Computer problems overcome during STS-100

By Julie Burt

On April 24 – the eve of what was to be a historical robotic-arm handshake in space – an alarm sounded in the Destiny lab of the International Space Station and in the Mission Control Center. The primary command and control computer’s hard drive experienced a failure.

Expedition Two Flight Engineer Jim Voss, who said goodnight from the station six minutes earlier, returned from his sleep area to talk with the CAPCOM, or spacecraft communicator, in Mission Control.

The CAPCOM told Voss that the primary command and control computer could not link up with its hard drive. After repeatedly trying to gain access, they attempted to reset the computer. It failed, which set off the alarm.

Voss returned to bed when the backup computer, equipped with identical software, automatically took over. While they slept, the STS-100 and Expedition Two crews had no idea the days ahead would bring continuing computer problems and failures.

“These were the most serious events we have had since the beginning of the space station program,” said station Lead Flight Director John Curry.

On April 25, eight hours after it was brought on as primary, the second computer began to show similar trouble and could not access its hard drive.

Troubleshooters in Mission Control wanted to switch over to a clean computer to resume the day’s activities. One more computer waited on standby to take over if needed.

Upon recommendations from the Onboard, Data, Interfaces and Networks (ODIN) team and the Mission Evaluation Room (MER), Curry authorized the switchover to the third computer. Against probability, the third computer did not work. After attempting to reset the computer, Mission Control lost all status data, or telemetry, from the station. The crew could not connect any of the United States system computers, leaving both Mission Control and the crew “blind” as to the status of the their systems.

In Building 30 at Johnson Space Center, Mission Evaluation Room personnel led the effort to understand the failures and recommend corrective action. The Mission Evaluation Room is in charge of the sustaining engineering and responsible for solving all on-orbit problems.

“The MER has a lot of capability to put a lot of brainpower on problems. This problem was a real test of that,” MER Manager Scott Gahring said.

They called Honeywell—the primary contractor for the command and control computers—immediately when the problem surfaced. Key personnel flew to Houston while their Glendale, Ariz., team stayed involved in real-time evaluations.

Success!

In the hours before the computers failed, the crew had completed Flight Day Four activities. This included the installation of the station’s robotic arm, Canadarm2, to the lab cradle assembly on the Destiny lab. It was powered up and ready to go for the next day’s activities—a loaded checkout of Canadarm2 and the transfer of the space lab pallet—the device on which it was launched—to the Shuttle’s robotic arm.

The station arm hung over the Destiny lab holding the pallet while the crew slept and while the failures were occurring. Unfortunately, the failures made it impossible for the crew to perform robotics operations as they were trained. Software needed to be loaded on the SSRMS from the failed computers. Since the hard drives could not be accessed, the software stored in them was out of reach as well.

The STS-100 lead robotics flight controller, Aaron Goldenthal, had to act fast. He sent updated procedures to the robotics trainers for verification. Then, he told the crew that they would now have to work in what is known as “single joint mode.” Instead of being able to program the arm to move to a certain place and then push a “go” button, they would now have to activate each individual movement separately.

As if that was not enough, the Robotic Work Station could not pick up the arm’s activity. This made it a long process of the crew executing a command and the ground confirming the command was accepted.

The robotics flight controller would send up a procedure for the crewmember to follow. The crewmember would manually turn a switch to choose a joint on the Station’s arm. The arm would move in a selected direction. Then the crewmember would put on the brakes. Finally, the robotics flight controller would have to confirm that the movement occurred.

“It was like watching grass grow,” said lead station robotics trainer Lane Honeycutt. Under normal circumstances, the robotics operations were supposed to take four hours and 30 minutes. The crew only exceeded this by an hour and a half, doing the operations virtually manually with almost no computers working.

“The coordination between the crew and the robotics Flight Control teams was a picture of perfection,” Honeycutt said.

The space lab pallet was handed off and the Station’s new arm was in a good configuration for the next assembly mission, 7A.

Chili cookoff winners announced.

Page 4

Safety and Health Fair a success.

Page 5
INFO TO KNOW

Viewing Shuttle launches and landings

Visitors interested in viewing a shuttle launch at Kennedy Space Center (KSC) may inquire about such opportunities offered by Delaware North Park Services, Inc., the concessionaire responsible for NASA’s Guest Services at Kennedy Space Center. You may call them at (407) 449-4444.

Car passes are no longer available for KSC due to the large number of requests from the public. However, there are many off-site viewing locations that offer prime viewing opportunities. You can find more information about these sites on the KSC Website at http://www.ksc.nasa.gov.

A recorded manifest of anticipated launch dates is available by calling (407) 867-4636. During countdown, a recorded launch status is available at (407) 867-0000. The Future Flight Launch Schedule is also available online at http://spaceflight.nasa.gov/shuttle/future/index.html.

Due to the average cloud cover in the area, shuttle landings are frequently more difficult to see than launches. In addition, there is no viewing area large enough to accommodate the general public. However, any of the off-site viewing locations mentioned on the KSC Website can also be used to see a shuttle landing.

Adjustments made to launch dates

The Shuttle and Station programs recently decided to adjust a number of launch dates to accommodate wiring modifications and structural inspections to two orbiters, and to provide the proper spacing between Expedition missions to the ISS. The changes were officially confirmed at a Joint PRCB attended by Shuttle and ISS Program Managers Ron Dittemore and Tommy Holloway. The changes made are:

- STS-108 (UF-1) Moves from 11/19/01 to 11/29/01 (one week after Thanksgiving)
- STS-110 (8A) Moves from 1/17/02 to 2/28/02
- STS-111 (UF-2) Moves from 3/14/02 to 4/18/02
- STS-112 (9A) Was officially baselined for 7/11/02

Expedition Two Science Experiments

For the next several issues, we will list some of the science experiments being performed on the International Space Station.

ADVASC
Advanced Astroculture-Express Rack 1
Dr. Weijia Zhou, University of Wisconsin-Madison
A plant growth experiment that will be used to study the effects of microgravity on the chemical and genetic make-up of a plant in the same family as cabbage and radishes. The seeds will grow into plants whose seeds will be returned to Earth for study. Delivered during STS-100/6A in April 2001. Earlier versions flown on eight previous shuttle missions and on Mir.

More ADVASC Info: Expedition Two press kit, p. 7

ARIS ICE-Active Rack Isolation System
ISS Characterization Exp.-Express Rack 2
Dr. Jim Allen, Boeing, Houston, TX
The Active Rack Isolation System absorbs vibrations that could affect sensitive scientific experiments. Experiments aboard the space station that are sensitive to vibrations will be put in EXPRESS Rack 2. The ARIS ICE portion of this equipment supports space walk operations and augments the Service Module gas re-supply system.

More ARIS ICE info: Expedition Two press kit, p. 6

Bonneau Ball Neutron Detector-Human Radiation Measurements
NASA JSC, Houston
The Bonneau Ball Neutron Detector-Human measures the amount of neutron radiation that enters the space station. Neutron radiation can affect the blood-forming marrow in bones. The data will be used to develop countermeasures to protect astronauts on long duration missions. Delivered during STS-102/5A in March 2001. Flown previously on shuttle.

More Bonneau Ball info: Expedition Two press kit, p. 9 http://spaceflight.nasa.gov/missions/science/experiments/bball.html

CEO-Crew Earth Observations-Destiny Lab
Dr. Kamlesh Lulla, NASA JSC, Houston
Photographs taken by the crew, using handheld cameras that are used to record long-term changes on the surface of the Earth. Initiated on station with Expedition One crew in November 2000. Continuing a program that began with the first spaceflights (Mercury) in the early 1960s.

More CEO info: Expedition Two press kit, p. 10 http://eol.jsc.nasa.gov/

The Expedition Two press kit can be found at: http://spaceflight.nasa.gov/missions/exp2/exp2_presskit.pdf
EVA achievements spotlighted at awards event

The EVA (Extravehicular Activity) Project Office sponsored an annual EVA award event on May 8, 2001, in the Gilruth Ballroom. The event recognized the civil service and contractor community for the activities in the past year.

Shuttle Flight
Five flights through 4A (CY00) 
EVAs
Nine EVAs for a total of 59 hours and 37 minutes.

Development Test
Eight Major NBL Development Tests, of which two were for verification purposes.
Eight engineering runs, 24 crew runs.

EVA Training
2,377 hours NBL training.
358 NBL suited events.
4,713 hours EVA training.

Water Process
961 Class III suit processed by FCE.

Fit Checks (tool-to-tool)
Total: 2380

Hardware Processed
1098 EVA tools were processed.

Number of New Tool Built
Completed 31 new tool development projects. For these new developments, 70 flight units and 56 training units were delivered.

Raytheon Technical Services Services elected to space research industry forum

Raytheon Technical Services Company (RTSC), a subsidiary of Raytheon Company (NYSE: RTNA, RTNB), and a leading support services provider for defense, federal and commercial customers, was elected as a member of the National Space Biomedical Research Institute’s (NSBRI) Industry Forum.

As an Industry Forum member, Raytheon will help NSBRI transfer technologies and converting them to use in the commercial arena makes them a natural addition to the Industry Forum, said Dr. Joseph Kerwin, NSBRI Industry Forum chairman and a former astronaut.

“Raytheon has exhibited a desire to make major contributions in this area, and it will be a major asset to the Industry Forum.”

The NSBRI, established in April 1997 following competitive selection by NASA, is a consortium of 12 research institutions leading a national effort to carry out the research necessary to ensure safe human exploration of space.

The Institute’s research into the health risks associated with long-duration space travel is designed to address similar conditions found on Earth. A few of these similarities include bone loss, muscle wasting, sleep disorders and balance problems.

Raytheon Technical Services Company provides technical, scientific, and professional services to defense, federal and commercial customers worldwide. It specializes in management, operation and maintenance of customer facilities, equipment and systems; logistics and life-cycle support; overhaul and repair depot operations; engineering, logistics and personnel support for earth sciences; test and training range support; and privatization of government services.

Steven Corbin, program manager for the Microgravity Sciences Application Department in the Aerospace Engineering Services group of RTSC, will represent Raytheon on the Company is a global technology leader in defense, government and commercial electronics, and business and special mission aircraft.


The NSBRI’s consortium members are Baylor College of Medicine, which serves as the lead institution, Brookhaven National Laboratory, Harvard Medical School, The Johns Hopkins University, Massachusetts Institute of Technology, Morehouse School of Medicine, Mount Sinai School of Medicine, Rice University, Texas A&M University, University of Arkansas for Medical Sciences, University of Pennsylvania Health System and University of Washington.

The EVA (Extravehicular Activity) Project Office sponsored an annual EVA award event on May 8, 2001, in the Gilruth Ballroom. The event recognized the civil service and contractor community for the activities in the past year.

Ron Dittermore, Manager of the Space Shuttle Program, was the guest speaker. Steve Dorsting, Acting Deputy Manager, read citations. G. Allen Fliynt, Acting Manager, EVA Project, and Leroy Chiao, EVA Crew representative, presented the following awards:

**MISSION AWARDS**

Certificates designed with flown EVA patch for activities in the past year.

STS-99 Shuttle Radar Topography Mission

For outstanding support to the successful STS-99 mission

STS-101 2A.1, Destiny Laboratory Module

For support of the successful EVA’s that were executed on STS-98, 5A.

STS-106 2A.2, ISS Assembly, P6 Truss

For outstanding support to the successful EVA’s that were executed on STS-92, 3A.

STS-98 5A, Destiny Laboratory Module

For support of the successful EVA’s that were executed on STS-97, 4A.

STS-99 Shuttle Radar Topography Mission

For outstanding support to the successful STS-97 mission

STS-101, 2A.2a, ISS Assembly, P6 Truss

For support of the successful EVA that was executed on STS-106, 2A.2b

STS-95, 4A, ISS Assembly, P6 Truss

For support of the successful EVA that was executed on STS-101, 2A.2a

STS-92, 3A, ISS Assembly, P6 Truss

For support of the successful EVA’s that were executed on STS-98.

STS-102 5A.1 Expedition Two Crew

For support of successful STS-102 5A.1 that were executed on STS-102, 5A.1

**EVA HONOR AWARDS**

EVA certificate with flown EVA patch for events and activities that are not planned or scheduled

John Graf

For outstanding efforts to identify and validate the inability of the Druzeo Tubes to detect MMH contamination of an EVA crewmember

Armon Knight

For outstanding support for the waiver process for shipping the USA Simplified Aid for EVA Rescue (SAFER)

Gary Kerch and Greg LeSourgeoine

For outstanding efforts to build and certify the quick disconnect lever tool prior to the flight of STS-99

Eric Darcy

For outstanding efforts to coordinate multiple BETA battery engineering tests

Patrick Donavan

For outstanding efforts during STS-97, helping to resolve the problem with the tensile loading of the solar array

Ernie Becker

For leadership and dedication to improve safety and test operations at the NRL

Lyn Rose

For excellent support in developing the EVA Flight Data File checklists for each mission

Patricia O’Connell and David Segovia

For outstanding efforts to develop and reproduce labels for the exterior of the International Space Station elements

John Donellian

For outstanding effort for the International Space Station Nodes 2 and 3 Extravehicular Activity (EVA) Jeff Case and Eleriaw “Yuma” Escobar

For diligence and attention to detail, a problem with the High Strength Bridge Clutch was uncovered prior to STS-100, 6A

**SPACEFLIGHT AWARENESS TEAM AWARDS**

STS-97, Team 4 Solar Array Recovery Team

For their real-time mission support of the STS-97 EVA repair of the damaged solar array wings. Without the efforts of these people, the ISS would not have two fully functional Solar Array Wings.

STS-98, Sunnyvale Solar Array Recovery Team

During STS-97, this team traveled with very short notice to Sunnyvale, California, where they worked long hours with the Solar Array Wing designers to develop, test and relay to Houston the procedures that were used to repair the damaged solar array.

**EMU Decontamination Procedure**

For their superior efforts in developing procedures for decontamination of the EMU. These procedures were crucial to the safety of the crew and success of the first EVA on STS-98 when EV2 became contaminated with ammonia.

**EMU Oxygen Contamination Recovery Team**

For their dedication and exemplary efforts in identifying and recovering from the hydrocarbon contamination found in the Secondary Oxygen Packs (SOP’s) in the EMU System. Their efforts allowed for the safe and on time support of critical ISS assembly missions.

**JSC GROUP ACHIEVEMENT AWARDS**

Strela Temporary Stowage Device Team

For the successful quick-turn delivery of the Strela Temporary Stowage Device for STS-101, used to temporarily stow Strela on PMAI

SHOSS Box Team

In recognition of their outstanding support of the EVA’s conducted on STS-101 and STS-106

Increment 1 EVA-Integrated Product Team (IPT)

For extraordinary effort in developing new procedures and processes to ensure the EVA readiness of the first ISS Long Duration Flight Crew and ground controllers.

EVA Analysis Integration Team (AIT) and Recovery Team

For outstanding support to the successful Tool Development Efforts for the STS-97 Mission

**NASA Technical Interface Change Team (TIM)**

For demonstration of extraordinary commitment and exemplary professionalism in resolving complex international issues leading to better cooperation between US and Russian partners that resulted in improved proficiency and safety of ISS Increment EVA as documented in EVA TIM protocols signed in February and March of 2001

NBL KSC Trip Team

For contributions to identifying EVA flight hardware and training mockup differences to improve the quality of NBL training and EVA flight support

**EMU Oxygen Contamination Logistics Recovery Team**

For dedication and performance exceeding all expectations in implementing a recovery plan after discovering hydrocarbon contamination in theEMU secondary oxygen system

EMU Processing Team

For the extraordinary efforts put forth associated with processing EMU’s

June 1, 2001 3
And the Chili Cookoff winners are...

**Judged Best Chili:**
1st Wing Nuts
2nd S.O.B. (Son of BARF)
3rd Crime Scene Chili
4th (tie) Jalapeno Attack
4th (tie) Wrong Stuff

**People’s Choice Chili:**
Catalytic Chili Peppers

**Showmanship:**
1st Catalytic Chili Peppers
2nd Surfin Chili
3rd Crime Scene Chili
4th Chili Wizards

**GAMES:**

- **Grapefruit Pass:**
  1st Wrong Stuff
  2nd Chili Wizards
  3rd Surfin Chili

- **Spoon Drop:**
  1st Wrong Stuff
  2nd Arm Pit Chili
  3rd Chili Wizards

- **Pyramid Build:**
  1st Hope’s Hollywood Hot Stuff
  2nd Catalytic Chili Peppers
  3rd Ay Chihuahua

- **Space Trivia:**
  1st Surfin Chili
  2nd Frisky Peppers
  3rd Bugs

---

Chili and fun were served up Saturday, May 5

---

‘Moo-ve’ over
There’s two new Longhorn Steers at JSC

On Monday, May 9, two new employees started at JSC’s Longhorn Pavilion.

Thanks to Wayne Turner and members of the Dow Chemical Company, and Bruce Withers and the Trident Energy Company, two Longhorn Steers were donated to the JSC Longhorn Project. Trident Love and DCC Ranger are the names of the new additions. Many people from NASA, the community, the Houston Rodeo and the Texas Longhorn Breeders Association of America were on hand to welcome the steers to their new home.

Along with two young steers, Joe and Terry Hlavinka also donated a new red tractor to the project. The Longhorn Project began in 1966, and continues to grow, with the help of volunteers and donations such as the one recently made.
‘Safety ‘Round the Clock’ Spring Fair a huge success

By Mary Peterson

What can you learn that’s new about safety and health? Apparently plenty, as about 3,000 people streamed by the approximately 40 booths and outdoor activities that made up the “Safety ‘Round the Clock” Spring Fair held Friday, May 11, at the Gilruth Center. Things got off with a bang—literally. Brian Cornell, a master automobile technician, set off an air bag hourly outside to demonstrate its power and protection value in the event of an accident.

“Although air bags are designed to deploy only in a front-end collision,” Cornell told onlookers, “it is possible, if rare, to set the device off by other means.” He cited the case of a car that accidentally drove over a chunk of steel, resulting in bottom force impact sufficient to do the deed. Cornell went on to explain how the air bag acts in concert with the seatbelt, tightening and loosening for maximum protection; all timed in a manner that is virtually indistinguishable to the passenger.

Inside Gilruth were equally stimulating subjects, where fairgoers could talk to local law enforcement officers about safety in their own neighborhood and how to avoid being a crime victim. In some cases, they could even learn the statistics that applied to their area and what types of crime were the most prevalent. One booth displayed an array of guns and gunlocks for those concerned with unsupervised and unwarranted use of firearms.

And what if your house catches fire? One safety representative demonstrated a head covering of plastic with an attached breathing canister, telling audiences: “The Evac-U8 emergency escape smoke hood is the very latest in affordable technology to help you escape a burning building. People too often overlook the fact that more fire victims perish from smoke inhalation than from actual burn injury.”

The award-winning design is widely used by Canadian and U.S. Government agencies as well as by hotels, air crews and major corporations. Some fairgoers, for the first time, could see its value in a home as well.

Those wanting health answers took advantage of subjects as far-reaching as nutrition and fitness to spinal irregularities, skin cancer screening, and blood sugar and cholesterol testing—all just for the asking.

“Now that we’re fast approaching hurricane season,” said a member of the JSC Spacelift Meteorology Group, “we’ve had lots of talkers on weather safety information, with many wanting to know where their home stands in relation to the flood plain.” If you’re new to the area, this was a must-see.

On the parking lot adjacent to the Center, drivers lined up to have their children’s car seat checked for proper installation and to learn how to correct it themselves, if need be, from a team of trained technicians. Thanks to Cimarron, Inc., replacement car seats were provided to those whose equipment was substandard or had been recalled.

Colorful balloons dotted the walkways, while popcorn and hotdogs were freely munched by those squeezing in some learning time during their lunch hour, all lending a festive air to an otherwise serious set of subjects.

The fair was produced by Rindy Carmichael/MEI, in cooperation with the Safety and Test Operations Division of the Safety, Reliability and Quality Assurance Directorate.

About 3,000 people attended the ‘Safety ‘Round the Clock’ Spring Fair on May 11. Below are some of the event’s exhibitors demonstrating fire safety (left) and car seat safety (right).

Latest and greatest in technology featured at Expo

By Laurie Branhm

The third annual ODIN Alliance Technology Expo hosted by OAO was a huge success. Hundreds of people attended the event, which was held May 10. It included 12 computer vendors and JSC civil and contractor employees. Dell, Apple, Microsft, HP, Sun, SGI, and Cisco were just some of the vendors who participated with booths.

Everyone who attended was able to see the latest and greatest in computer technology available by the OAO/ODIN contract for the year 2001. OAO demonstrated 12 new seat types, including three UNIX seats each from SUN, SGI and HP and three printer seats from HP. Also, OAO and Dell announced the NASA Employee and Subcontractor Purchase Plan Web site.

Dave Matthews Band

Tours JSC

Drummer Carter Beauford and Saxophonist LeRoy Moore of the Dave Matthews Band visited Johnson Space Center for several hours on Thursday, May 10. The band was in the Houston area to perform at the Cynthia Woods Mitchell Pavilion on May 11 and 12.
2001 Savings Bond Campaign
Two changes to program will make it easier to buy bonds

By Candace Hunt

SC’s U.S. Savings Bond campaign begins June 4 and continues through June 15, 2001. This year we have two changes to our 2001 Savings Bond program that make it easier to buy bonds through Employee Express and adds the option of a Signature CD bond, which gives our employees even more ways to save.

Employee Express enables employees to buy bonds through payroll savings, stubs and IRAs, and the option of paying off your bond allotments, all with the click of a mouse. It’s easy, fast, and secure.

Additionally, an individual is able to offer the inflation-indexed I Bond along with the Series EE Savings Bond through payroll savings. This new I Bond earns an adjustable interest rate that keeps savings growing over and above inflation for up to 30 years. Their earning rate is based on the Treasury’s fixed rate of return determined each month with a semi-annual inflation rate based on changes in the Consumer Price Index for all urban consumers (CPI-U). The current rate for I Bonds as of May 1 is 5.92 percent. Interest rates for Series EE savings bonds are based on market yields of actively traded Treasury notes and bills, and are adjusted every six months, climbing as market rates increase. Each May 1 and November 1 the Treasury determines the rate, which is 90 percent of the average yield on five-year Treasury securities for the preceding 12-month period.

The current rate for EE Bonds as of May 1 is 4.50 percent. Whether you choose I Bonds or EE Bonds, they provide many advantages.

Savings Bonds are backed by the full faith and credit of the United States. Your Savings Bonds are registered, so the Treasury can use the funds to pay off the national debt if it gets too high. Interest earned is not subject to state or local taxes, and federal tax liability can be deferred until the bonds are cashed before five years are subject to a three-month interest penalty. In addition, when bonds are redeemed for the purpose of financing higher education, either yours or your children’s-interest earned under some circumstances is completely tax free. Bonds can be cashed and reissued by the Treasury at face value if cashed before five years are subject to a three-month interest penalty. Additional information on how to cash savings bonds can be found on the JSC homepage at http://www.jsc.nasa.gov/ or on the Human Resources Office homepage at http://hro.jsc.nasa.gov/.

Also, if you have any additional questions, contact your departmental bond coordinator or Candy Hunt at 813/5.
Valuable insight: Special day allows children to visit JSC

Recent members of the Graphics and Exhibits teams were recognized as winners in the Communicator Awards 2001 Print Media Competition.

T h e IMPASS contract’s Graphics and Exhibits departments were recently named winners in the Communicator Awards 2001 Print Media Competition. The IMPASS Graphics department received the competition’s highest honor, the Crystal Award of Excellence, for its Advertising and Communications poster produced for Spaceflight Awareness. The combined efforts of IMPASS’ Graphics and Exhibits departments earned the Award of Distinction, the competition’s second highest honor, for JSC’s newest exhibit, which premiered at the 2001 Houston Livestock Show and Rodeo.

Wayne A. Thomas was recently selected as NASA Procurement Supervisor of the Year. He has been supporting the procurement organization in various positions since 1990, and was promoted to supervisor in 1998. As Deputy Manager of the Space Station Procurement Office, Thomas provided the leadership to restructure the ISS Prime contract with Boeing, which was valued at $537 million. The restructuring accomplished three Program goals:

• Re-established a cost performance incentive by converting the contract to cost-plus-award-fee with a cost factor.

• Reorganized the Exhibit A Statement of Work (SOW) into Design, Development, Test and Evaluation (DDT&E); Integration and Operation; Spares; and Other Product Development. The restructure of the SOW allows Boeing to concentrate on completing DDT&E and allows NASA to participate in the management of effort to accomplish element and launch package integration and assembly sequence planning and implementation.

• Globally settled approximately 38 contracts for equitable adjustment, avoiding a significant and prolonged distraction to the Program. This action also cemented the Boeing overrun of $966 million.

Thomas participates in real-time decisions related to ISS Prime contract changes. This past year, 305 changes (109 UCAs) with an absolute value of $679 million were cemented. Thomas provides the ISS technical managers’ recommendations on scope and implementation strategy. Under his leadership, the Changes Team continues to manage an active workload of 66 UCAs and other letters RFP actions with a value of $190 million.

Thomas also has the responsibility of managing 27 active contracts and grants with a total value of $700 million. At the same time, he guided the efforts of procurement professionals as they tackled several new competitive and noncompetitive procurements. One of the more significant contract actions was the negotiation of $100 million of additional goods and services for the Russians. Interviews conducted by the IQ Procurement Survey Team noted: “The Space Station Procurement Office stood out especially as an area where members felt the organization was functioning very effectively and job satisfaction appeared to be relatively high based on employee comments.”

The office received nine strengths and no weaknesses from the Headquarters Procurement Management Survey.
Human Resources reports the following personnel changes:

Key Personnel Assignments
Allen Frynt was named Acting Manager, EVA Project Office. Steve Deering was named Acting Deputy Manager, EVA Project Office.

Jim Van Laer was named Manager, Operations Integration, International Space Station Program Office.

Susan Creasy was named Acting Manager, Mission Integration and Operations Office, International Space Station Program Office.

Lill Moore was named Chief, Energy Systems Division, Engineering Directorate.

Randall Adams was selected as a Flight Manager, Space Shuttle Program.

Roberto Galvez was selected as a Flight Manager, Space Shuttle Program.

Additions to the Workforce
John Moore joins the Space Station Procurement Office, Office of Procurement, as a Contract Price/Cost Analyst.

Rosalie Sole joins the Space Station Procurement Office, Office of Procurement, as a Contract Specialist.

Heather Peters joins the Operations Division, Mission Operations Directorate, as an Operations Lead.

Jose Hernandez joins the Materials and Processes Technology Branch, Manufacturing, Materials, and Process Technology Division, Engineering Directorate, as a Materials Research Engineer.

George James joins the Structures and Dynamics Branch, Structures and Mechanics Division, Engineering Directorate, as an Aerospace Engineer.

Sarah Finch and Nicholas Hines join the Engineering Resources Management Office, Office of the Chief Financial Officer, as Program Analysts.

Gilda Callaway joins the Office of the Chief Financial Officer, as a Program Analyst.

Eric Reinking joins the Space Life and Sciences Resources Management Office, Office of the Chief Financial Officer, as a Program Analyst.

Leroy Evans and Marci Paden join the Space Station Resources Management Office, Office of the Chief Financial Officer, as Program Analysts.

Mark Reanking joins the Space Shuttle Division, Safety, Reliability, and Quality Assurance Office, as an Aerospace Engineer.

Bill Joiner joins the Space and Life Sciences Resources Management Office, Office of the Chief Financial Officer, as a Program Analyst.

Sarah Finch and Nicholas Hines join the Engineering Resources Management Office, Office of the Chief Financial Officer, as Program Analysts.

June 1

Chess Club meets: The Space City Chess Club meets each Friday evening from 5:30 p.m. until 9 p.m. at the Clear Lake United Methodist Church, 16339 El Camino Real, room 423. Other June meetings will be held on the 8, 15, 22 and 29. All skill levels are welcome. For more information, please call James Mulberry at x32897 or James Temrick at x32639.

June 4

ClA-NSSE meets: The Clear Lake area chapter of the National Space Society meets at 6:30 p.m. at the Parker Williams Branch of the Harris County Library at 10851 Scarsdale Blvd. For more information contact Murray Clark at 281-367-2227.

NISBE meets: The National Society of Black Engineers meets at 6:30 p.m. at Texas Southern University, School of Technology, first floor. For more information contact Kimberly Topp at 281-290-2917.

June 5

Quality Society meets: The Bay Area Section of the American Society for Quality meets at 6 p.m. at Franco’s Restaurant. For more information contact Ann Dorris at x38620.

June 6

Spaceiland Toastmasters meet: The Spaceiland Toastmasters meets on Wednesday Mornings at 7 a.m. at the House of Prayer Lutheran Church 1515 Bay Area Blvd at Redsea. Other June meetings will be held on the 13, 20 and 27. For more information contact Avia Sloan at 713-768-6336 or asloan@hal-pc.org

Spaceiland Toastmasters meet: The Spaceiland Toastmasters meet at 11:30 a.m. at United Space Alliance, 600 Gemini. Other June meetings will be held on the 13, 20 and 27. For more information contact Patricia Blackwell at 281-280-6683.

July 6 Communiments meet: The Clear Lake Communicators, a Toastmasters International club, meets at 11:30 at Wyle Laboratories, 1100 Hercules, Suite 305. Other June meetings will be held on the 7, 14, 21 and 28. For more information contact Allen Prescott at 281-282-3281 or Richard Lehman at 281-290-6557.

Warning System Test: The site-wide Employee Warning System performs its monthly audio test at noon. For more information contact Bob Gaffney at x34249.