SCIENCE AND TECHNOLOGY CORPORATION

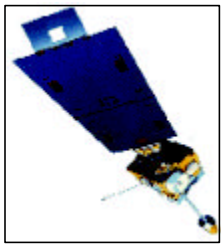
NEWSLETTER

... An Innovative Advanced Technology Company

Vol. 14, No. 2 | Hampton, Virginia | FALL 2005

STC Expands Satellite Science, Engineering, and IT Support Services to NOAA

Every thunderstorm, hurricane, tsunami, drought, wild fire, or snowfall is continuously monitored by the National Oceanic and Atmospheric Administration's (NOAA) suite of satellites. Today's satellites do not just look at the clouds, land mass, and ocean surface but report on temperatures, moisture, wind, motion, and many other planetary features. STC personnel located at the NOAA Science Center in Camp Springs, Maryland, continue to maintain and improve the development of these satellite products, derived from the information gathered by polar (POES) and geostationary (GOES) orbiting satellites globally. These products, generated by the National Environmental Data Information Service (NESDIS) Environmental Satellite Processing Center (ESPC) provide weather forecasters, hydrologists, oceanographers, and emergency managers real time status to make decisions to save lives and property. In addition, products and raw satellite data are transferred into the NESDIS Comprehensive Large Array Stewardship System (CLASS) for expanding our understanding of the global climate pattern.



GOES Satellite

STC scientists, scientific programmers, systems administrators, and system engineers support the architectural system design, scientific data analysis, programming, application integration, system

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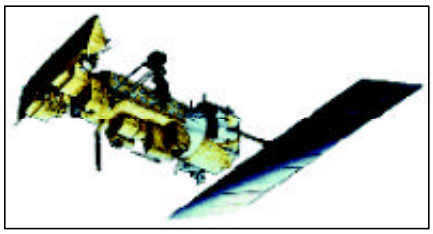

NOAA POES Satellite

STC Attains ISO 9001:2000 Certification

The International Organization for Standardization issues and maintains a series of documented standards relating to quality management systems. ISO 9001 is their standard for assessing an organization's Quality Management System (QMS). The 2000 revision of ISO 9001, called ISO9001:2000, is a process-oriented standard that encompasses nearly all aspects of an organization's management structure, with particular emphasis on customer focus. The standard requires a documented QMS and close adherence to the processes and procedures within the QMS.

STC has maintained ISO 9001:1994 compliance for several years and in late 2004 made the decision to update to ISO 9001:2000 upgraded certification/registration. The process was expedited when STC was awarded the NASA Langley Re-

(*Continued on page 3; see* **ISO**)

Honors and Awards

Rahman Receives Excellence in Innovation Award

A Digital Image Enhancement Patent for a product co-invented by **Dr. Zia-Ur Rahman** was given the Excellence in Innovation Award at the Tech Nite Gala in Virginia Beach, May 2005.

This award recognizes U.S. patents issued to Hampton Roads inventors in the calendar year 2004 that are deemed by a

(*Continued on page 4; see* **RAHMAN**)

Lawrence Receives Commendation Plaque

On 19 July 2005, **Kurt Lawrence** was recognized by the Government Task Manager, Mr. Stephen Fine, and presented a plaque of appreciation by Dr. William Kavanagh, SAIC PAISC Program Manager, during an In-Process Review in Abingdon, MD. Kurt was recognized for his discovery of an off-site stockpile of several thousand

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Kurt Lawrence (r) being presented appreciation plaque by Dr. William Kavanagh, SAIC PAISC Program Manager.

EVA IR Camera Project Team Wins NASA Peer Award

The Extravehicular Activity (EVA) Infrared (IR) Camera Project Team, including STC's **Kent Davis, Mick Hartzheim, Viola Jackson, Peggy McCloud,** and **Delores Russell**, was awarded the One NASA Peer Award at the 15 August 2005 NASA Family Breakfast attended by NASA Senior Staff and Contractor Senior Management. Each team member was recognized and presented a certificate by the NASA Langley Research Center Director, Roy D. Bridges, Jr. This new award, implemented in October 2004, is an honorary award given to employees and non-NASA individuals who have demonstrated One NASA behavior.

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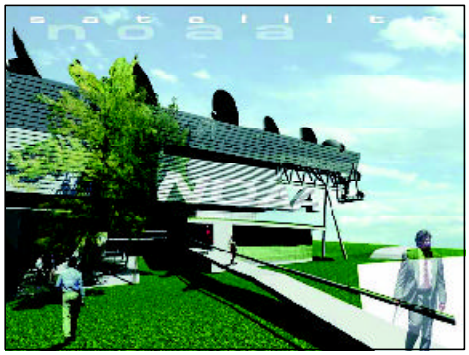
and software maintenance, hardware maintenance, product assurance, and product development management support. Our NOAA services are managed by our NESDIS Program Manager and ESPC Science and Products lead **David Donahue**, our ESPC manager **Jeff Manning,** and CLASS manager **Jeremy Throwe**.

One example of our support within ESPC includes the processing of Moderate Resolution Imaging Spectroradiometer (MODIS) data in near real time, which increases the accuracy for weather forecasting and assessing natural disasters. Producing this data in near real time is not a simple task, considering time dependencies on the receipt of various data sources and the hardware and software constraints when dealing with complex and large volume high resolution data. Through the efforts of STC employees at the Information Processing Division, the NOAA MODIS system is now providing NASA (the Goddard DAAC) with all Level 0 data for their near real time efforts, Level 1B products to various DOD agencies for their weather forecasting bureaus, and Level 2 products to a variety of NESDIS groups processing gigabytes of data each day.

Monitoring the Planet's Coral Reefs



The NOAA Satellite Operations Facility

In July 2005, NOAA's Coral Reef Watch satellite team, supported by STC employees **Kristina Sprietzer** and **Jill Wemmer**, received final approval to release a new operational satellite warning product to monitor the health of coral reefs. Covering domestic and international arenas, this important new product helps place NOAA at the forefront of truly integrated environmental research observations. NOAA's Coral Reef Watch Satellite Bleaching Alert system is an automated e-mail alert that monitors the status of thermal stress conducive to coral bleaching. STC scientists and programmers supported the transition of the research code for this program into the operational phase and they were recently highlighted in an article by Conrad C. Lautenbacher, Jr., Vice Admiral, U.S. Navy (Ret.), Under Secretary of Commerce for Oceans and Atmosphere and NOAA Administrator.

In September, our support to NESDIS was split into two contracts, the CLASS program and the ESPC contract. The team of QSS, STC, Northrop Grumman, and Riverside Technology Inc. won the follow-on contract to support the Environmental Satellite Processing Center contract. STC has an expanded role in this new contract and is currently assisting with the migration of operations into the new NOAA Satellite Operations Facility (NSOF), which upon completion will merge the processing of GOES and POES data. The CLASS program, with continuing support from CSC and STC, is being developed with a set of standard software development procedures (currently CMM level 3 and CMMI level 2 certified), which include requirements definition, software and hardware planning and reviews, integration and testing, and validation. The CLASS program will be under competition in early 2006 and STC will be part of the SGT team for this new contract under COMMITS NEXGEN.□

STC Supports EVA IR Camera Project for Shuttle

Following the loss of Space Shuttle Columbia in February 2003 (STS-107 mission), and driven by a strong desire of crews of successive Shuttle missions for an on-orbit inspection tool, the Extravehicular Activity (EVA) Infrared (IR) Camera Project Team was formed. Its mission was to develop an inspection technique based on infrared thermography to identify surface and sub-surface damage to the Shuttle's Reinforced Carbon-Carbon (RCC) wing leading edge. The multi-center team was composed of members from JSC and GSFC, and led by LaRC to develop an EVA handheld camera system to allow on-orbit inspection by the astronauts—the only tool the crew has that will detect sub-surface damage. **Kent Davis, Mick Hartzheim, Viola Jackson, Peggy McCloud,** and **Delores Russell,** who are a part of STC's Electronics Fabrication Services group, were members of the EVA IR Camera Project Team (see Honors and Awards).

The project was originally scheduled to support STS-115 in December 2005, but when the STS-114 crew requested support for their July 2005 mission, the team responded to deliver flight-certified hardware to support both STS-114 and STS-121. Moreover, they assessed the feasibility of performing on-orbit IR inspection relying solely on solar flux. Ground IR inspection techniques not being feasible for on-orbit inspection, the team conducted extensive analyses and tests and, in conjunction with the crew office, established an EVA inspection technique identifying data acquisition parameters, necessary lighting conditions, and inventing a shadowing technique.

On-time delivery being essential, a rapid pace ensued. In eight months, the team developed the project requirements, designed the camera system and inspection technique, built two engineering units, and four flight units, validated over 275 requirements, and completed the flight certification of the camera system. The team's dedicated efforts over nights and weekends provided the crews with the desired critical on-orbit inspection capability.

The camera system is much like a handheld camera system except that imagery is recorded from the infrared portion of the spectrum. The camera is sensitive to heat emitted from objects in its field of view. Damage (cracks, holes, sub-surface delaminations) to the RCC shows up in infrared

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From left to right: Viola Jackson, Kent Davis, Dick Gray, Dr. Adarsh Deepak, Mick Hartzheim, Peggy McCloud, and Dr. George Wood.

The STC NEWSLETTER is published by the Science and Technology Corporation, 10 Basil Sawyer Drive, Hampton, VA 23666.

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STC Provides Data Services at Aberdeen Test Center

STC's data services contract at the U.S. Army's Aberdeen Test Center (ATC) that got underway in mid 2005 has the potential of being an $88 Million dollar contract over five years. It was the largest ever prime contract won by STC and represents a highly significant achievement for our company. Contract teammates are Jacobs Sverdrup and TRI-S Incorporated.

Under this contract the STC team provides the complete range of data collection and management services for all the tests conducted by the U.S. Army at the Aberdeen Test Center. The team is responsible for maintaining the computers, systems and network, and for providing the Help Desk support. The ATC Data Services contract has enhanced the rapidly increasing volume of Information Technology services being provided by STC.

The award of this contract was the result of a couple of years of work by the STC Edgewood Regional Office to assure that STC had a full understanding of the ATC needs and expectations before the decision was made to bid. **Dick Gilligan**, Sr. Vice President for STC's Regional Office, was the Capture Manager.

This contract started on 1 May 2005 with **Ed Stauch** of the STC Edgewood Regional Office as the Program Manager (PM). Ed Stauch has been a Senior Systems Engineer with STC since 1998. His background includes 34 years in T&E leadership, management, and analysis; providing technical support to Close Combat and Combat Support Directorates of Army Evaluation Center; writing T&E plans and reports, developing data needs and specified collection requirements with a specific focus on RAM/ILS data collection. He is a recognized expert in data analysis throughout the T&E community. He completed his government service with the formation of an entirely new Support Mission Directorate of 55 engineers, analysts, accountants, and health physicists in a reorganization of logistics, environmental quality, facilities engineering, security, and safety functions for the Test and Evaluation Command. STC is privileged to have such a recognized leader take the responsibility of PM for this important ATC contract.

Ed Stauch

ISO (*Continued from page 1*)

search Center (LaRC) Electronic Fabrication Support Contract in the spring of 2005 since STC promised ISO 9001:2000 certification within 9 months of the award. The scope of our certification includes Corporate Headquarters, the Edgewood Regional Office (Maryland), the STC Polar Technologies Office in Columbia, Maryland, and the Hampton Electronic Fabrication Facility, with additional locations to be added later as appropriate. Since the scope included Headquarters and the processes there, all STC locations were impacted by the new system and all had to achieve compliance.

The conversion and certification effort was lead by **Rink Wood**, STC's Chief Financial Officer and QMS Management Representative, with **Dick Gilligan** spearheading the Edgewood Regional office certification effort, and Jim St. John leading the Columbia Office effort. Rink was closely supported by **Carol Lightner**, STC's Facilities Manager and QMS Document Control Coordinator for the documentation updates and implementation, and by **John Andersen**, STC's Production and Quality Manager, for the Electronics Fabrication Facility certification. John Andersen also assumed the role of Internal Audit Team Leader and coordinated the efforts of internal auditors during the implementation of the updated QMS. The internal auditors included **Dave Ackley**, **Missy Lyons**, **Elyse Webb**, **Tonda Winston-Parham**, **Kent Davis**, **Mick Hartzheim**, and **Althea James**. According to our external ISO implementation consultant, our internal audit team was "the best and most conscientious" he had ever worked with.

Through the hard work of these individuals and many others, and the cooperation of all, STC successfully completed a third party audit of our QMS in August 2005. Significantly, the auditor found no non-conformances, major or minor, and no reported findings. Such a clean audit is rare and something we can all be proud of. Thanks to all for their support of this achievement.

STC received its registration certificate effective 21 October 2005. The certificate is effective for 3 years but requires periodic surveillance by a certified registrar.

STC Abingdon Supports Guardian Contract

During 2004, STC's Abingdon office, supporting the Lead Systems Integrator (SAIC), was awarded the Installation Protection Program (IPP) for the Joint Program Manager Guardian contract. This contract provides support to enhanced chemical, biological, radiological, and nuclear (CBRN) defense and response capabilities at multiple military installations. Currently, STC's participation in the contract involves support for the Lead System Integrator (LSI) Warehouse functions, Engineering Library, and Database Programming out of STC's Edgewood Regional Office.

Robert Pratt, Natalie Churchill, and **Michelle Santiago** support warehouse functions. Collectively, they are responsible for receiving, storing, and shipping Installation Protection Equipment. This activity supports the fielding and sustainment of the IPP Family of System. The IPP will enhance the Installations' protection posture and the safety of installation personnel while allowing for rapid restoration of critical installation operations. Teamed with SAIC, the department has written and implemented new Standard Operating Procedures for the warehouse operations and begun full-scale support activities.

Left to right: Michelle Santiago, Stephen Franzoni, Natalie Churchill, Linda Wilkerson, and Robert Pratt.

Stephen Franzoni is a Programmer Analyst working on database development and maintenance of the Integrated Digital Environment which is the central repository for document tracking within the Guardian website. The website is designed for the collection, tracking, and dissemination of information; coordination and communication of Guardian activities; and to provide a comprehensive library of information in support of efforts to enhance protection of DOD Installations.

Linda Wilkerson maintains the Technology Library (which she established within PAIS Non-Stockpile Department 6 years ago) of over 1,200 documents for the PAIS contract. The library provides a

(*Continued on page 4; see* **GUARDIAN**)

STC Recognizes Staff With Over 15 Years of Service

Robert C. Wright
May 1990

Rink C. Wood
September 1990

Not pictured: Amar Choudry (September 1989); William E. Ferguson (May 1990)

RAHMAN (*Continued from page 1*)

panel of experts to represent significant commercial potential and/or social benefit.

Zia is the VP for R&D for STC's subsidiary, TruView Imaging Co. (TVi), which publishes and sells the PhotoFlair line of digital image enhancement software products online from its website, www.truview.com. PhotoFlair products based on this and previous patents were co-invented by Zia.□

LAWRENCE (*Continued from page 1*)

surplus projectile casings and quickly recognizing their potential use as simulated equipment projectiles, thus eliminating much of the manufacturing cost for such items used for training purposes in the chemical demilitarization program. Kurt's professional involvement in the task and strong business sense applied on behalf of the U.S. Army will save more than $200,000 for each 1,000 of these projectiles used, cutting the acquisition cost in half. Kurt was commended again for his actions in a joint letter of recognition from Mr. Dwaynne McKamey, SAIC Task Manager, and Mr. Bob Connors, SAIC Non-Stockpile Directorate Manager.□

GUARDIAN (*Continued from page 3*)

ready reference of documents produced for the Non-Stockpile destruction systems. As a strong member of the Guardian team she has also coordinated with SAIC project leadership to establish the configuration management library and its procedures for that program. Linda recently received a letter of commendation from the LSI for her work on Guardian.□

CAMERA (*Continued from page 2*)

imagery since the temperature in damaged areas is slightly different than the surrounding material. The NASA team, including STC personnel, partnered with the main vendor, FLIR Systems, to provide a modified commercial camera that formed the core of the flight camera system.

One camera system is currently on board the International Space Station and a second will be flown on STS-121 where it will be used to image the temperatures of the wing leading edge of the Orbiter while on orbit. Another objective is to validate imagery of damaged RCC samples carried on board with imagery already obtained on the ground.

The camera, operational inspection technique, and processing software have provided the Shuttle Program with a unique inspection capability that improves the safety of the crew and the safe return of the Orbiter.□

Contracts and Accounting Department Changes

STC is pleased to announce the promotion of **Elyse Webb** to Assistant Contracts Manager. Ms. Webb has been with STC as a Senior Contracts Administrator for seven years and, recently, has also been a Quality System Internal Auditor during the implementation and operation of our ISO 9001:2000 Quality Management System. Elyse has a strong background in contracts administration and accounting, and her interpersonal skills and superior responsiveness have resulted in a consistent record of providing exceptional support to our customers and managers. We are confident that under her leadership the Contracts Administration Department will further enhance our client relations and service.

Elyse Webb

Joining Ms. Webb in the Contracts Administration Department is **Melissa Lyons** (Missy). Missy has been with STC for over six years working in various areas within the Accounting Department. Missy has a strong background in accounting and is currently pursuing a Masters degree. Most recently, she has been assigned responsibility for cost reporting, customer property control, accounts payable, travel reimbursements, and fixed assets. Missy is also a Quality System Internal Auditor. These responsibilities have required her to become familiar with our contracts administration functions, making a smooth transition to the Contracts Administration Department possible. Her demonstrated customer focus and broad background will further enhance the level of customer support from our Contracts Administration Department.

Angela Stotler will be taking over many of Ms. Lyons' accounting responsibilities, providing her a well deserved growth opportunity. Ms. Stotler has been with STC for over five years with responsibility for the payroll function and, recently, purchasing.

Additionally, STC would like to welcome **Joyce Harris** to the Contracts Administration Department and **Carol Ann Clements** to the Accounting Department. Joyce has worked in both contracts administration and accounting with government service contractors for several years. Carol joined STC after several years experience with DCAA and as Controller for other small businesses. She will be handling the payroll and purchasing functions.□

Donald Frank, Earth and Space Sciences Director

In April 2004, **Donald Frank** joined STC as the Director for Earth and Space Sciences. Donald is a degreed Meteorologist with a background in Mathematics and Computer Science. After first supporting the Earth Observations Laboratory and Space Flight Meteorology at the Johnson Space Center, he moved to Kansas City in the late 1990s to support the NOAA NCEP Aviation Weather Center and assisted in the development of the Collaborative Convective Forecast Program (CCFP), an on-going collaborative forecast program between NOAA, the FAA, and airline meteorological departments.

Don Frank

In 2000, Donald transferred to Maryland to support NASA Goddard's Data Assimilation Office (now known as the Global Modeling and Assimilation Office (GMAO)). There he supported the operations of the model and the assimilation of satellite products, including the assimilation of AIRS temperature and moisture retrievals and MISR cloud track wind products. In addition, he managed several contracts at NOAA and NASA while supporting the GMAO.

In August 2004, STC opened its Lanham, Maryland, office from which Donald Frank manages DC regional contracts and contracts at NOAA. The facility is located within 4 miles of NASA Goddard in the Southgate Washington Business Park at 9602D Martin Luther King Jr. Highway, Lanham, Maryland.□