SCIENCE AND TECHNOLOGY CORPORATION

NEWSLETTER

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STC Wins U.S. Army PEO-I MSO IV&V Contract

Once again, the STC Independent Verification and Validation (IV&V) team has won the supporting contract for modeling and simulation planning and assessments in the development of advanced U.S. Army weapons systems integration. For almost 4 years, the STC team had supported the

Cornell Morrison (left) and Mark Warren (right)

Program Manager for what was the Future Combat Systems (PM FCS) Modeling and Simulation Office (MSO) in its planning and preparation for Modeling and Simulation (M&S) utilization. As part of a major reorganization, ordered by the Secretary of the Army, a new leaner organization emerged designated the Program Executive Office for Integration (PEO-I), which selected a new omnibus-type contracting tool to elicit competitive bidding for further support work among multiple corporate teams headed by well known large corporations. With only 10 days allowed for the proposal under the

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U.S. Army RDECOM Contract for Chemical, Biological, Radiological, Nuclear, and Explosive Support Awarded to STC

The Edgewood Chemical Biological Center (ECBC) has selected the STC Team to provide Engineering Support, Research and Technology (R&T) Support, and Program and Integration Support to the ECBC and other customers in the Edgewood, Maryland area. This is a 5-year contract to provide the U.S. Army with integrated science, technology, and engineering solutions to address the defense needs of the warfighter and the non-medical needs of the Chemical, Biological, Radiological, Nuclear, and Explosives (CBRNE) defense agencies.

The Edgewood area of Aberdeen Proving Ground (APG), Maryland, is home to many other organizations that together form a consolidated chemical biological defense community. Each of these organizations, and their subordinate offices, will be serviced by this contract. Government organizations that are co-located with ECBC, or have major offices in the Edgewood area of APG include (but are not limited to) U.S. Army Medical Research Institute for Chemical Defense, Joint Program Executive Office for Chemical and Biological Defense, Center for Health Promotion and Preventive Medicine, Chemical Materials Agency, Assembled Chemical Weapons Activity, 20th Support Command, and the Department of Homeland Security.

STC has over 30 years of experience supporting the Department of Defense and the military services in the chemical and biological defense area. Since 1980, STC has consistently delivered technical support services to the U.S. Army Research Development and Engineering Command (RDECOM) and its predecessor organizations. During this period, STC has been awarded over 40 contracts/subcontracts and performed critical research involving the biological defense programs of the U.S. Army. STC has operated 12 biological

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Electronic, Metal, and Composite Hardware Fabrication Support Services (EMCHFSS)

Over the past 5 years, STC has supported NASA's Langley Research Center (LaRC) under the Electronic Fabrication Support (EFS) contract. This past summer, the STC team in Hampton worked towards developing a proposal response for the follow-on work known as EMCHFSS (pronounced EM-Chiefs). STC was awarded the follow-on contract in December and the new contract started at the end of January. The new contract allows STC to build off the experience gained from EFS, in which STC continued to support electronics work, but also moved into the metal fabrication arena and the composite world. This move into metal and composite fabrication provided STC the opportunity to work on a number of NASA's Constellation-related efforts.

The EMCHFSS contract is headed by **John Andersen**, the Project Manager, who has primary project responsibility and leads the electronics works. **Leon Council** supports Mr. Andersen and is responsible for the metal and composite fabrication efforts. Due to the performance of the project team, STC has had the opportunity to be a part of some of NASA's hallmark

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Ares 1-X Launch

STC Co-sponsors Pre-Launch Reception for Space Shuttle Atlantis

Last November, STC had the good fortune to co-sponsor a pre-launch reception for the upcoming STS-129 launch of the Space Shuttle Atlantis. The reception was coordinated with Langley Research Center (LaRC), Johnson Space Center (JSC), and Stennis Space Center (SSC). Though a lot of hard work went into the logistics of making this effort a success, the reception and associated activities went off without any issues. The STC logistics of the upfront coordination were deftly handled by **Vicky Thompson.** With a short 6-week turnaround time, Vicky worked with representatives from each organization and put together the pre-launch reception that hosted over 400 guests. The preparation entailed organizing lodging for each group's attendees, as well choosing a venue and organizing the gathering. Gift bags were prepared for each guest with various items from each organization. Vicky also manned a registration table where she could meet and greet each guest personally. This personal touch put a good face forward for STC, and all enjoyed this first pre-launch opportunity.

Lesa Roe, NASA LaRC Center Director, with Dr. Adarsh Deepak.

STC was well represented at the launch activities, which not only included the reception, but also included tours of the Kennedy Space Center (KSC). Those from STC who attended included **Dr. Adarsh Deepak**, **Rink Wood**, **Dr. Tom DeFelice**, Vicky Thompson, **Leon Council**, **Matthew Stearman**, **Eric May**, and **Jeff Manning.** The tour allowed us to see the launch facilities, which included a stop at the launch pad and an opportunity to take pictures of Atlantis. In addition, guests were given the chance to drive by the massive Vehicle Assembly Building (VAB) where the Shuttle stack is integrated. The tour continued and they were able to see the shuttle landing runway, the large mate/demate structure that allows for the loading and unloading of the shuttles from the 747 transport aircraft. They also had the opportunity to tour the Space Station Processing Facility, where payloads are prepared for transport to the International Space Station. While there, they were able to see the Cupola supplied by the European Space Agency that will supply astronauts with a panoramic viewport. They also saw the Multi-Purpose Logistics Modules named Leonardo, Raffael, and Donatello. The tour concluded with a stop at the KSC Visitor Center for guests to see the Rocket Garden, a mockup of the Space Shuttle, and take a ride on the Space Shuttle Simulator.

The pre-launch reception was held at the Double Tree Hotel in Cocoa Beach on the evening before the launch. Over 400 guests arrived and enjoyed a beautiful evening pool side. Langley Research Center Director, Lesa Roe, spoke to those in attendance and introduced the participating Centers and the co-sponsoring companies. Dr. Deepak was introduced by Ms. Roe, where he offered a few words about STC and welcomed everyone to the reception.

Dr. Deepak converses with astronaut John McBride.

The next day, the attendees boarded buses and drove to the launch viewing areas, either adjacent to the launch complex or at the Banana Creek viewing area. At the Banana Creek viewing area is the Saturn V museum that houses a refurbished Saturn V rocket, which was used to send the Apollo astronauts to the moon. The museum also housed other artifacts of the Apollo program, including a Lunar Module, a Command and Service Module, and Jim Lovell's space suit from Apollo 13. They also had the chance to speak with astronaut

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From left to right: Eric May, Leon Council, Matthew Stearman, Adarsh Deepak, Jennifer Manning, Jeff Manning, Rink Wood, Vicky Thompson, Bruce Hoogstraten, and Tom DeFelice.

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Editing and Layout: AnnaMaria Clack
(757) 766-5800/Fax (757) 865-1294
Web site address: www.stcnet.com

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new contracting process, our Team Lead, **Mark Warren** and Department Manager **Bob Lackey** wrote the proposal which has been recognized as the superior provider of MSO IV&V support. STC was awarded the new contract November 30, 2009 for the base year and two additional option years with an overall value of approximately $3M.

The STC IV&V team consists of Mark Warren, Systems Analyst and Team Lead, and **Cornell Morrison**, Program Analyst, both working at the STC Defense Sector Office in Edgewood, Maryland. The team also includes Systems Analysts **Francis Cline** and **Becky Hill**, both working from the Huntsville, Alabama, area. The primary work of the IV&V Team is to provide planning and assessments for M&S utilization plans, test plans, validation and verification plans, and accreditation plans that support system federations for use in evaluation of Systems of Systems (SoS) versus a single system as has been the more traditional method. These SoS represent the integrated "cross talk" between multiple weapon platforms on the ground or in the air, either manned or unmanned. System integration will allow the army units to share situational awareness as well as access to a variety of weapons support in a rapidly changing warfighter environment. The system developers are required to utilize M&S to prove out the operational concepts of their systems. The government needs independent professional assessments separate from the development organization to validate those system assumptions and approaches. The IV&V team provides those independent assessments, and answers only to the government, while interacting with the developers during their M&S phases of the weapon projects. The STC IV&V team remains committed to the continuing work supporting the U.S. Army for the next phases of weapon systems development.□

Francis Cline

Becky Hill

EMCHFSS (*Continued from page 1*)

successes of the past year, which led to our success in winning the follow-on contract. STC has worked on such items as a nose cone for the new FA-22 strike fighter, a Pratt & Whitney scram jet engine under development, and numerous wind tunnel modifications. STC has also provided key support and made major contributions to NASA's Exploration Systems Mission Directorate (ESMD), which included production of drop models and testing fixtures, the Pathfinder crew module, Pad Abort 1 (PA-1), Ascent Abort 1 (AA-1) [subsequently converted to a pathfinder for Kennedy Space Center (KSC)], and the Ares crew module and launch abort system for Ares 1-X.

STC has also provided outstanding support to Wallops Flight Facility in support of the Max Launch Abort System (MLAS) fabrication and stacking process. Additionally, STC produced the Ares-1 wind tunnel launch tower for KSC, including metal and electronic fabrication. STC has also produced composite panels for the Lunar Electric Rover for the Johnson Space Center, as well as composite panels for the Habitat Demonstration Unit.

Habitat Demonstration Unit

STC provides high-quality metals fabrication support for all welding, rolling, forming, and breaking to include composite machining and non-destructive inspections. Our team, working in LaRC's 101,000 square foot metal fabrication complex, is experienced in fabrication of flight test articles to AS9100 standards for the Constellation Project. STC's delivered products include Crew Modules, Launch Abort Systems, Forward Bay Covers, Separation Rings, Drop Models for testing air bags, scale models of launch towers, and all Ground Support Equipment to safely test, service, and ship all these complex components.

MLAS and Ares 1-X were significant accomplishments for NASA over the past year, and STC can take pride in the fact that we were directly involved in those successes. In support of MLAS, the following statements were made recognizing the quality of STC's efforts:

"We could not have accomplished this complex launch so rapidly if it were not for your company's support. The Science and Technology Corporation delivered quality hardware and on-site support in an extremely rapid timeframe and we greatly appreciate your focus and effort." – *Ralph Roe, Director, NASA Engineering and Safety Center re. MLAS Project*

STC personnel "have provided invaluable support to the MLAS program to date, helping us work through several technical and schedule driven challenges." – *Brian Hall, NASA Sounding Rocket Program*

STC also provides LaRC with composite material fabrication support for physical properties research and delivered hardware. This includes fabrication of composite materials (i.e., Boron, Graphite Carbon Fiber, Fiberglass, Kevlar), test article fabrication, close tolerance machine work, material lay-up, resin/adhesive bonding, alumina heat test materials, resin infusion and vacuum forming. STC provides qualified proficiencies in the use of high-speed routers, readout-controlled milling machines, lathes, drill presses, autoclave and hot bonding systems, and hand tools applicable to development of precision test articles and related structures/hardware for aerospace research applications.

The above services are in addition to the continued high quality electronics fabrication and micro-electronics support to LaRC. STC's reputation at LaRC for quality resulted in a nomination for the George M. Low Award in 2009. The George M. Low Award represents NASA's Excellence Award for Quality and Productivity. Though STC did not win the award, we were honored to be nominated and believe we were well represented with our nomination package.

The past 5 years have been outstanding, and with the award of the EMCHFSS contract to STC, we believe the next 5 years will be even better. We look forward to supporting NASA LaRC in whatever capacity we can and believe we will be heavily involved in their success.□

MLAS Launch

STC achieves CMMI ML 2 Assessment

For the past 12 years, STC has been following ISO 9001 and CMMI (Capability Maturity Model Integration) processes both internally and on its contracts. On April 22, 2010, STC completed a third party assessment and has satisfied the requirements for CMMI ML 2. The completed assessment will be published in early June on the Software Engineering Institute CMMI website.

CMMI is a framework for project planning and control and incorporates a process improvement approach that provides organizations with the essential elements of effective processes that ultimately improves performance. CMMI helps integrate separate organizational functions, set process improvement goals and priorities, provide guidance for quality processes, and provide a point of reference for appraising current processes.

CMMI models are collections of best practices that can be compared to an organization's practices and guide improvement to processes. A formal comparison of a CMMI model to an organization's processes is called an appraisal. The Standard CMMI Appraisal Method for Process Improvement (SCAMPI) incorporates the best ideas of several process improvement appraisal methods. STC chose to undergo a Maturity Level 2 SCAMPI appraisal of its systems development practices. The appraisal process was rigorous, requiring STC to demonstrate implementation of the CMMI ML2 standards in its processes and on projects. After assessing the company's Quality System Processes, the appraiser evaluated three projects and interviewed software development and systems engineering staff to determine level of compliance with the documented processes.

Several STC staff members received training in CMMI to act as appraisal team members and internal auditors as part of our on-going surveillance and improvement processes. The training course occurred on April 20–21, 2010, and was attended by **David Ackley**, **Carol Lightner**, **Jeff Manning, Mike McGuire**, **Kevin Stone**, **Bentley Streat**, **Tonda Winston-Parham**, and **Dr. Tom DeFelice**.

A special thank you to Dr. Tom DeFelice and Carol Lightner for their significant contributions to achieving this milestone.□

LAUNCH (*Continued from page 2)*

John McBride, a veteran of the Space Shuttle program. The launch itself was an event that will be a lifelong memory for those who attended. It was also a great opportunity to bond with fellow STC employees outside of the work environment and to share such an amazing experience together. It was an event and an experience that will not be forgotten.□

Honors and Awards

ECBC Service Awards and Commendations

Jennifer Minter (right), Biodefense Team Supervisor, presents Bruce Voelker, Research Biologist, his 10 year service award.

Jim Gilbert (left), Biodefense Program Manager, presents Dr. Charlie Davidson, Signal Analyst Engineer, his 5 year service award.

Dr. Charlie Davidson (left), STC Point Detection Supervisor presents Kate Furman, Quality Assurance Manager, commendation letters/award for her outstanding participation in the Seal of Excellence (SoE) core work group.

Dr. Charlie Davidson (left), STC Point Detection Supervisor, presents Samir Deshpande, Software Engineer, commendation letter/award for developing databases which resulted in ECBC's CB Point Detection research work receiving DTRA's Best Basic Research Award at the CB defense conference held in New Orleans.

Dr. Dan Heinz received commendation letters/award for his contributing ideas and effort in the development of the Temporal-Spectral area of DTAR project out at ECBC's Passive Standoff.

Jennifer Minter, Research Biologist, received a 5 year service award.

Patricia Collett, Microbiologist, received letters/award of commendation for research on the Bacillus globigil phase of the Commercial Off-The-Shelf (COTS) Modernization Project presented at the Defense Threat Reduction Agency (DTRA), Physical Science and Technology Conference held in New Orleans, Louisiana.

STC Receives NASA LaRC Award

NASA Langley Research Center has again selected STC as the Small Business Contractor of the Year for 2008—after winning the same award for 2007. This award was for STC's outstanding performance on the Electronics Fabrication Support Contract. Dr. Adarsh Deepak, President & CEO of STC accepted the award for STC from Ms. Shana Dale, NASA's Deputy Administrator, at the NASA/JPL Small Business Symposium and Awards Ceremony in Washington, DC. STC was selected based on its performance, innovation, customer service, safety, management, cost savings, employee development, compliance with equal opportunity regulations, mentoring of other minority business, community involvement and community outreach. The award is also in recognition of the many complex projects completed on or ahead of time and within budget by STC as evidenced by the numerous letters of commendation and awards from the NASA-LaRC customer.

From left to right: Shana Dale, NASA's Deputy Administrator, Dr. Adarsh Deepak, Glenn Delgado, Assistant Administrator for NASA Office of Small Business Programs.

CBRNE (*Continued from page 1)*

research laboratories located at the ECBC in support of its biological detection program.

The proposal was developed by STC Edgewood Regional Office who will manage the contract. **Jim Gilbert**, STC Vice President for Chem-Bio Programs, was the Capture Manager for the proposal and will be the Program Manager for the contract. His management of the predecessor ECBC R&T contract, coupled with the excellent performance of our staff supporting the contract, were instrumental in STC's win of this expanded scope contract.

Dick Gilligan, STC Senior Vice President for the Defense Sector, commenting on the win said "Mr. Gilbert and his proposal team did an excellent job of highlighting the superior performance of our current contract staff, attracting top-notch teammates, and positioning STC for continued growth in the ECBC and CBRNE communities."

Safety Corner – Proper Lifting

Workers frequently cite the weight and bulkiness of objects that they lift as major contributing factors to their injuries. In 1999, for example, more than 420,000 workplace accidents resulted in back injuries. Bending, followed by twisting and turning, were the more commonly cited movements that caused back injuries.

Use proper lifting techniques when lifting or moving objects: keep a wide stance; bend knees; keep back straight, lift with legs (never twist); and keep the load as close to your body as possible

Make sure to work as a team when lifting oversized loads or loads over 50 pounds. Contact STC's Corporate Safety Manager, George Wood, at 757-865-2014, if you have any questions or concerns.