

Bringing ONE NASA to financial systems



and NASA Headquarters in using NASA's first integrated financial management system.

The Center is already seeing results from the new system: JSC's Financial Management Division closed the books for the month of February in a record two days, instead of the typical eight days using the legacy systems.

Such efficiency is one of the goals of the Core Financial module, which is the backbone of the Integrated Financial Management Program (IFMP) – the Agencywide effort to streamline and modernize NASA's financial and administrative systems and processes. The Core Financial module gives JSC and the Agency timelier, more consistent and more reliable financial information, and improves accountability to enable future full-cost accounting. It also helps NASA improve its information exchange with customers and stakeholders.

The implementation of such an ambitious project took a lot of cooperation and hard work.

More than 60 JSC Implementation Team members have dedicated the last 11 months to make the goals of Core Financial a reality. To tackle the formidable workload, these civil servants and contractors organized into sub-teams: Project Management, Technical Support, Data Conversion, Process Management, Change Management and Rollout. Project Manager Dot Swanson is quick to share the credit.

"I was fortunate in that I had a fantastic team," said Swanson, "and the help of a great Deputy Project Manager in Carol Harvey. And throughout the project, John Beall, Randy Gish and the JSC Steering Committee gave us the support and resources we needed to be successful." Beall is JSC's Chief Financial Officer, and Gish is Director of Procurement.

The project was rolled out over multiple phases. During the "Understanding" Phase from March 2002 to May 2002, teams worked to assess the scope and complexity of the subsequent "Implementation" Phase. Once Implementation began in June 2002, the teams geared up to

When Johnson Space Center "went live" with the Core Financial system in late February, its 1,080 users joined colleagues from Marshall Space Flight Center, Glenn Research Center, Kennedy Space Center

configure the Core Financial software, design and test the interfaces and prepare for the data conversion. They also began to prepare the end-users by establishing a Center-wide network of Change Agents to support communications, assigning Core Financial roles to users and developing and delivering training based on those roles. The JSC user community deserves its own recognition for its patience and flexibility throughout the implementation.

Since activating all the users, the JSC Implementation Team has provided a variety of Post-Go-Live support processes. These include:

- ❖ The Online Quick Reference tool (OLQR), a Web-based aid with detailed trouble-shooting instructions. The OLQR can be found at <http://olqr-cf.ifmp.nasa.gov>.
- ❖ The Core Financial Live Lab, where users can receive assistance from an experienced user when entering the transactions into the new system. The lab is located in Bldg 12, Room 276; hours are 8:30 a.m. to 5:00 p.m. Monday through Thursday, and until 3 p.m. on Fridays.
- ❖ The IFMP Help Desk, which has been staffed with supplemental experienced users for the period after Go Live. The Help Desk can be reached at (281) 483-9999 or by e-mail at "IFM-SAP Help Desk;" hours are 8 a.m. to 5 p.m. weekdays.

As with any new system implementation of this scope, the Implementation Team and Center Management anticipate that there will be some problems to overcome. However, they also know from experience that when NASA teams work together, there are no issues that they cannot resolve.

The JSC Implementation Team looks forward to June 2004 when the remaining NASA centers go live, and the vision of One NASA is actualized in the Agency's financial systems.

For more information on the IFMP Core Financial Project, onsite employees can visit <http://www4.jsc.nasa.gov/org/la/cfo/ifmp/> and offsite readers can visit <http://ifmp.nasa.gov/>.

News from White Sands

NASA's nose: George Aldrich helps avoid smelly situations in space

By Kim Hulsey

Thanks to George Aldrich and his team of NASA sniffers, astronauts can breathe a little bit easier. Aldrich is a Chemical Specialist or "chief sniffer" at the White Sands Test Facility's Molecular Desorption and Analysis Laboratory. His job is to smell items before they can be flown in the space shuttle.

Aldrich explained that smells change in space and that once astronauts are up there, they're stuck with whatever smells are onboard with them.

In space, astronauts aren't able to open the window for extra ventilation, Aldrich said. He also said that it is important not to introduce substances that will change the delicate balance of the climate of the International Space Station and the space shuttle.

More than being merely unpleasant, smells in space can indicate a health threat. Even objects that give off no odor can emit dangerous chemicals by a process called off-gassing. If an object's off-gassing has toxic effects, it can be a matter of life and death.

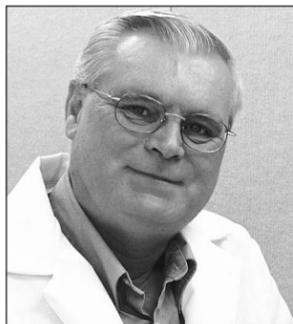
"Smell is brought out by confined spaces and heat," said Aldrich, "yet astronauts have no way of escaping a smell if it becomes pervasive. If that smell comes from dangerous compounds, it's a serious health threat."

It is Aldrich's job to use his sense of smell to ensure the olfactory comfort, as well as the safety, of astronauts on orbit.

The science of smelling

When he was just 18 years old, Aldrich began working at WSTF's fire department and was asked to be on the department's Odor Panel. Aldrich explained that one of the requirements to get a job as a sniffer is a lack of any allergies or respiratory problems.

"If you have a lot of allergies, your nasal passages are already irritated and cannot be used," he said. NASA calibrates and certifies its sniffers' noses every four months using a "10-bottle test" in which seven of the bottles have odors and three of them are blanks. The seven scents must be categorized as musky, floral, ethereal, camphoraceous, minty, pungent or putrid.



WSTF 0301-0639
Photo by Lou Rosales

George Aldrich is a Chemical Specialist or "chief sniffer" at the White Sands Test Facility's Molecular Desorption and Analysis Laboratory.

According to the NASAexplores Web site (www.nasaexplores.com), Aldrich's team tests nearly all items that astronauts would encounter during their flight – including fabric, toothpaste, circuit boards, makeup and even the ink on their checklists.

First, the items are tested for toxicity. They are placed into individually sealed containers and then into an oven, which is heated to 120°F for three days to speed up the off-gassing process. The gases are then extracted and tested to determine whether they are toxic or carcinogenic. If the gases are deemed safe, the items then undergo odor testing.

Aldrich and four other team members smell the items and rank them on a scale of zero to four, ranging from non-detectable (zero), to barely detectable, easily detectable, objectionable and offensive (four). Aldrich refers to level four as "get-me-out-of-here." Because the sense of smell can vary from person to person, sniffers give each object their own ratings from which an average is obtained. If an item rates more than a 2.4 on the scale, it fails the test and is not allowed on the flight. Some items that have failed are camera film, felt-tipped markers, mascara and certain types of stuffed animals. Aldrich has done 765 of these "smell missions" to date.

NASA could use dogs or "electronic noses" for this testing, but as Aldrich pointed out, the Agency would rather use human sniffers because they serve as a screening test for the also-human astronauts. The human testers can more accurately identify smells that will offend the human crewmembers than an electronic nose could.

As a result of his career, Aldrich has had some uncommon opportunities. He has served as a judge four times at the Odor-Eaters Rotten Sneaker Competition. He has also appeared on television a number of times, including appearances on two game shows.

While others may chuckle at his unusual occupation, Aldrich said he believes in its value.

"I wouldn't be doing it if I didn't think it was important," he said. ❖

Don't miss a beat

AED machines can save lives during cardiac arrest

By Kim Hulsey

Betty Gress would not be alive today if not for the quick actions of her office mates and the availability of an automated external defibrillator (AED).

"I think about how extremely lucky I was to be in a place that had the people with the courage to do what needed to be done and the equipment to do it with," said Gress, Station Flight Manager in Johnson Space Center's Mission Integration and Schedule Management Office. "I know for a fact that I would not be here today if it were not for the AED in the building."

Gress was saved by one of 58 AEDs onsite, and she is one of four such success stories so far here at JSC. AEDs have proven to be invaluable medical tools for the Center since they were brought here about three years ago.

"You make one save and it pays for itself, really," said Russ Tucker. Tucker, a Corporal with the Special Operations Division in Physical Security Support, is a believer in the AED machines.

What is an AED?

An AED is a device used to administer an electric shock through the chest wall to the heart. This device has proven to be the only effective way to treat sudden cardiac arrest. Built-in computers assess the patient's heart rhythm, judge whether defibrillation is needed and then administer the shock. Audible prompts and lighted indicators guide the user through the process.

Sudden cardiac arrest is so dangerous because it is unpredictable and can happen to anyone – even a child – and many victims have never had any prior heart problems. Sudden cardiac arrest is due to an electrical malfunction in the body, causing the heart to stop beating properly. The heart then becomes an ineffective pump that no longer supplies the body and brain with oxygen.

Within seconds, the victim falls unconscious and has no pulse. Only immediate treatment, such as CPR and the use of an AED, can prevent death. Every minute without treatment decreases survival by 10 percent.

"Early intervention is the key to the chain of survival," said Dr. David Williams, Director of Space and Life Sciences. With AEDs and trained AED operators located throughout JSC property, help can be given in the critical initial two to four minutes when the chance of survival is much higher.

Who can use the AED?

Most AEDs are designed to be used by non-medical personnel who have received proper training.

"Virtually all of the employees who volunteered to be trained and certified as AED operators have not been a part of any first-response rescue team," said Bob Gaffney, JSC Emergency Preparedness Manager.

AEDs are relatively easy to use, but the operator must know how to recognize the signs of sudden cardiac arrest and when to call JSC's emergency phone numbers. Operators must also be certified in CPR, which stands for cardiopulmonary resuscitation. Early CPR is an integral part of providing lifesaving aid to people suffering sudden cardiac arrest. The ventilation and compressions help to circulate oxygen-rich blood to the brain between shocks.

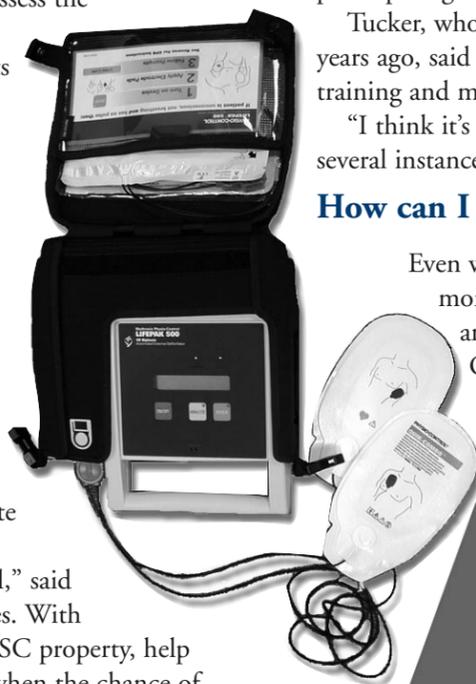
In addition, it is important for operators to receive formal training on the AED model they will be using so that they become familiar with that particular device and can operate it successfully in an emergency. Certified AED operators must commit to maintaining their skills and certification by participating in monthly computer-based refresher training.

Tucker, who used an AED to help save a life at JSC fewer than two years ago, said that the benefits of the program make it well worth all the training and maintenance required.

"I think it's an excellent program," said Tucker. "There have been several instances where people have been brought back."

How can I volunteer as an AED operator?

Even with more than 500 certified AED operators, JSC still needs more people who are willing to be trained and certified in CPR and the use of AEDs. Interested employees should call the Occupational Health Office at x37896 or Mike Fox in the Human Test Support Group at x25724.



NASA JSC 2002e50930 Photo by Bill Stafford

Betty Gress, whose life was saved with an AED last year, is pictured with the people who played a role in her rescue. From left to right are: Jeffrey Davis, Director of Space and Life Sciences Directorate; Daniel Sedej, Communication and Tracking Group Lead, training division; Robert Smith, member of the JSC Security Bike Patrol; Gress, Station Flight Manager in the Mission Integration and Schedule Management Office; Michael Prendergast, Flight Manager for the Mission Operations Directorate; and Kimberly Kennedy, Flight Manager for the Mission Operations Directorate.

Mars Settlement Design Competition

In just one weekend, more than 100 high-school students departed from Johnson Space Center and traveled 60 years into the future.

Over the weekend of Feb. 21-23, JSC hosted its annual Mars Settlement Design Competition. The competition is an exciting industry simulation game for high-school sophomores, juniors and seniors in the Houston and southeast Texas area.

The competition scenario required the four competing student "companies" to design a base on Mars for almost 19,000 people in the year 2063. The winning students called their "company" Vulture Aviation.

This year 157 students attended the competition along with 15 teachers/chaperones. The students and teachers represented 54 different high schools and 34 school districts.

The driving forces behind the yearly event are Astronaut Bonnie Dunbar, who initiated the competitions at JSC five years ago; Norm Chaffee, InDyne, Inc. Consultant; and Mike Kincaid, Education and Student Programs Branch Chief.

This is the fifth year that JSC has sponsored this competition as part of its educational outreach activities during the National Engineers Week period in February.

In addition to JSC, the competition is sponsored and underwritten by Boeing, Dow, Clear Creek ISD and the Houston section of the American Institute of Aeronautics and Astronautics.

JSC also sponsors a similar competition at the White Sands Test Facility in October of each year. The WSTF competition has been active for four years. ❖



NASA JSC 2003e15030 Photo by Robert Markowitz

The competition judges discuss the students' proposals. From left are Beatriz Kelly-Serrato, Lockheed Martin Engineer in the Crew and Thermal Systems Division; Kerry Soileau, Aerospace Technologist in the Avionics and Software Office; Shirley Brandt, Hernandez Engineering Scientist Specialist in the Automation, Robotics and Simulation Division and Astronaut Bonnie Dunbar, Assistant Director for University Affairs and Research and founder of the JSC and WSTF competitions.



NASA JSC 2003e15028 Photo by Robert Markowitz

Students collaborate to create their proposed Mars bases during the competition.



NASA JSC 2003e15029 Photo by Robert Markowitz

Here, high-school students are hard at work planning their proposed Mars bases.

Background Photo NASA JSC 2003e15031 Photo by Robert Markowitz

Participants in the Mars Settlement Design Competition catch up on some much-needed rest.

SPACE CENTER Roundup

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