**, the CFC Chairperson, recognized key workers for their support during the 2004 Combined Federal Campaign. She announced that total Technical Center contributions were one of the highest in recent years, and had risen to $140,317.30.

CFC payroll deductions run on a payroll calendar year. This year's CFC donations started with January 9, 2005, (pay period 3) and will end on January 8, 2006, (pay period 2).

CFC Campaign Ends: Shown above are CFC Chairperson, Pat Mabis (far right), and the many key workers from throughout the Center who helped make this year's drive so successful.

Tech Transfer Contract Awarded to Rowan University

By Deborah Germak

The Technical Center has awarded a contract to Rowan University to provide clinical project support on research and development (R&D) projects, and to transfer technologies developed at the Center to the commercial market. The yearlong contract has an additional one-year option.

"We are very excited about this partnership," said **Basilyn Bunting**, acting Program Director, Office of Knowledge Management. "It brings engineering and business students into the Tech Center's laboratories to work hand-in-hand with our scientists and engineers."

During the first year, students are working on a patented adiabatic expansion nozzle invented by **Bob Filipczak**, an FAA engineer in the Airport & Aircraft Safety R&D organization. The unique nozzle produces a continuous gas-to-solid or gas-to-aerosol stream. This flow results in a more effective, efficient use of the hand-held fire extinguishers now onboard aircraft. The students are trying to re-prototype the nozzle using less expensive parts and labor. They are also searching the marketplace to find broader uses for the nozzle with fire extinguishers used in every-day situations.

"This is a case where an FAA engineer designed a product to meet an aviation need, but the product may serve other purposes well beyond the realms of aviation," said **Deborah Germak**, Technology Transfer Program Manager. "The Technical Center's partnership with Rowan University epitomizes the spirit of technology transfer legislation, as well as the President's mandated R&D initiatives to support technological innovation; strengthen science, mathematics and engineering education; and strengthen partnerships."

If the patent is licensed to a manufacturer, the inventor and the laboratory will enjoy the royalties returned on the patent. The inventor can earn up to $150,000 a year, above his or her salary.

Contract Awarded to Rowan: Dr. Dianne Dorland, Dean, College of Engineering, Rowan University and Ronald J. Esposito, Acting Senior Corporate Officer for Transition, discuss the technology transfer contract that recently was awarded to Rowan University.

"We encourage all employees to use their creativity to discover and develop new technologies," said Technical Center Director, **Dr. Anne Harlan**. "And, we want to share these opportunities and expose new technologies to students – our upcoming workforce." Harlan foresees a long and flourishing partnership between the Technical Center and Rowan University on this project and many future endeavors.

Tech Transfer: Rowan University students are working on a patented adiabatic expansion nozzle that was invented by Bob Filipczak. This unique nozzle produces a continuous gas-to-solid or gas-to-aerosol stream that results in a more effective, efficient use of hand-held fire extinguishers on aircraft. The students are trying to re-prototype the nozzle, using less expensive parts and labor, and they also are searching the marketplace to find broader uses for the nozzle with fire extinguishers used in every-day situations.

The Wind Tunnel Arrives at NAFEC

By Stan Ciurczak

Have you visited the Battleship NJ museum in Camden? The battleship and the Tech Center's large wind tunnel have something in common. Both ended their "first career" on the west coast and then sailed through the Panama Canal to begin a "second career" in South Jersey.

The only thing I knew about the wind tunnel, until I met **Harry Webster** and **Jack Berry** from the Airport and Aircraft Safety R&D Division recently, was that *Good Morning America* meteorologist, **Tony Perkins**, did a broadcast about hurricanes, while strapped inside the wind tunnel, a few years ago. I now know that the Airflow Induction Test Facility, in Building 204, consists of a large wind tunnel, a smaller wind tunnel and an environmental test chamber. The centerpiece is the 5.5 foot-diameter subsonic wind tunnel that you pass when you drive down Card Road in the research and development (R&D) area.

The large Tech Center wind tunnel originally was used to test Surface-to-Air (SAM) missiles at the Navy's Pacific Missile Range Headquarters in southern California. The Navy established this facility, known as Point Mugu, in 1946, to test and evaluate guided missiles and components.

After the Navy declared it to be surplus, the FAA's Bureau of R&D arranged to have it shipped to the newly created National Aviation Facilities Experimental Center (NAFEC). Dismantled and then shipped through the Panama Canal to Philadelphia, it was placed on 50 by 100 foot barges and towed to Mays Landing by Wescoat Towing Co. of Atlantic City. At the dock in Mays Landing it was lifted from the barge onto a truck and transported

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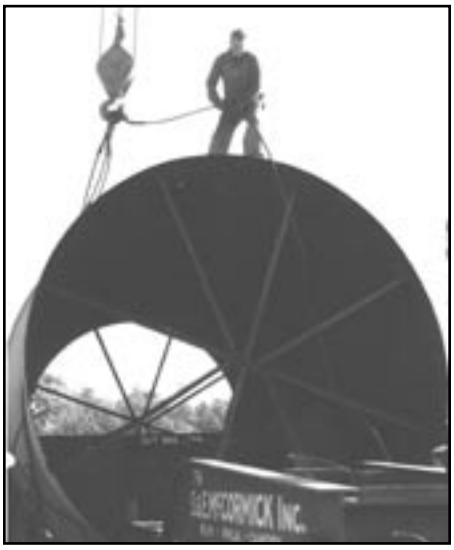
Mays Landing Pier in 1959



A Brief History of Wind Tunnels

By Stan Ciurczak

The first person to propose the use of wind tunnels to gather aerodynamic data was Edme Mariotte. He wrote a seminal paper on aerodynamics titled, "Following the Movement of the Waters," which was published posthumously in Paris in 1686.

Francis H. Wenham built the first induction type wind tunnel with John Browning in 1871. He authored a paper titled, "Aerial Locomotion," in which he drew the conclusion, based on measurements he made using the wind tunnel, that long, narrow wings would be most efficient for flying.

Albert J. Wells built a wind tunnel at MIT, in 1896, for his mechanical engineering thesis.

The Wright Brothers constructed a wind tunnel in 1901. Data derived from their tests using this wind tunnel were vital to the success of the 1903 Wright Flyer.

Note the cement truck (right, center) that flipped over and then separated from the chassis during construction of Building 204

Many tests have been run in the subsonic wind tunnel. For example, the U.S. Coast Guard issued a new directive that required certain classes of life rafts to demonstrate that they could open in hurricane force winds and remain intact. SWITLIK Life Raft Company contracted with the Tech Center, through a Cooperative Research and Development Agreement, to test their life rafts in the tunnel at 74 mph. The initial test resulted in a destroyed life raft. After some redesign and seam reinforcement, they produced a raft that met the requirements.

Right: Testing a life raft in hurricane conditions in the wind tunnel

Tech Center Wind Tunnel

Relocating the subsonic wind tunnel in 1959 from Point Mugu, CA through the Panama Canal to Pomona, NJ was no small undertaking. Wescoat Towing brought a barge from Philadelphia to the fishing pier in Mays Landing, where S&E McCormick, Inc. loaded the huge sections of the wind tunnel onto a caravan of flatbed trucks. The local utility companies cleared hanging wires and other obstructions, and the caravan proceeded at night to NAFEC. The sections of the tunnel were unloaded and the wind tunnel was reconstructed as the centerpiece of the Airflow Induction Test Facility. Building 204 was constructed around the wind tunnel.

Partnership Formed with Stevens Institute of Technology

By Pete Castellano

Technical Center Director, **Dr. Anne Harlan**, recently signed a formal Partnership Agreement with Stevens Institute of Technology President, **Hal Raveché**, at a special ceremony that was held at the Stevens Campus in Hoboken, NJ. This agreement marks the first step in a long-term commitment toward the development of strategic partnerships to educate employees of the Tech Center, other government agencies, and residents of the surrounding southern NJ region, by creating a dynamic research and education community.

While Tech Center personnel are employed in many different disciplines, our core business is designing, testing, and deploying improved aviation technologies for the benefit of the flying public. So it is no surprise that we have a need to provide our employees access to quality continuing education and advanced degrees in Systems Engineering in order to remain a leader in our core business.

Stevens is one of the top engineering schools in the nation, and also has the largest Systems Engineering program in the nation. Under this agreement, Stevens is offering graduate education in Systems Engineering at the Center, which can be applied towards certificate, masters and doctoral programs. The first course was offered from October 18-22 at the Center with 33 students enrolled. The second course was held from February 7-11 with 26 students enrolled.

Through the use of the modular format, employees will complete their classroom hour requirements up front, and then follow up with project work that can be scheduled more flexibly. This format allows for greater participation of full-time workers,

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Systems Engineering classes are being taught at the Tech Center by professors from the Stevens Institute of Technology, a top engineering school

The Wind Tunnel Arrives at NAFEC

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here at night, by E.G. McClintock & Co., after the local electric and telephone companies cleared any low-hanging cables that might have gotten in the way of the caravan that brought it here.

A reporter, who covered this event, for the Atlantic City Press, wrote that the bell mouth resembled “a giant’s hi-fi speaker.” He was right on the money with that description. The tunnel weighs 135,000 pounds and is 131 feet long. It has a test section that is 5.25 feet by 16 feet, and a diffuser section that is 100 feet long. It has a huge bell mouth that is 22 feet in diameter. The FAA acquired it for two purposes: to conduct in-flight aircraft fire protection studies at speeds up to 600 miles per hour; and to gather data for a much larger wind tunnel that “tentatively” was being planned for the future. **Col. William S. Cowart**, Jr., the first director of NAFEC, said that this project was being added to some 60 others that were underway at NAFEC at that time, in 1959.

The wind tunnel has been used for a wide variety of research applications. The original purpose was to use it to simulate in-flight testing of hand-held fire extinguishers that are used in general aviation aircraft. Using the wind tunnel to simulate flight conditions, Tech Center employees would run the engine of a plane, such as a Cessna 210. They then would operate and discharge the extinguishers remotely, measure the concentration and certify that this was a flyable combination. This type of work was done about 20 years ago.

In the past 10 years or so, the wind tunnel has been used in a number of research applications. It was used to test airport runway marker signs, in order to determine the design requirements that are needed to withstand turbine engine jet blasts. It was used to assess the flammability characteristics of lithium batteries and the potential hazard associated with shipping them on transport aircraft. Based on the tests run in our wind tunnel, the FAA decided to ban the shipment of lithium batteries on passenger aircraft.

The wind tunnel also was used to test an airfield turf product that was designed to keep down erosion and lessen the chance of aircraft engine rock ingestion. It also has been used to test a new type of life raft, which was developed for the U.S. Coast Guard, to see if the life raft would remain intact under stormy conditions.

The wind tunnel is being used currently, and over the next few years, to research soft ground-arresting systems for decelerating airplanes in the event of a runway overrun. The wind velocities and acoustic forces produced by the tunnel in one minute are comparable to 3 hours of jet blast, and have been used to expose new Jet Blast Resistant-treated blocks to conditions representative of jet blast at a runway end at LaGuardia Airport.

Other future work for the large wind tunnel is beginning to take shape. New aircraft, such as the Boeing 7E7, are being built with composite airframes. In the past, aircraft were built with aluminum hulls, which are excellent heat conductors that do not melt in the case of a fire. Our in-house experts plan to run tests, in the wind tunnel, which will yield data that can be used by the FAA and the aviation industry to improve fire safety in aircraft that are made with composite airframes.

Awards

Employees Recognized: Thirteen people in the Systems Analysis Division recently received service or time-off awards: 1st Row (left to right): Richard Ozmore, Andrew Lamb, Jose Perez, Joseph Richie and Sherri Magyarits. 2nd Row: Robert Holladay, George Chandler, Michael Paglione, Elizabeth Delarosby and Sheila Franklin Smallwood. 3rd Row: Douglas Baart, William Vaughan and Brian Colamosca.

Partnership Formed with Stevens Institute of Technology

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while also utilizing the labs and facilities at the Center for hands-on, real world assignments.

In conjunction with the first day of classes, a formal ribbon-cutting ceremony was held at the Center to unveil the new Partnership Agreement with the Stevens Institute of Technology. Center executives and managers; members of the faculty and administration from Stevens; members of the FAA Contractor Consortium; NFFE Union President, **Butch Dansby**; **Linda Hinkley**, representing **U.S. Rep. Frank LoBiondo**; and system engineering program students were on hand.

Partnership Agreement: Technical Center Director, Dr. Anne Harlan, recently signed a formal Partnership Agreement with Stevens Institute of Technology President, Dr. Hal Raveché, at the Stevens Campus in Hoboken.

Celebrating the New Partnership: Trib Singh, CEO and President, Hi-Tec Systems; Center Director, Dr. Anne Harlan; Butch Dansby, NFFE President; Dr. Dinesh Verma, Associate Dean (Outreach) and Professor of System Engineering, Stevens Institute of Technology; and David Sparenberg, President, Contractor Consortium.

Spectrum Engineering at the Technical Center

By Paul Dever

The Spectrum Engineering Group improves National Airspace System (NAS) safety and efficiency (airport gate availability and reduced fuel costs) by mitigating Radio Frequency Interference to Air to Ground Communication frequencies. There are six FAA Engineers in the Spectrum Engineering Group. All project work is obtained from the Office of Spectrum Policy and Management via a yearly Program Directive (PD). The FY-05 PD (worth $920K) contains 56 tasks that are imbedded in 19 project areas. These project areas include:

Radio Frequency Interference (RFI) Ground Resolution (six day) Courses for FAA, Airline and International Personnel

RFI Air Resolution (five day) Courses for AVN Organization

Frequency Management Officer (FMO) responsibilities

Ultra Wide Band (UWB) Ground Penetrating Radar (GPR) Testing

VHF/UHF Air to Ground Radio Testing including Digital Radios

VHF “25 Initiatives” to mitigate shortage of frequencies until 2010

RTCA-SC-202 Committee for Portable Electronic Devices (PEDs)

Measurement of PED Emissions for RTCA-SC-202

Provide support via FAA Headquarters for RTCA, ICAO, WRC etc.

FAA RFI Van Program including Next Generation RFI Van

Ground and Air RFI Resolution Investigations

National RFI Tiger Team Activities

Testing of Wireless Devices in FAA facilities

EMI Testing of FAA Systems

GPS Interference Analysis

Bandwidth over Power Line (BPL) Testing

Radiation Hazard (RADHAZ) Measurements

Spectrum Engineering project work at the Center is done using an Experimental Remote Control Air to Ground (RCAG) Communication Facility (Building #176), an Electromagnetic Compatibility (EMC) Lab (Main Building), a National RFI Van facility (in Building #206) and a large Shielded Room (Hanger Building). Over the past few years these facilities have been upgraded/ created thanks to generous funding of more than $0.5M from FAA Headquarters.

With respect to Ground Spectrum Engineering project work, the Spectrum Engineering group makes use of their $600K RFI Master Van and a new 4WD Truck outfitted with radios and test equipment. The RFI Van serves as a platform to test hardware, software, and vehicle changes before an authorized change to the nine FAA regional RFI vans can occur. The Van is also used for training, formal demonstrations, second level support and local RFI Investigations. The 4WD Truck is used for general purpose Spectrum Engineering project work.

When airborne Spectrum Engineering project work is required (such as RFI Investigations or Frequency Coverage Studies), the group enlists the support of Center pilots who operate N-38, N-39, N-40 or N-49 aircraft. The Spectrum Engineering group has a rack of Electronic Test Equipment (such as Spectrum Analyzers and Direction Finders) that is bolted down and plugged into the aircraft.

Spectrum Engineering: From left to right: George Sakai, Doug Quimby, Rob Drew, Oscar Alvarez, Basilyn Bunting, Paul Dever, Jack Bastian, Kiem Hoang, Marty Badinelli, Y Truong, Stephen Levitski, Ed Coleman, Rich Dunklee, Don Willis and Center Director, Dr. Anne Harlan.

Tech Highlights

By Stan Ciurczak

Presentation to California Wind Energy Collaborative Forum: Personnel from the Airport Technology R&D Branch recently gave a presentation at the California Wind Energy Collaborative Forum (Palm Springs, CA). The presentation was titled, "Wind Generator Obstruction Lighting Research." **Jim Patterson**, an Airport Safety Specialist, gave an overview of a research effort currently underway to develop lighting standards for wind turbine farms. Current standards do not contain guidance on illuminating obstructions that are as large or diverse in layout as those found with wind turbine farms. Some turbine farms that the Branch has evaluated are well over 20 miles in length, and contain well over 200 individual turbines.

Turbine Farm Lighting: Airport Technology R&D Branch employees traveled to Lawton, OK to conduct a final evaluation on a test site that was constructed to evaluate new guidelines for illuminating wind turbine farms. The test site, located about 70 miles southwest of Oklahoma City, OK consists of 45 wind turbines that have been lit using only 14 strategically placed red obstruction lights. The lights are placed on the outermost turbines, and programmed to flash in unison from dusk until dawn. Results of this evaluation will be included in a Technical Report due to be completed in early 2005.

Laboratory Visit: The Associate Administrator for Commercial Space Transportation, **Patti Grace Smith**, and other visitors were briefed recently about current projects and structure in aviation human factors, including an overview of the overall goals and recent accomplishments of the NAS Human Factors Group and the Laboratory Support Group. Several questions were raised about risk perception and methods of developing a complete understanding, in the form of informed consent, on the part of commercial space passengers. Since Tech Center human factors researchers have some experience with informed consent as it applies to Institutional Review Boards, the group discussed the idea of studying this issue as it applies to commercial space passengers.

Airport Technology: Program manager **Donald W. Gallagher** is back from helping the international aviation community set the standards for airport visual guidance. Gallagher serves as a technical representative for the U.S. delegation to the International Civil Aviation Organization (ICAO), and spent four days in November meeting colleagues from around the world at the ICAO Visual Aids Panel (VAP). He reports, in accordance with its global makeup, the VAP was incorporated into what is now called the Aerodromes Panel. Gallagher does double duty on smaller committees, representing the U.S. as co-chairperson of the Runway Incursion Working Group and as a member of the Approach Lighting Working Group.

Tech Center engineer **Jim Patterson, Jr.** spoke recently at the 20th Annual Airport Conference of the FAA Great Lakes Region, where he updated airport officials and managers on studies that are being conducted by the Center. Patterson is a project manager specializing in airport visual guidance.

Information Portal: The Office of Knowledge Management at the Technical Center is sponsoring development of a web-based portal for employees. The portal will centralize and standardize numerous information systems currently used by Center employees in their work. Different users or user communities may have very different views and priorities regarding the information contained in the portal. Center National Airspace System Human Factors Group researchers are conducting several user-centered design and usability testing activities to ensure that information is organized so that users can find what they need quickly and accurately.

ETMS Support for Chicago TRACON: Engineering research psychologists from the Tech Center's NAS Human Factors Group traveled to Chicago Terminal Radar Approach Control Center (TRACON - C90) to examine usability problems associated with newly deployed monitors for the Enhanced Traffic Management System (ETMS). Controllers reported difficulty viewing the monitors from the operational controller positions, especially at off-angles. The location, size and other characteristics of the new monitors were examined and procedures and information needs of Air Traffic and Airway Facilities personnel were discussed at length. The most significant issue involved visibility of aircraft on the ETMS Traffic Situation Display (TSD) that are not eligible for a land-and-hold-short operation. Controllers need to identify these aircraft well before they enter the TRACON airspace so they can be routed to an available runway. The routing should not disrupt arrival flow and, ideally, should not require putting the aircraft in a holding

Tech Highlights

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pattern. Controllers use the TSD to identify these aircraft while still seated at their radar displays. Given the distance and viewing angle from the radar displays to the TSD, identifying these aircraft could be difficult or create more workload for the controllers. Researchers will develop human factors recommendations for resolving the issue and present these to the ETMS program office.

Risk Analysis Group Submits Plan to Institutional Review Board (IRB): The Tech Center's NAS Human Factors Group provided consulting services to a risk analysis group concerning a research plan that will use FAA maintenance personnel to develop a new error model for aircraft maintenance. The human factors researchers assisted in preparing a test plan and survey format that will fit requirements for IRB processing. The enhanced plan will be submitted for IRB review so that the research can be conducted within FAA guidelines.

Women Engineer Magazine: Interviews were conducted with two engineers at the Technical Center for profile stories that will appear in the spring edition of Woman Engineer magazine. The subjects are: **Jennifer Duffy**, a test director and electronics engineer in the Maintenance Service Division, Office of Innovations and Solutions; and **Holly Cyrus**, a project manager in the Airport Safety Technology Section.

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On-The-Spot Award

John Wiley and Gerry Spanier recently presented Pawan Jain an award for outstanding technical service in NAS Modernization.

Prayers for Our Tsunami Friends

By Dy D. Le, President, Asian Pacific American Coalition

All of us have heard many tsunami stories since the deadliest earthquake of the 21st Century struck South Asia. I am not going to tell you another tsunami story, since I cannot stand it any longer. The pain is unbearable, and I am sure that you feel exactly the same way.

What I am going to share with you is my own personal experience with one of the tsunami-impacted countries, Indonesia. My family and I took refuge there for 13 months before resettling in the U.S. 20 years ago.

Because of the difficult political situation in Vietnam in 1979, I took my family to the Pacific Ocean and we left the country on a small wooden boat. We sailed away without knowing where we were going, and were lost on the high seas for many days and nights. On the 10th day of our voyage, somehow, we crashed into one of the Indonesian islands. We were very hungry and weak. We were also very frightened, as we did not know where we were, and what kind of people we were about to meet. While the sun was quickly going down, the jungle in front of us, and the vast ocean behind became darker and darker. We did not know what to do except to stay close to each other and to find a safe and warm place to sleep over night. Fortunately, the night went by peacefully.

When the morning came, some of the local Indonesian fishermen found us. Eventually, a crowd of local people from a nearby village rushed out to see the “boat people”; the term used to describe the Vietnamese refugees. For the next several days, to our surprise and joy, they fed us and helped us build temporary shelters.

The local Indonesian people treated us as if we were their own. Although we were not able to understand their language, we quickly came to know that we were safe on their island. We stayed there peacefully for a few weeks until the day that the United Nations High Commissioner for Refugees came for us. A few days later, we were taken away and shipped to the Galang Refuge Camp on Pulau Galang Island, located approximately 80 kilometers southeast of Singapore. As we were about to depart, the local people came out to say farewell to us. Some of them cried, and some of us cried, too. For the next 13 months, we stayed at the Galang Refuge Camp waiting for our resettlement to a third country.

On December 26, when we heard that a powerful 9.0 earthquake had unleashed a deadly tsunami on coastal areas in South Asia, a happy holiday became a very sad day for our family. At the dinner table that evening, I could not help but express my grief toward all the tsunami victims. We prayed for all of them. We also thought about the Indonesian friends who opened their arms to welcome us to their land. I was under the impression that their island could probably have been wiped out, too. Our two sons sat quietly as my wife and I told them of our short but sweet and profound relationship with the Indonesian people 25 years ago.

After dinner that evening, as I was quietly surfing the internet for more information about the tsunami and impacted islands in South Asia, our two sons walked in and put down on my desk a few hundred of their hard earned dollars. “Dad!” said my oldest son. “When you send your money to the tsunami victims, could you send ours as well?”

As the newly elected President of the Asian Pacific American Coalition (APAC), I am committed to creating a long-term relief fund and to find a direct means to help the South Asia tsunami victims and their families. We Americans have been well known for our extraordinary generosity to help worldwide victims. We have come together to pray for the victims and to donate generously to many of the relief efforts. As a result, I believe that our effort to establish a long-term relief fund will be strongly supported and successfully carried out by the employees of the Technical Center.

Having Fun While Supporting CFC

By Elizabeth Turcich

To support this year's Combined Federal Campaign (CFC) effort, the Office of Independent Operational Test and Evaluation (IOT&E) held its annual pie-throwing fundraiser at the William J. Hughes Technical Center. The event raised a grand total of $1,756.00, a substantial amount for a small office of 13 staff members. The money will be split evenly to benefit four charities: the Alzheimer's Research Fund, the American Medical Center Cancer Research Center, the Cure Hepatitis Fund (American Liver Foundation) and the Assistance Dog United Campaign, which provides financial assistance to people who need but cannot afford an assistance dog; and to people and programs whose purpose is to provide assistance dogs to people with disabilities.

In the weeks preceding the event, IOT&E staff and SENTEL contractor support staff bid money on individuals who had agreed to be 'pied.' The people who received the largest total bids were declared the winners and received 'friendly' Jell-O and whipped cream pies in the face. Four IOT&E staff members, good sports all, were pied this year. An auction also was held to determine who would have the privilege of throwing the pies, which raised additional money.

The Acting Director of the Office of IOT&E, **Joe Schanne**, IOT&E Program Managers, and SENTEL Contractor Support participated in the event. The fundraiser was organized and coordinated by IOT&E Specialist, **Elizabeth Turcich**.

Top right: Huan Nguyen after being 'pied' by Tom Raubacher of Sentel Corp. as part of a CFC fundraiser.

Bottom right: Mike McFadyen of Sentel Corp. is getting ready to 'pie' Trish Horan for CFC.

Corrections and Addenda

By Stan Ciurczak

In the October / November Intercom ("Technical Center hosts ATF Field Training Exercises," p. 8), I stated in error that the Bureau of Alcohol, Tobacco and Firearms (ATF) comes under the Department of Homeland Security. It turns out that ATF is part of the U.S. Department of Justice, although I have been in Government long enough to remember when ATF came under the U.S. Treasury. Thanks to **Walt Vernon** for catching my mistake.

Also, we must have run out of space in that issue, because we left out the last paragraph of an interesting article by **Keith Buch** ("Before There Was a Tech Center," pp.29-30). This was a story about the land on which NAFEC and the Tech Center was built. Here is the paragraph that got left on the editing room floor:

"*The launching of the Soviet Sputnik in 1957 created a severe recession which caused the U. S. Military including the Navy to evaluate the utility of many of their active bases. Unfortunately, the Navy decided to close the Atlantic City Naval Air Station (ACNAS) because many of its structures were of temporary World War II construction and required replacement. On June 27, 1958 the Navy lowered its colors at the ACNAS. On July 1, 1958 the property of the former ACNAS was transferred to the Federal Aviation Administration (formerly the Airways Modernization Board) for use as the National Aviation Facilities Experimental Center (NAFEC)*."

Now Serving…Volleyball!

By Janet M. Kinsell

The Technical Center Intramural Volleyball League is gearing up for another season. **Joe Delesantro** was the league president the past 4 years.

Games are played on 3 courts, which are located near the softball field and the firehouse area. The courts are regulation size of 30 x 60 x 10ft. and meet volleyball association standards.

"**Gary Poulsen's** employees renovated the courts 3 years ago, by bringing in over 350 tons of beach sand creating a playing area of a foot deep of sand," According to Delesantro. "The courts no longer hold puddles as the sand drains the rain in no time. The guys took such care in getting it right. The courts are just perfect."

The league season begins in May and runs until September. Depending upon the number of 6-player teams, the games are generally 1 or 2 nights a week. Wednesdays and Thursdays have worked best in the past and are again the anticipated nights of play.

Beginning at 5:30 p.m., a 3 game match is played with each game requiring a score of 15 points. To complete a game you must win by 2 points, so it isn't unusual to have a game score reaching into the twenties. The co-ed team must consist of at least 1 female player and a substitute. Best of all, no previous experience is required.

He went on to say, "There are all levels of players and you only need an understanding of the game and a wish to have fun. I believe the incoming president, **Brian Devers**, is looking to also create 2 person competitive play for those who are really passionate about the game." Last year's league consisted of 8 teams with the '03 champion X-Factors taking the title again.

"We're looking for another great season," he said. "Hopefully the weather will cooperate just like last year. When it rained, it miraculously stopped by 5pm. Our season always ends with a cookout during tournament playoffs. I hope more employees will come out this year. It's a great way to enjoy the outdoors and exercise at the same time."

Look for posted fliers advertising sign-ups in April or May. Sign up as a team or as a single player. Teams are formed based upon the number of sign-ups. If you have questions, Joe Delesantro can be reached at x5414.

Honoring Our Own

By Pete Castellano

FAA employees nation-wide recently were honored for serving in, or supporting, operations Iraqi Freedom, Enduring Freedom and Noble Eagle in Iraq and Afghanistan. More than 600 FAA employees nation-wide have served in this capacity, since September 11, 2001, and FAA Administrator, **Marion Blakey**, wanted to recognize their service.

In a message to all employees, the Administrator said, “December 7 is also the 63rd anniversary of Pearl Harbor, a date that stands along Sept. 11, 2001 as one of the two most infamous dates in recent American history. Just as December 7, 1941, changed America forever, so did September 11, 2001, and we have chosen that date to remember and to honor those of ours who are involved in this latest conflict.”

A ceremony was held in headquarters, led by FAA Administrator, Marion Blakey, and Secretary of Transportation, **Norman Mineta**, which was simulcast in every Region and Center. In conjunction with the ceremony in headquarters, a ceremony was held here at the Center. Acting Senior Corporate Officer for Transition, **Ron Esposito**, presented all of the honorees with certificates and medals. Our sincere thanks to all who serve - we owe you an enormous debt of gratitude!

Tech Center employees recently were honored for their service in the war against terrorism.

The following Tech Center employees were honored for their military service:

Lawrence Weisman
ATO-E (AOS-350)
James Mauroff
ATO-P (ACB-860)
Michael Achey
ATO-P (ACB-870)
Andrew Abraham
ATO-T (ATB-232)
Richard G. Davis
ATO-T (ATB-232)
Joseph Iovanisci
ATO-T (ATB-232)
JoAnn Jones
ATO-T (ATB-232)
Roberto Ortiz
ATO-T (ATB-232)
Wayne Palaia
ATO-W (AOS-270)
Don Stahlberger
ATO-W (AVN-200)
Patricia Mckernan
ATO-W (AOS-530)
Richard Reiken
ATO-W (AOS-260)

Cathy Jaggard Honored

By Mary Lou Dordan

Hi-Tec Systems President, **Trib Singh**, recently recognized **Cathy Jaggard**, a Hi-Tec employee, for expanding her job responsibilities. Jaggard represents her company at many community functions, such as science and job fairs, and meetings of industry associations and professional groups, and has been named Hi-Tec’s manager for community outreach programs.

In addition, Jaggard was honored at a recent Institute of Electrical and Electronic Engineers (IEEE) banquet at Mays Landing Country Club for becoming a Senior Member of the IEEE. She is one of the few women to reach this status within this professional organization. While supervising several projects, Cathy has published more than ten white papers in her field. In addition, while continuing her education toward an advanced degree, she also shares her knowledge by teaching computer-programming courses at local colleges.

FAA Receives Strategic Planning Award

By Stan Ciurczak

The Association for Strategic Planning recently awarded its prestigious "*2004 Richard Goodman Strategic Planning Award*" to the FAA for being "at the leading edge of strategic practice" for its Flight Plan 2004-2008. The flight plan directly supports DOT'S Strategic Plan and the President's Management Agenda. Each FAA office has standardized and linked its respective annual business plan to the flight plan. A computerized tracking tool monitors the status of each objective and promotes agency transparency by allowing the public to track the FAA's progress at www.faa.gov.

The Association for Strategic Planning is a California-based professional association that recognizes continuing excellence in strategic planning and stimulates innovation in the strategic planning process. Non-profit and government applicants for the award were evaluated by a panel of judges who are experts in strategic planning and management.

NJ Aviation Education Council Visits Tech Center

By Barbara Harris-Para

The NJ Aviation Education Council recently visited the Technical Center for their monthly meeting. **Terry DiPompo**, Program Director, Office of Human Capital Strategies, welcomed the group of twelve Council members to the Technical Center.

The group enjoyed a tour of the Free Flight Lab with **Terrance Moore**, and the Small Aircraft Transportation System (SATS) Simulation with **Adam Greco**. **Ryan King** from Airport Safety Technology presented new innovations in airport improvements, and **Roger Bawgus** and **John Ashenbach** from the Tower Integration Group demonstrated the advantages of being able to make changes at airports before they are constructed. Basically, it was a tour of virtual reality.

If anyone is interested in joining this worthwhile group, you can either call **Mary Lou Dordan** at extension 5-6493, or **Jerry Fleiger** at 732-671-9327. You would be surprised at all the activities that this group can generate.

FAA Research Chemist Honored by AIAA

By Stan Ciurczak

The American Institute of Aeronautics and Astronautics (AIAA) recently honored Technical Center research chemist, **Louise Speitel**, with the "Outstanding Achievement in Aviation Research" award, which was presented at the annual awards banquet of the South Jersey Professional Societies.

Speitel was cited for developing an analytical method to detect dozens of fire gas concentrations in smoldering and flaming fires. This new capability provides the technology for creating and patenting a composite plastic smoke generator that can be used to simulate aircraft cargo compartment fires. The device enables testers to inexpensively reproduce a smoke composition signature that is representative of real luggage. This safe, reproducible and realistic smoke generation source has become the benchmark for manufacturers who produce advanced fire detectors for aircraft.

Speitel has worked at the Technical Center for 28 years. An employee of the Fire Safety Branch, Airport and Aircraft Safety Research and Development Division, Office of Aviation Research, she has designed instrument systems and methods to perform chemical analysis for fire safety projects, and has been active in developing fire standards and codes. She is a member of the American Chemical Society, the National Fire Protection Association, the American Society for Testing and Materials and the International Aircraft Systems Fire Protection Working Group.

Technical Center gets SMART

By Al Schwartz

As a premier aviation research and development (R&D), and test and evaluation facility, the Technical Center has proven to be a valuable asset to the FAA and the surrounding region. Strengthening the Mid-Atlantic Region for Tomorrow (SMART) is an organization that brings together interested parties from government, industry, and academia to identify emerging technologies for exploitation in the region and to expand the influence of the region nationally and internationally. Being a technology leader within the South Jersey region, it was obvious that the Tech Center should become a member of SMART.

SMART consists of technology leaders in four Mid-Atlantic States, including NJ, Delaware, Maryland and Pennsylvania. By leveraging the talent within the four states, SMART hopes to increase the level of research and development within the region. SMART is accomplishing this by forming "Technology Clusters," which are sub-groups made up of experts who have a common interest in an area of technology. Current "Technology Clusters" include: Biotech, Defense, Education, Energy, Fire and EMS, International Collaboration, Communications, Manufacturing, Modeling and Simulation, Materials and Transportation. **Al Schwartz**, from the Tech Center's Simulation and Analysis Group, has been a member of the cluster for more than a year.

The Modeling and Simulation Cluster (M&S) was formed to promote modeling and simulation in the region, to develop project proposals that will enhance the simulation capabilities in the region, and to establish partnerships among the members. The US Army, US Navy, University of Pennsylvania, NJ Institute of Technology, Drexel University and Lockheed Martin are just a few of the members involved in the M&S Cluster. The Center was asked to become a member by Cluster Chair, John Lancontora.

***SMART Tech Fair**: Nicole Racine from Titan (left) and Sherri Magyarits from the Simulation and Analysis Group (right).*

In May 2004, the M&S Cluster hosted its first Tech Fair at The Enterprise Center at Burlington County College, Mount Laurel, New Jersey to promote M&S in the region. The Tech Fair featured displays from M&S Cluster members and speakers providing incite into the world of M&S. The Tech Center was well represented. Both the Simulation and Analysis Group and the Technology Transfer Program Office had representatives on hand to provide information.

Working together, the Tech Center can provide SMART with a proven technology leader and knowledgeable partner, while SMART can provide the WJHTC with new opportunities and increased exposure regionally and nationally. For more information on becoming an active of a Technology Cluster, contact Richard Page at x5285 or Jacqueline Rehmann at x4739.

FAA to Study Solar-Powered Lights for General Aviation Airports

By Holly Baker

A technology that helps guide military pilots in Iraq might someday show the way for private pilots at home.

The FAA's Airport Safety Technology Section, based at the Tech Center, will install and test solar-powered taxiway lights at Cross Keys Airport in Gloucester County, NJ. This innovative program could eventually benefit thousands of small general aviation (GA) airports across the country. These are the same taxiway lights that guide pilots of U.S. fighter jets and cargo planes deployed in the Middle East.

Starting December 1, 2004, FAA visual guidance specialists began installing 90 taxiway edge lights at Cross Keys (edge lights along the main runway will not be included). The blue light-emitting diode lights will remain on from dusk to dawn. Over the next nine months, experts will check the test lights for visibility, durability and effectiveness.

Many smaller general aviation airports have minimal, if any, lighted guidance for pilots taxiing from runways to parking areas. The solar-powered lights will add safety to remote sites that lack access to electricity, as well as those airports with limited resources to pay for power.

The FAA Aerospace Forecast reports that general aviation used 19,000 different private or public airports last year. Cross Keys Airport, 14 miles southeast of Philadelphia, is representative of a typical GA airport that lacks taxiway edge lights.

Existing Taxiway Lights

The solar-powered lighting system is one of many ways the FAA Airport Safety Technology Section is working to enhance safety at airports.

New Solar Taxiway Lights

Cross Keys Airport

Interested in writing for the Intercom?
Contact Stan Ciurczak at ext. 5-4789

Lok Koo Retires

By Paul Jankowski

Lok Koo, Transportation Security Lab Test Director, retired on December 31, 2004 Lok was a major contributor to improved security at our nation's airports.

As Test Director at the Transportation Security Laboratory (TSL), he oversaw the development of the process for Certification of Explosive Detection Systems (EDS). This process was implemented in response to the mandates of Public Law 101-604, which called for the development of an automated detection system that could find the type of explosives that brought down Pan Am 103 over Lockerbie, Scotland in December 1988.

In response to recommendations from the National Academy of Science and the Office of Technology Assessment, Lok pioneered the EDS Certification Process, where none existed before. In addition, he worked tirelessly to establish the independence of the EDS Certification Office. This process is now looked upon as the world standard.

The first system to be certified was the Invision CTX-5000 in December 1994. This process is continuing at the TSL as systems are upgraded and new technologies are developed. To date, over 1000 certified Explosive Detection Systems have been deployed at our nation's airports.

Before joining the newly-formed Aviation Security Laboratory in 1990, Lok worked in various testing programs at the FAA Technical Center. He originally was hired on September 25, 1977 to work on a program called the Discrete Address Beacon System (DABS) to better characterize the position of aircraft. In 1980, as a member of the Computer Acquisition Program, he worked on the replacement of the Air Traffic Control System. He worked on the HOST program to upgrade the IBM 360 to the IBM 3083, and he also worked on the Advanced Automation System (AAS), the goal of which was to increase air traffic capacity.

We want to thank Lok for his years of dedicated service, and wish him all the best for a happy and healthy retirement!

Maria Campolo Scholarship Established

By Stan Ciurczak

Maria (Guarino) Campolo, the wife of Center employee, Lou Campolo, passed away on March 8. A perpetual scholarship at Egg Harbor Township High School has been established in Maria's name for students seeking further study in areas that she loved, including scuba, oceanography, travel, marine biology and culinary arts. Contributions in her memory may be made to:

E.H.T. Education Foundation
Maria Campolo Perpetual Scholarship Fund
c/o Dr. Philip W. Heery
Superintendent, E.H.T. Schools
202 Naples Avenue
West Atlantic City, NJ 08232

Tom Grygotis Retires

By Stan Ciurczak

***Clockwise**: Tom Grygotis (top left) launches a paper airplane at his retirement party, which was held at the Italian Gourmet Restaurant in Galloway Township; Center Director, Dr. Anne Harlan, presents Tom with his Retirement Certificate; and Mike Greco and John Wiley enjoy the festivities*

Tech Highlights

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Arresting System Tests: On January 22, a Polar Air Cargo Boeing 747 skidded off the end of runway 4R, after landing at New York's JFK Airport. The aircraft came to a rest in the middle of the arrestor bed and no one was injured. Clearly the Engineered Material Arresting System (EMAS) saves lives, but Tech Center researchers are not resting on their laurels. They recently began a series of durability tests on EMAS in a Tech Center wind tunnel in the Airflow Induction Test Facility, where a newer version of the arresting system block is being exposed very quickly to significant amounts of jet blast. The new Jet Blast Resistant (JBR) treatment for EMAS blocks has many potential benefits over existing JBR coating, including improved durability and moisture resistance, and reduction of life-cycle maintenance costs by eliminating the need to paint the surface.

Airport Lighting: Members of the local community near Arcata Regional Airport (ACV, near Eureka, CA), a regional airport served by two airlines, filed a complaint with the airport last year regarding strobe lights that were distracting and sometimes blinding nearby vehicular traffic. Airport safety experts from the Tech Center visited the site, last summer, to conduct survey measurements. After returning here they fabricated baffles that would block the light from the roadway; and, in January, they returned to install 3 baffles. They also evaluated, from both the air and the ground, whether the baffles were blocking the light from the roadway without degrading the light signal needed by approaching aircraft. Everyone seems pleased with the results.

Large Aircraft Survivability Initiative: The vulnerability of commercial aircraft to terrorist threats, particularly man portable defense systems (MANPADS), is an ongoing security concern. The U.S. Air Force has created a Large Aircraft Survivability Initiative (LASI), in order to forge a collaborative effort between the Federal government and industry

Rita Rehmann Retires

By Stan Ciurczak

***Clockwise**: Dennis Filler (top left) presents Rita Rehmann with her Retirement Certificate; Ron Esposito presents Rita with a 25-Year Service Award; Rita is congratulated by her co-worker Sue Rainey; Rita is joined by her son, Al Rehmann, and her daughter, Jacqueline Rehmann*

Tech Highlights

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that will increase commercial aircraft survivability. The Tech Center's Fire Safety Branch has a special interest in any discussion relating to the effectiveness of the FAA's fuel tank inerting system against MANPADS, and fire survivability issues, so **Dick Hill** recently attended the initial LASI workshop, which was hosted by the 46th Test Wing (Eglin Air Force Base, FL).

Piloted Ignition Paper: **Rich Lyon** recently presented a paper titled, "Piloted Ignition of Combustible Solids", at the 9th Fire and Materials International Conference, in San Francisco, which is a major international conference on the fire performance of materials, composites and related products. In addition, **Rich Walters**, Galaxy Scientific, co-authored a paper titled, "Heat Release Test Method for Noncombustible Materials", with three scientists from the National Institute of Standards and Technology (NIST).

Laboratory Visit: **Kelvin Coleman**, Special Assistant for Programs and Planning, FAA Office of Commercial Space Transportation, recently Tech Center labs, and was briefed on Terminal Radar Approach Control Weather Information Requirements, Traffic Management Advisor Information Presentation and the Future En Route Workstation.

Unmanned Aerial Vehicles: Tech Center engineering research psychologists from the NAS Human Factors Group discussed the design of a Ground Controller Workstation for Unmanned Aerial Vehicles (UAVs) with a representative of the U.S. Coast Guard. They also provided documentation about air traffic control workstations, and examples of the details that are needed to design a usable computer-human interface.

A Tribute to Mike Chappine

By Charlie Bilardo

The recent passing of **Michael J. Chappine**, on Christmas Eve, has certainly taken aback everyone who knew him at the Technical Center. Mike cut a figure that was truly larger than life, and to those of us who knew him personally, he was unquestionably much more than that. For those of us in Accounting, Mike was much more than an accounting officer; he was also a comrade in arms, and above all, a truly unique and unforgettable individual.

When events seemed to be overtaking all of us, Mike would summon-up his own special brand of coolness and patented humor. Mike had that uncanny skill to turn the impossible to the probable and the preposterous to the practical. Amazingly, all of this magically came to reality with a cool, collected smile; a keen sense of practicality; and that incongruous sense of humor that unfailingly sent us rolling on the floor.

What was most noteworthy and admirable about Mike was his sensitivity. Like most males, he tried to mask this venerable trait, but it always managed to work its way to the surface.

Finally, Mike loved the great outdoors and the creatures that inhabited it unconditionally. It was his way of inserting some sense of sanity in an otherwise frenzied world full of contradictions and imponderables. He was an accomplished hunter, and true to this character he sincerely respected and admired the deer for its majestic presence and the gifts it offered to man.

Mike is now in the best of hands and in the presence of majesty that far surpasses the beauty of our great outdoors. If we can remember Mike, in this manner, he never will leave us in spirit. For those of us in the Financial Management Division, we will remember him gliding through the aisles and partitions and being the one and only Mike Chappine. Big guy, we always will miss you, but we will never forget you. Thanks for the fond memories!

God bless you, Mike!

The late Mike Chappine

Michael Chappine Scholarship Fund

By Stan Ciurczak

Mike Chappine, our accounting officer at the Tech Center, died unexpectedly on Christmas Eve. Friends are asked to contribute to the Michael J. Chappine Scholarship Fund, Tabernacle Township School, c/o the Board of Education, 132 New Road, Tabernacle. NJ 08088.

Bob Chupein Family Fund Established

By Stan Ciurczak

Bob Chupein from the Information Technology Division passed away suddenly on January 6, leaving behind his two children, Bobby, age 14 and Jennifer, age 11. The NAFEC Association has set up an account at the FAA Technical Center Credit Union to accept donations toward the care of Bobby and Jennifer.

If you wish to make a donation, please stop by or send your donation to the credit union, Account Number 212720. Checks should be made out to “Bob Chupein’s Family Fund.” Donations will be accepted until March 31, when they will be forwarded to the children in care of their mother, Chris Chupein.

Right: The late Bob Chupein

Randy Bowen Remembered

By Elizabeth Turcich

Joe Schanne and Sue Bowen

Randall S. Bowen, a project manager for the Office of Independent Test & Evaluation, (IOT&E) passed away on June 22, 2004, at the age of 52 after a year-long battle with cancer. Randy was an FAA employee for 22 years.

Randy held degrees from Bloomsburg University and Millersville University. Before joining the Office of IOT&E in 2002, he held various positions in air traffic control at the Wilkes-Barre-Scranton, Honolulu and Harrisburg airports, and also worked at FAA Headquarters. In his work on IOT&E teams, he brought his knowledge and experience to bear on the Capstone program, ASR-11 and ITWS.

Randy’s influence on his co-workers and friends is evident in the words they use to describe him. IOT&E Office Director, **Joe Schanne**, describes Randy as, "A shining example of an IOT&E staff member. In addition to the extensive technical and operational expertise that he brought to the job each day, Randy had kindness and compassion."

Joe Schanne recently unveiled a plaque designating the office conference room as the Bowen Conference Room. Randy’s wife, **Sue Bowen**, was on hand for the ceremony. She thanked the Office of IOT&E for honoring Randy’s memory, and said that Randy thought that being an IOT&E project manager was his perfect job.

The plaque commemorating the dedication of the Randy Bowen Conference Room bears the words:

“Randy’s professionalism and dedication were an inspiration to all who had the pleasure to know him. This conference room is dedicated to his memory so that we can always be reminded that one person can truly make a difference in the lives of many.”

Remembering

By Stan Ciurczak

We honor the memory of our former colleagues and friends. May they rest in peace.

Michael J. (Mike) Chappine passed away suddenly on Christmas Eve at the age of 49. Mike was the Accounting Manager at the Technical Center and also the Vice President of the Tabernacle Township Board of Education. He is survived by his wife, Judy (Grovatt) Chappine, 2 children, a surrogate child and many other relatives and friends.

Robert (Bob) Chupein passed away suddenly on January 6 at the age of 42. Bob worked in the Information Technology Division of the Technical Center. A son and a daughter survive him.

Oscar Leroy (Duke) Dugan passed away on October 25, 2004, at the age of 80. Duke was a maintenance worker at the Technical Center when he retired. Three children, two foster children and two grandsons survive him.

Ruth Farrell passed away in October 2004. Ruth retired from the FAA after working for NAFEC and the Tech Center for 25 years. She was a very friendly, knowledgeable librarian who had enjoyed travels to Egypt, Japan and Russia. She worked for the U.S. Air Force in California and Germany for 10 years prior to working here.

Steven Forstner passed away on October 11, 2004, at the age of 86. Steven retired from the U.S. Navy and then worked for NAFEC for many years. He was the Past Commander of VFW Post 2389 in Pleasantville and also was the 16th District Past Commander. He is survived by a number of close friends.

Mark D. Giberson passed away on November 10, 2004, at the age of 46. A veteran of the U.S. Navy, Mark worked for the Technical Center as a contractor Senior Test Engineer for more than 20 years. His wife, Lisa Ciccarelli Giberson, and 2 children survive him.

Alma Fay (A-Fay) Horn passed away on September 25, 2004, at the age of 80. A-Fay was a well-known photographer in Philadelphia before moving to Atlantic City, where she took pictures for the famous Club Harlem. She later worked as a computer programmer for NAFEC. Two sisters survive her.

Robert B. (Bob) Hull passed away on January 12 at the age of 66. Bob was a U.S. Army veteran before working for NAFEC and the Technical Center as Supervisor of Support Systems. He retired from the FAA after 35 years of service. Bob was instrumental in developing the Northfield Cardinals Football Field. His wife, Mary (Boner) Hull, 3 sons, 2 daughters and 11 grandchildren survive him.

Aubrey L. (Mac) MacFarland passed away on December 21, 2004, at the age of 90. During World War II, Mac worked on the Battleships New Jersey and South Dakota. He then worked as a welder for the Philadelphia Navy Yard and for NAFEC. His wife, Katharine, predeceased him. A son, 4 grandchildren and 5 great-grandchildren survive him.

Robert D. Miller passed away on November 7, 2004, at the age of 82. During World War II he served in the U. S. Navy. He then became an Aircraft Inspector for NAFEC and the Technical Center, before retiring from the FAA in 1982. Marie R. (Reinhard) Miller, his wife of 56 years, a son and 2 grandsons survive him.

Nancy E. (Rusty) Olufs passed away on November 11, 2004, at the age of 69. Nancy came to work at NAFEC as a Secretary after serving in the U.S. Air Force. She later worked for the Technical Center on air traffic control systems as a Systems Analyst. Nancy is survived by 4 children and 7 grandchildren, and is interred at the Atlantic County Veterans Cemetery.

Frederick W. Ranger, Jr. passed away on December 12, 2004, at the age of 70. He served in the U.S. Air Force, during the Korean War, and played on the 1956 World Champion Basketball Team for the Air Force. He worked for NAFEC and the Technical Center before retiring from the FAA. He later worked as a consultant for TRW. He also was a Northfield city councilman from 1984-1986, and was a founding member of the Northfield Pool, now known as the Tilton Swim Club. His wife, Jemma T. Ranger, predeceased him. A daughter and a son, 6 grandchildren and a great-grandson survive him.

Patricia M. (Pat) Shannon passed away on January 5 at the age of 64. She retired from the FAA after working for NAFEC and the Technical Center for 30 years. Pat is survived by a daughter and was predeceased by her son, Richard Shannon, Jr. She is survived by 7 grandchildren and 2 great-grandsons.

Rosemarie Sutocky passed away on November 4, 2004, at the age of 77. Rosemarie was a retired longtime secretary with the U.S. Government who worked in Washington, DC and at NAFEC. Many nieces, nephews, great-nieces and great-nephews survive her.