



THE

CHRONICLE

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Published for the employees of SSC Atlantic



SSC Atlantic outreach targets future naval scientists and engineers



A team member from the Spanndroids displays his collection of FIRST® LEGO® League badges during a break in competition at River Oaks Middle School. See story on page 4. Photo by Joe Bullinger.

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Photo by Joe Bullinger

Kids learn to appreciate science, technology, engineering and math during LEGO® robotics competitions. SSC Atlantic volunteers hope the experience will turn these “Pye-ntists” into scientists who support the Navy of the future. See story on page 4.

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SSC Atlantic's Lt. Cmdr. J.D. Judd watches the Bee-Bots of Flowertown Elementary School as they practice for FIRST® LEGO® League robotics regional competition. See story on page 4.

SPAWAR



**Systems Center
ATLANTIC**

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Commanding Officer.....Capt. Mark Glover
Executive DirectorChristopher Miller

SSC Atlantic Mission, Vision and Values

Mission: To rapidly deliver and support solutions that enable information dominance for our Naval, Joint, National and Coalition Warfighters.

Vision: Make IT Count for the Warfighter and the Nation.

Values: Service to our country, Excellence and Credibility, Transparency in the way we conduct our business, Responsiveness and Accountability, Diversity and Teaming.

THE CHRONICLE

EditorSusan Piedfort
Command PhotographerJoe Bullinger

Goals

Strategic effects that provide innovative solutions for today, tomorrow and beyond.
Operations management that delivers solutions with quality, speed, agility and value.
Organizational development that empowers each individual to make a difference.

The Chronicle is a quarterly publication designed for SSC Atlantic employees. Its purpose is to inform, educate, entertain and generate new ideas.

Contents of *The Chronicle* are not necessarily the official views of, or endorsed by, the U.S. Government, the Department of Defense, the U.S. Navy or SSC Atlantic.



From the desk of

CHRISTOPHER MILLER

Executive Director

STEM outreach: An investment in our nation's future

The United States' need for a scientifically, mathematically and technologically literate populace is vital, and it will continue to grow in importance – particularly as other nations make rapid advances in science and technology. Once the world leader, the U.S. now lags behind other nations in science, technology, engineering and math (STEM) education from elementary school to the college level. International comparisons place U.S. students in the middle of the pack or lower in science and math, and in our own National Assessment of Educational Progress, less than one-third of U.S. eighth graders show proficiency in math and science.

Only one third of bachelor's degrees earned in the U.S. are in STEM areas. By comparison, approximately 53 percent of first university degrees earned in China, and 63 percent of those earned in India, are in STEM fields. More than half of the science and engineering graduate students in U.S. universities are from outside the U.S. Recent evidence indicates that many of the most proficient U.S. students, including minority students and women, have been gravitating away from STEM to other professions.

This is something we are concerned about. Especially since many of SSC Atlantic's scientists and engineers who came of age in the Apollo era will be retiring in droves in the near future. We need to engage and attract the future naval scientists and engineers who will fill the pipeline for tomorrow's high-tech jobs in government and defense.

Secretary of the Navy Ray Mabus has renewed the Navy's focus on America's STEM education. The Navy will invest more than \$100 million in STEM programs by 2015 in programs that engage students in STEM-related, hands-on learning and address gaps in the current naval STEM portfolio.

SSC Atlantic has a long-standing commitment to inspire and encourage future scientists and engineers, but in the last

several years these efforts have been in high gear. Building on historically successful activities such as shadow days, mentoring, science camps, science fairs and career days, SSC Atlantic's outreach program has expanded into the classrooms and is helping to make STEM subjects more interesting to kids at a young age.

The youth of today are completely comfortable with every aspect of technology, having spent most of their lives using computers, video games, cameras, MP3s, cell phones and other toys and tools of the digital age.

My three-year-old daughter is a perfect example. She took an immediate liking to my smartphone and tablet, and with very little instruction began to intuitively navigate through their features and choose her favorite games.

While today's elementary, middle and high school students are interested in technology, many of them are not being taught STEM-related subjects in a way that engages them.

That's why SSC Atlantic volunteers have concentrated on reaching out to kids from kindergarten to high school in an effort to engage and educate them about opportunities as scientists and

engineers. In 2009 we partnered with the Center for the Advancement of STEM Education (CASE) to help teachers adopt new instructional strategies based on inquiry-and-design-based learning. Our folks worked alongside and supported teachers in laboratories as subject matter experts (SMEs), performing experiments that help students of all ability levels apply what they learn in the classroom to real world problems. This is a fun way for them to learn, and is a proven strategy for motivating students to pursue STEM careers.

Now SSC Atlantic's outreach has been reenergized to

“We need to engage and attract the future naval scientists and engineers who will fill the pipeline for tomorrow's high-tech jobs in government and defense.”

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Photo by Joe Bullinger

Taking it to the schools

SSC Atlantic Commanding Officer Capt. Mark Glover speaks to Reserve Officer Training Corps (ROTC) students at Fort Dorchester High School Feb. 21. The captain discussed his naval career and emphasized the need for more students to pursue careers in science, technology, engineering and math. The visit was part of SSC Atlantic's outreach program.

Trovato relieves Schug as SSC Atlantic XO

Cmdr. Mike Trovato recently relieved Cmdr. Charles Schug as executive officer (XO) of SSC Atlantic.

Schug, who had served as XO since the standup of SSC Atlantic in the fall of 2008, retired with 26 years of naval service.

Trovato, who comes to SSC Atlantic after a tour at SPAWARSSCOM as the executive assistant to the vice commander, is a native of New York City. He received a bachelor of science degree in engineering from Rensselaer Polytechnic Institute, and has also earned a master's degree in business administration. His sea assignments have been on **USS Fletcher**

(DD-992) and **USS New Orleans** (LPH-9) Amphibious Ready Group with the embarked 11th Marine Expeditionary Unit in support of Operation Desert Shield and Operation Desert Storm.

Shore assignments have been as an instructor at Expeditionary Warfare Training Group Pacific, as Officer in Charge of the Shore Bombardment Area on San Clemente Island and as Naval Plans Officer responsible for ARG/MEU Interdeployment Training Cycle events and Fleet Experimentation for the I Marine Expeditionary Force at Camp Pendleton, Calif.

Trovato left active duty in 1999, continuing his service in the Naval Reserves. His Reserve assignments were as Training and Operations Department Head for Naval Coordination and Protection of Shipping Det C; as Technology Officer and Maritime Watch Officer on a nine-month



Cmdr. Mike Trovato

mobilization to Commander Third Fleet in support of Operation Noble Eagle and Operation Enduring Freedom; and as Officer in Charge, Beach Master Unit One, Det C mobilizing a Beach Party Team for 14 months in support of Operations Enduring Freedom and Iraqi Freedom. He also served as Commanding Officer, Naval Computer and Telecommunications Area Master Station Pacific Det Golf, and as Project Officer for Space and Naval Warfare Systems Command Det 406. In 2002, he was redesignated as an Information Professional Officer.

Trovato was a senior systems engineer with the Science Applications International Corporation in a civilian capacity. In 2006, he returned to active duty, assigned to Naval Networks Warfare Command where he served as Network Operations, Information Operations and Space Center/ Maritime Operations Center Director, and as CYBER Exercise Director. In August 2008, he volunteered for a Global War on Terrorism Support Assignment with Combined Joint Task Force - Horn of Africa, where he served as CJ6 - Communications Directorate Deputy Director.

Trovato is a member of the Navy's Information Dominance Corps and the Defense Acquisition Professional Corps. He earned the Information Dominance Warfare Officer designation and achieved Level II certification in the Defense Acquisition Program Management career field and Level I in Systems Planning, Research and Development Engineering - Systems Engineering career field.



Photos by Joe Bullinger

Members of the Helpful Hawks 1237 team from Hanahan Elementary School experience the thrill of victory as their robot successfully goes through the paces during Berkeley County regional competition at Cane Bay High School.

SSC Atlantic outreach inspires future engineers

Robotics makes science fun

The thrill of victory! ... The agony of defeat.... The fun of learning!

The fun of learning?

That's right, LEGO® robotics competitions combine fun AND learning. And with help from SSC Atlantic, kids may also be drawn to future careers in science and engineering.

SSC Atlantic is sponsoring a record number of youth teams in FIRST® (For Inspiration and Recognition of Science and Technology) competitions this winter. The command's science, technology, engineering and math (STEM) outreach program mentors 34 youth teams.

The robotics events, and other SSC Atlantic outreach efforts, answer a nationwide need to attract and nurture the next generation of scientists. Studies have shown that the number of American students interested in learning science and technology continuously decreases throughout middle school and into high school.

In the effort to motivate youth to pursue STEM careers, FIRST® competitions -- which challenge kids to build robots using LEGOs®, sensors and motors -- have proven to be effective since they started in 1989. Robotics competitions also give SSC Atlantic a chance to build on its long-standing commitment to STEM education by sponsoring teams via the National Defense Education Program (NDEP) and providing volunteers who serve as mentors.

SSC Atlantic's efforts align with Secretary of the Navy Ray Mabus' renewed focus on providing educational opportunities for future naval scientists and engineers in order to strengthen the service's future workforce. An estimated 50 percent of the Department of the Navy's scientists, engineers and employees in related STEM disciplines will be retirement eligible by 2020. SSC Atlantic's outreach activities are aimed at inspiring the next generation of scientists and engineers.



SSC Atlantic Commanding Officer Capt. Mark Glover, Outreach Director Shanda Johnson and Janice Jolly, Charleston County School District's STEM representative, chat during the Charleston regional competition.

It is a huge effort at SSC Atlantic, involving more than 200 employees who volunteer in a variety of ways. They play a vital role as they show students the possibilities of a STEM career in the real world.

"Many of the students we work with don't know what engineers do. Our volunteers are real people who look just like these students; they come from the same type of communities, schools and socio-economic backgrounds," said SSC Atlantic Outreach Director Shanda Johnson. "The students can identify with them. The message we bring is: you too can pursue STEM careers and be employed in lifelong careers that you enjoy and empower you to make a difference. You can have promising and prosperous futures. The goal is to build the pipeline of STEM professionals in our community," she added.

For currently volunteers, the opportunity to make a difference in the way kids view STEM fields of study is exciting. Through the LEGO® robotics youth teams, kids understand the concepts involved with designing and programming robots to perform specific tasks, a research presentation is required -- this year's topic was food safety -- and each team must demonstrate core values. SSC Atlantic Commanding Officer Capt. Mark Glover was on hand for Charleston County regional competitions at West Ashley High School and at the state finals in Columbia, S.C. Executive Director Christopher Miller served as a judge in competitions last year and most recently at the Dorchester 2 regional competition held at River Oaks Middle School.

Youth ages 6 to 18 can take part in FIRST® competitions. From a scaled down FIRST® LEGO® League (FLL) robotics program for children ages 6 to 9 called Junior FLL, to FLL for elementary and middle school students ages 9 to 14, to the FIRST® Tech Challenge (FTC)/FIRST® Robot-

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Above, the Digital Divas dispatch a robot to compete a mission at Charleston regionals. Below, the Dolphintators of Harleyville/Ridgeville Elementary compete at the Orangeburg regional competition. At bottom, SSC Atlantic's Gary Scott, Total Force Management (8.1) Competency Lead, watches as team members network.





Above, SSC Atlantic Executive Director Christopher Miller judges a team during competition at River Oaks Middle School. Below, the Berkeley Butchers from Berkeley Intermediate School are evaluated as they give a presentation to demonstrate core values as part of the competition.

ics Competitions (FRC) for students in grades 9 through 12, students learn to think through the entire engineering process as they design and build robots. FTC is designed to prepare high schoolers for FRC.

FLL, for 9- to 14-year-olds, has up to 10 students on each team with at least one adult mentor. Each team must build a robot entirely out of LEGOs®, then program the robot to complete a series of challenges on a standardized competition table. Each team researches a theme for the year, such as food safety or water conservation, and presents their findings to a panel of judges. SSC Atlantic provides mentors for seven FTC/FRC teams for high schoolers, three in Charleston and three in Hampton Roads and one in New Orleans. The FRC competitions feature short games played by 120-pound robots that the teams, guided by SSC Atlantic mentors, built in six weeks from a kit of commonly used robot parts. Each year the challenges are different. Last year, each match began with a 15-second autonomous period in which robots hung a yellow inflatable circular tube in their respective grid. In the second part, drivers control the robots as they hang inflatable shapes on grid posts. The match ends with the robots deploying an independent electro-mechanical minibot, which climbs a vertical pole racing to trigger a sensor. All the action takes place during a two-minute, 15-second match. The students on the teams learn about teamwork, innovation and strategizing. They must build cooperative alliances with other teams while simultaneously working competitively. Teams receive awards based on their leadership, commitment and innovation rather than their final score.

The competition is exciting for all ... students, parents, sponsors, mentors, coaches, judges and referees. For SSC Atlantic volunteers, it is especially rewarding.



“It has been a real pleasure to work with the teachers at the school, the parents and the children on the Bee-Bots team,” said Lt. Cmdr. J.D. Judd of his Flowertown Elementary School group. “It has been great to see the children learn about engineering and get excited about science. This has been a great way to not only support the Navy’s STEM initiatives but also make a difference in the local community.”

This year’s LEGO® robotics teams coached by SSC Atlantic personnel did particularly well. Nine teams advanced to state competition in Columbia, S.C., and four came home with awards. The team from Rollins Middle School in Summerville, coached by SSC Atlantic’s Chris Rynearson, won second place in the overall champion category and will compete in the FIRST® LEGO® League World Invitational Open 2012, “Robots in Paradise,” in Florida May 3 through 6. This is the first time an SSC Atlantic-sponsored team has progressed to the FIRST® LEGO® League World Invitational Open.

Hanahan Middle School’s Nano Hawks, coached by Karen Cooke; River Oaks Middle School’s ROMbots, coached by Soloman Nkwocha; and Westview Middle School’s FBI Agents, coached by Tim Gardner, all placed in various categories at the state competition.

The robotics competitions are part of larger SSC Atlantic’s educational outreach effort. For more than three years SSC Atlantic has been sponsored by NDEP via the Department of Defense Research and Engineering (DDRE) and partnered with many professional STEM learning institutions to help teachers adopt inquiry and design (I&D)-based learning activities that supplement the normal science curriculum. SSC Atlantic engineers and scientists brought their technical expertise to the classroom and worked alongside and supported teachers in the laboratories as subject matter experts (SMEs).

In Charleston, SSC Atlantic has also held shadow days, lunch buddy programs, summer camps, summer employment programs for youth, tours, lab visits, career day visits to schools and other activities.

The Charleston Metro Chamber of Commerce awarded SSC Atlantic the Business Education Partnership Award in 2010, recognizing the center’s commitment to STEM education through various programs with area schools and universities. SSC Atlantic has partnerships with Charleston, Berkeley and Dorchester school districts and with universi-



Above, the Spanndroids from Spann Elementary School wait their turn to give their presentation. Below, Pete Vandmuelebroecke, 6.0 competency lead, mentors his Cario Middle School team at the practice tables. At bottom, Tim Gardner and his team, the Food Borne Illness (FBI) Agents, prepare for competition.



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Above, SSC Atlantic's Tom Glaab watches as his First Knights team gets organized. At right, the Dolphintors pose with their teacher and Tom Longino of SSC Atlantic's 586.

ties in South Carolina, Louisiana and Virginia. SSC Atlantic representatives have visited more than 100 elementary, middle and high schools to perform cooperative and mutually beneficial development.

SSC Atlantic's Cyber Security Outreach team received the center's STEM Outreach of the Year award for their work in getting high school students involved in cyber security -- one of the new national strategic defense priorities. SSC Atlantic's Cyber Security Syllabi team created two high school cyber security outlines to help develop a future cyber security workforce in South Carolina. The team, led by Lt. Cmdr. Nathan Geisinger and including Dale Messer, William Littleton, Lt. Cmdr. J.D. Judd and Justin Williams, logged more than 500 hours in the effort. They developed the cyber security curricula and syllabi and submitted the outline to the Department of Education's Career and Technology Education (CATE) portfolio. This team's work is being reviewed by a team of educators throughout the state for adoption in South Carolina's CATE program.

SSC Atlantic was also presented a certificate for participation in the Berkeley County summer camp program.

The town of Hanahan invited the Hanahan elementary and middle school robotics team to a town meeting March 13 to present the kids certificates for their success in making it all the way to state competition. Mayor Minnie Blackwell also presented a certificate of appreciation to SSC Atlantic for its support of the community. Michelle Rehr-Matash, mentor for the Hanahan Elementary team, and Karen Cooke, the Hanahan Middle School team mentor, accepted the certificate of appreciation on behalf of SSC Atlantic.

Tidewater Outreach Coordinators Justin Langley and Bill LaBelle kicked off their efforts in a big way last year with a four-day STEM summer academy involving 42 middle school students from area schools. During the event students, guided by SSC Atlantic scientist and engineer mentors, used



creative teamwork and brainstorming to solve a variety of problems involving robotics, engineering, rocketry, ballistics, electronics, biology and chemistry.

David Gravseth, SSC Atlantic's STEM champion in New Orleans, is collaborating with the Naval Research Lab at nearby Stennis Space Center to work with area schools. New Orleans employees already mentor teams from local schools competing in the robotics competitions. Patti Bertuccini, Matt Devitt, Fernando Ortiz and Danielle Shoemake served as volunteer judges at the FLL regional robotics qualifying tournament held late last year at Fontainebleau High School in Mandeville, La. Gravseth is mentor for Slidell High School's FRC team, which competed at the Bayou Regional FRC competition March 16.

SSC Atlantic employees Ray Borne, Laura Napolitano and Perry Gehrman helped judge the Greater New Orleans Science and Engineering Fair (GNOSEF) at the University of New Orleans in February. Open to any student attending middle or high school in New Orleans' four-parish-area, the fair has two divisions: junior division for six to eighth grade and senior division for high school students

At the Louisiana District VIII Science Fair starting March 8 at Southeastern Louisiana University in Hammond, La., SSC Atlantic's Douglas St. Cyr, David Gravseth, Joyce Morris, Laura Napolitano, Chester Alonzo and Zane Melder



Gary Scott, Shanda Johnson, Michelle Rehr-Matash, Karen Cooke and Hanahan Mayor Minnie Blackwell -- with her young honorary mayor -- pose at the Hanahan Municipal Building March 13. The Hanahan elementary and middle school robotics teams were recognized by the town for qualifying for the S.C. state robotics competition. All team members were presented certificates of recognition, and SSC Atlantic representatives were given a certificate of appreciation for the center's support and dedication.

helped judge more than 400 student science projects over a two-day period. Michaelyn Broussard, the Region VIII Science Fair Director, sent a note of special thanks to SSC Atlantic and their employees for the help provided.

New Orleans employees also tutor students for local MATHCOUNTS competitions, and others serve as judges at local school science fairs.

Is SSC Atlantic's outreach involvement paying off? Rehr-Matash, who has assisted the command's outreach effort for three years, believes so. Volunteer Alicia Hilton told Rehr-Matash about one of the boys on a team she is mentoring. The boy's brother, who is not yet in third grade, has gotten caught up in the excitement of the robotics team. Their grandfather bought the boys a LEGO® robot for Christmas.

"Some people might ask, 'How do we know STEM outreach is work-

ing?' Here's a young child and his family who didn't have previous knowledge of robots, and now they are interested and excited about it," Rehr-Matash said. "To me that shows the impact we can have on grooming future generations of STEM professionals."

Johnson agrees that the outreach is effective. "Our volunteer SSC Atlantic scientists and engineers are excited about inspiring young people and will make a big difference in the way these young people view these fields of study," Johnson said. "I believe they will be the catalysts that generate a broader, more diversified base of future scientists and engineers," she said.

- Susan Piedfort, Chronicle Editor

Mary Graves, FIRST® LEGO® League Operational Partner and an SSC Atlantic industry partner, goes over the ground rules before the kickoff of competition at West Ashley High School.



CTO CORNER

Dr. Al Emondi
SSC Atlantic
Chief Technology Officer



BUILDING A STRATEGY WITH THE END IN MIND

As we build out our science, technology, engineering and math (STEM) outreach program for SSC Atlantic, it is imperative what we look at our end-to-end strategy. We need to understand how we could use effective approaches to inspire and engage kids that are just beginning to show an interest in STEM, as well as keeping them inspired in STEM as they enter and eventually graduate college.

We can't lose sight of the end goal ... which is to hire these students into our future workforce.

In building our end-to-end STEM pipeline, or appropriately in Navy terms, our STEM-to-Stern pipeline, there are key junctures where a decrease in potential STEM candidates will naturally occur. The initial candidate pool forms early, where kids at 8 years of age are beginning to show interest in STEM. Unfortunately, that candidate pool will only decrease over time. Simply because an individual expresses an interest in STEM does not indicate that they will eventually choose a STEM career field. Furthermore, of those kids that do enter college in a STEM degree program, anywhere from 39 to 65 percent will either not complete their degree, or upwards of 20 percent of students will choose to change to a degree program in a non-STEM discipline.

When considering our STEM pipeline strategy, we must consider the diversity component as well. While there is good news that the underrepresented racial minority (URM) component of the STEM student base has grown over the last 40 years, URMs still have a much higher rate of non-completion. Considering the graduation rate of STEM kids in the African American, Native American or Latino subgroups, each graduated only half of those compared to white or Asian American, and well over half the initial URM subgroup did not complete their degree within five years. This reduced number of degreed candidates in URMs is partially tied to socio-economic factors that are only minimally present in

non-URM groups. Studies have shown that students from the URM subgroups often find themselves in tension between their racial identity and their developing STEM identity. This tension, often felt from a societal and family context, can significantly affect their graduation outcome. The research has also shown that that it is possible to increase the retention rate of URM students in STEM degree programs by almost four-fold if strong networks, relationships and interactions with other STEM professionals are present to support these students during their collegiate experience.

When considering our STEM pipeline at SSC Atlantic, we must keep all of these factors in mind as we strike the right balance of inspiration and engagement in the K-12 age groups. We must provide meaningful interactions and strong mentor relations through internship and scholarship programs. All eventually lead to the goal of employing STEM professionals at SSC Atlantic. While this is a work in progress, we have already achieved many successes toward this strategy.

The Collegiate Cyber Defense Challenge, led by SSC Atlantic's Jeff Bullock, has kicked off with a series of regional competitions that will culminate in a national competition. Students will participate in cyber challenges with the hopes of being recruited by organizations such as SSC Atlantic. Several SSC Atlantic employees will serve as members of the Red and White teams during the competitions.

STEM summer programs (the Science and Engineering Apprenticeship Program; the Naval Research Enterprise Intern Program; the Science, Mathematics & Research for Transformation program; and summer faculty) are preparing for an exciting summer of work on Grand Challenges and other science and technology (S&T) projects. Students and faculty selected from high schools and institutions around

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the country will join the SSC Atlantic team for 8 to 10 weeks during the summer.

SSC Atlantic hosted National IT Shadow Day Feb. 13 for high school students in Charleston, New Orleans and Hampton Roads. This initiative, sponsored by the Department of Defense CIO, is designed to give high school students a unique opportunity to observe the federal IT workforce, shadow an IT professional and pursue a career in IT and STEM fields. Visiting students also participated in an open and interactive discussion with SSC Atlantic Commanding Officer Capt. Mark Glover and SPAWARSSCOM Commander Rear Adm. Patrick Brady.

FIRST® LEGO® League robotics season has been in full swing with regional competitions from January through March. More than 200 SSC Atlantic employee volunteers are involved with 34 teams through the center's sites. Six sponsored FIRST® LEGO® League teams (grades 3-8) qualified for the South Carolina State Competition, while an additional three teams with SSC Atlantic mentors made it to the state finals. The high school teams, FIRST® Robotics Competition, vie in their regional competition in March at the North Charleston Coliseum in North Charleston, S.C.

David Gravseth, the systems engineer on the Integrated Personnel and Pay System-Navy project, is the New Orleans STEM champion. As a Navy Reservist, Gravseth has worked with the Office of Naval Research (ONR) on a number of STEM-related projects, including Project Sea Perch, and has judged science fairs. Gravseth is also a member of the University of New Orleans (UNO) Department of Electrical Engineering advisory board, and he recently reviewed and graded 25 students' demonstrations at the university's Electrical Engineering Senior Design Symposium Day. In his new position, Gravseth is collaborating on STEM projects with the Naval Research Lab (NRL) at nearby Stennis Space Center and working with area schools through NRL's educational partnership agreements. A number of New Orleans employees are mentoring teams of students from various

high schools who competed in the FIRST® LEGO® League robotics competitions from January to March and are tutoring students for a local MATHCOUNTS competition. They also supported and judged entries at the District 8 science fair in Hammond, La., and the Greater New Orleans Science and Engineering Fair held on the UNO campus.

SSC Atlantic employees Keisha Williams (a scientist in Code 71000) and Rolland Fitch (an IT specialist in Code 5933) participated in Marrington Elementary School's mini career fair Oct. 14. They discussed STEM careers and explained how SSC Atlantic supports the military and a variety of government agencies. They also demonstrated Spykee the robot and explained how robots and unmanned vehicles are used to execute various government missions. After the career fair, the students expressed their appreciation by writing thank you cards to Williams and Fitch. Many students said that they enjoyed learning about new technology and drew pictures of Spykee on their cards.

Theresa Breaux, an electronics engineer in the Test, Evaluation and Certification competency (Code 5.9), was a mentor for Stratford High School girls who took part in the school's first Digital Damsels Robotics Camp in October. The one-week, after-school camp emphasized computer science, providing the opportunity for participants to build robots and do basic computer programming.

Total Force Management (8.1) Competency Lead Gary Scott, SSC Atlantic STEM Outreach Director Shanda Johnson and Keisha Williams work directly with Allen University to administer the Pipeline Project — created to increase the number of minority and female students pursuing STEM-related education. Pipeline students who interned in various Department of Defense labs and commercial businesses shared their experiences with symposium attendees recently. Speakers who worked in SSC Atlantic labs during summer 2011 — Frank Purnell, Eliza Mitchell and Harold Rickenbacker — described their experiences as life changing, and expressed their desire to return to SSC Atlantic this summer.

From the Executive Director

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involve the local communities everywhere SSC Atlantic has a presence. From FIRST® robotics competitions with elementary, middle and high schools in Charleston, to judging student science projects in New Orleans, to a summer academy for 42 kids in Hampton Roads, SSC Atlantic is committed to encouraging STEM study in students and serving as positive role models for career opportunities that await them.

At last count, we are involved in 34 FIRST® LEGO® League Robotics teams, four FIRST® high school Robotics teams, and cyber challenges at the high school and college levels. These outreach activities, along with our partnerships with colleges and universities and our

recruiting efforts, are helping us reach our strategic goal of providing innovative solutions for today, tomorrow and beyond.

Rooted within that goal is the challenge to cultivate future generations of scientists and engineers who will push the envelope further and competitively launch the command into new frontiers. It will help produce the capable and flexible workforce our nation needs to compete in a global marketplace.

I can personally attest to the rewards, and fun, of working with kids in the FIRST® LEGO® League robotics program. There are many other ways to get involved. If you'd like to help invest in our future, contact Shanda Johnson in Charleston, Justin Langley in Tidewater or David Gravseth in New Orleans. You'll be glad you did!

Carrying science forward

Axtell's doctoral study offers new adventures in learning

SSC Atlantic electrical engineer Travis Axtell is currently embarked on a new adventure in postgraduate learning thanks to the Department of Defense (DoD) Science, Mathematics and Research for Transformation (SMART) program.

Axtell was working in SSC Atlantic's 5.7 competency in 2009 when he was awarded the SMART scholarship, and is now pursuing a Ph.D. in space systems engineering at the Naval Postgraduate School (NPS) in Monterey, Calif.

Axtell's employment with SSC Atlantic goes back to his college years, when he was a co-op student working in the former Code 60, Command and Control. His branch designed command centers in the Iraq green zone, and the Navy Regional Operations Centers/Regional Dispatch Centers. When he graduated from college and started working at SSC Atlantic full time, he was offered an internship at the National Reconnaissance Office, the organization responsible for DoD sensitive satellite programs. He returned to Charleston with extensive knowledge of these systems, but he also saw many engineering challenges and wanted to be a part of the team to solve them. He was appointed the SSC Atlantic Scientific and Technical Intelligence Liaison Officer (STILO) to share experiences and build cooperation. Then came his selection in the SMART Scholarship program.

Axtell finds the learning experience at NPS incredibly rewarding. "Doctoral study is not about classes," he explained, "instead candidates work with a committee of Ph.D.s that guides the path of how to understand outstanding questions and solve them. It is an internal transformation that allows one to carry science forward."

Besides being on a first-name basis with prior astronauts, hearing first-hand accounts of the first non-stop flight around the world and other feats of mankind, and working alongside future astronauts, Axtell is learning about some of the



Travis Axtell

most sophisticated systems ever conceived. "The challenge is that the program doesn't exist to build even more complicated things, but rather to engineer it to be more affordable for our military," he said.

Axtell is certain that what he is learning today will help him make a difference in the future. "Every day I hear new military perspectives. Some of these officers tell engineering stories, others operational ones," he said.

"Learning and doing are two distinct actions," he added. "My opinion is that the government needs those capable of doing more than ever. I believe the program offices will be requesting our team to help them deliver reconnaissance systems affordably. The Navy is a mighty force, and I will work to ensure my contributions honor its legacy."

In Monterey, Axtell has also continued his involvement with robotics competitions that are part of the Navy's Science, Technology, Engineering and Mathematics (STEM) outreach effort, working with Carmel High School's FIRST® Team 2035. The competition, which makes the kids think through the entire engineering process in order to reach an objective, helps foster interest and knowledge of engineering and design. Axtell first participated in a robotics competition when he was in high school, and he feels it helped cement his aspiration to become a professional engineer and has inspired continuous learning. He mentored a team while working in Washington, D.C., and was very active in SSC Atlantic's STEM outreach activities.

"These are some of the smartest kids I've ever seen," Axtell said. "They have so much potential. If given the opportunity, they could go anywhere and do anything." In fact, two of his students have gone on to MIT for undergraduate and Ph.D.s in electrical engineering. "It was their hard work," he said, "but I would like to think I helped them to see their potential." Axtell has also made presentations to local educators about how to teach computer science and his work with the One Laptop Per Child community.

He returned to Charleston recently to give two Friday technical briefs, on space-based segmented mirror telescopes and an introduction to the concepts of the calculus of variations. The first topic relates to his passion and interests.

“To me, it represents the crown jewels of our country’s abilities,” he said. Axtell was part of the group that presented to National Reconnaissance Office (NRO) Director, retired Air Force Gen. Bruce Carlson, to request funding for the NPS laboratory. Carlson, along with leadership of the Office of Naval Research and the Air Force Research laboratory, signed the agreement to provide funding for the laboratory.

“We are now beginning experiments and I will soon propose my research plans,” Axtell said, adding that he also took a military space control class and developed an analysis on space protection investment that has been well received by the faculty.

And while his second SSC Atlantic technical brief topic, the calculus of variations, is very old, Axtell promotes it “as a means to understand how the great minds of history worked at understanding scientific principles,” he said. “It can help systems engineers prove their decisions based on facts.”

With another two years ahead before receiving his Ph.D., Axtell heartily recommends the SMART scholarship program. “More education does not make a person essential for our national defense, but it may help to unleash one’s potential,” he said. “If you feel you have the potential to save a life or improve the quality of life for our Sailors, Marines, airmen and soldiers, then you already know someone is counting on you. We raise ourselves by raising each other.”

Axtell believes the late Randy Pausch said it best. “The brick walls are there for a reason. The brick walls are not there to keep us out; the brick walls are there to give us a chance to show how badly we want something,” he said. “I believe in our ability to solve important problems. We must be vehement in the endeavors of our lives with every fiber of our beings.”

The SMART program allows students pursuing undergraduate or graduate degrees in STEM disciplines to receive a full scholarship and be gainfully employed upon degree completion. SSC Atlantic employees interested in the program can learn more on at <https://wiki.spawar.navy.mil/confluence/display/SSCACOG/DoD+SMART+Scholarship+Program>, or by visiting the SMART scholarship website at <http://smart.asee.org/>.

- Susan Piedfort, Chronicle Editor



Photo by Joe Bullinger

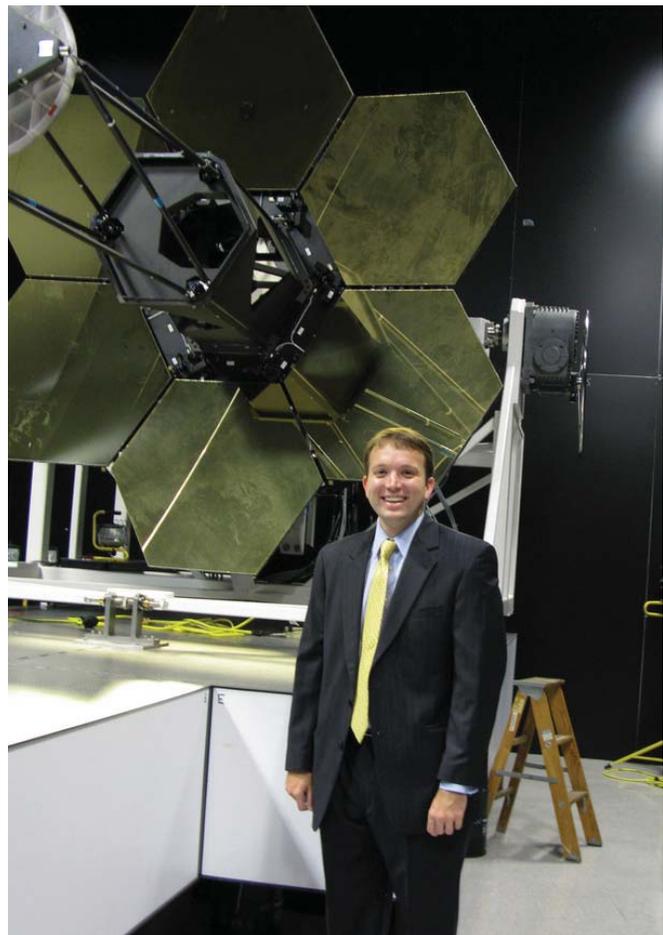


Photo provided

At top, at SSC Atlantic in June of 2009, Axtell talks about his involvement with local high school robotics teams as the teams give a demonstration in the executive conference room. Above, Axtell poses with a segmented mirror telescope in an NPS laboratory.



Photos by Joe Bullinger

Above, attendees gather before the official ribbon cutting ceremony for SSC Atlantic's new data center Oct. 7. Below, Lt. Cmdr. John Lukacs leads senior Navy officials on a tour of the new data center.



New data center plays key role in consolidation effort

SSC Atlantic unveiled a new data center in October that is playing a key role in consolidating more than 100 Navy data centers to increase effectiveness and efficiency and reduce costs while still meeting the Navy's security and operational requirements.

Department of the Navy Chief Information Officer Terry Halvorsen and Dave Weddel, Assistant Deputy Chief of Naval Operations for Information Dominance, were keynote speakers at the Oct. 7 ribbon cutting event. Both officials explained how the center fits into the Navy's future plans.

"This data center will be part of the Navy's data center consolidation effort. Not only is this data center efficient, it's green -- that is another big piece of what we want to do. We need to protect the environment and the resources that we have. This data center will help us do that," said Halvorsen, who is the Navy's senior official on matters related to information management, information technology/



Visitors attending the data center ribbon cutting ceremony at SSC Atlantic hear about data center capabilities from SSC Atlantic Commanding Officer Capt. Mark Glover.

cyberspace and information resources management. He is also the Department of the Navy's lead for IT/cyberspace efficiency.

"We are here today to support the Sailors and marines underway and in harm's way," said Weddel. "The demand for IT efficiencies and the demand for efficiencies at large across our Navy are increasing. Through facilities like this and efforts like this we are able to not only increase our IT efficiencies and reduce our spending in IT, but also build up a core of quality professionals, diverse IT professionals, that can man, manage and engineer such a facility and maintain it," said Weddel.

The official ribbon-cutting was performed by Gary Armstrong, vice president of Suffolk Construction; Lt. Cmdr. Steve Fichter of NAVFAC SE ROICC; Capt. Mark Glover, commanding officer of SSC Atlantic; Terry Halvorsen, Chief Information Officer for the Department of the Navy; Rod Smith, deputy commander of SPAWARSSYSCOM; David Weddel, Assistant Deputy Chief of Naval Operations for Information Dominance; Christopher Miller, executive director of SSC Atlantic; and Pennie Bingham of the Charleston Metro Chamber of Commerce.

"This data center provides the Navy a state-of-the-art platform that gets us another step closer to information domination. Within this data center we will be able to support significantly more work with fewer personnel without sacrificing service or capability," said SSC Atlantic Commanding Officer Capt. Mark Glover during the ribbon-cutting ceremony. "In cooperation and combination with data centers in New Orleans and San Diego, this building represents a capability and a capacity to be exactly what the Navy needs at a time when the Navy needs it."

Construction began on the 20,220-square-foot facility on Joint Base Charleston-Weapons Station Oct. 15, 2010. The

\$9.498 million data center was designed to the United States Green Building Council's Leadership in Environmental and Energy Design silver rating standard.

The Navy's data center consolidation initiative will provide cost savings due to reductions in physical locations, power and data center management contracts.

Glover praised the SSC Atlantic facilities team for their job in defining the original requirements for the building, to meet BRAC specifications and to allow flexibility for growth and development. They documented execution of construction details for accuracy against specifications. Led by Wayne Panullo, chief engineer, the team included James Herrington, civil engineer; Bill Dean, electrical engineer; and Skip Williams, mechanical engineer.

As BRAC Lead for SPAWARSSYSCOM, Ken Slaughter had the BRAC commission's vision for consolidating intellectual capital from Pensacola into a cutting-edge facility for existing customers and to support the warfighter in the future.

As BRAC 2005 Pensacola Transition Lead, Bob Byrnes managed the SSC Atlantic Pensacola Office transition to Charleston, enabling the smooth movement of 13 employees from Pensacola to Charleston and an additional 29 employees to other SSC Atlantic locations. His watch also included the construction of the data center to house the programs transitioned from Pensacola.

Pensacola Projects IPT Lead and BRAC Technical Project Manager Lt. Cmdr. John Lukacs managed the move of several critical programs from Pensacola to Charleston, including a 24/7 effort to transition six CNIC programs from Pensacola to Charleston over the Memorial Day weekend.

The new lab not only takes on the critical work moving from Pensacola but also proves synergistic as it both supports SSC Atlantic's corporate RDT&E network and provides

Continued on page 23

Acquisition and technical communities team up

By Floyd Usry, Colonel (Ret.), USMC
Marine Corps Advocate
SSC Atlantic

Sept. 11, 2011, marked the 10th anniversary of the attack by Al Qaeda terrorists on the United States. Since that event, Marines have been at war in Iraq and Afghanistan. Today, in Central Command, there are 23,000 Marines deployed and fighting as a result of those attacks.

As the acquisition agent for the Marine Corps, the Marine Corps Systems Command (MCSC) equips and sustains those Marines who are entrusted to be “the most ready when the nation is least ready.” Today, those Marines are engaged in a counterinsurgency battle, and “their struggle is our struggle” because their lives depend on the equipment the command provides to them.

MCSC Executive Director Dr. John Burrow has said that Space and Naval Warfare Systems Centers (SSCs) Atlantic and Pacific will grow in importance and urgency for the Marine Corps to remain invincible as America’s expeditionary force. And recently, during SPAWAR Day with MCSC, Burrow reiterated that SPAWAR Systems Centers are considered Marine Corps Centers because MCSC intends to leverage the command, control, communications, computers, intelligence, surveillance and reconnaissance (C4ISR) technical strengths of their engineer workforce and facilities for the benefit of the greater Marine Corps.

Over the course of the past turbulent decade, MCSC and SSC Atlantic have partnered to equip and sustain Marines in their fight for decision superiority in the counterinsurgency battles of Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF). MCSC and SSC Atlantic are allied to meet the 35th Commandant of the Marine Corps’ (CMC) Planning Guidance, specifically the CMC priority to equip the Marine for success in the current conflict in Afghanistan. MCSC recognizes SSC Atlantic as the preferred provider to equip the Marine with C4ISR engineered solutions.

Delivering best value to the Corps

Like other engineering centers, SSC Atlantic is a Working Capital Fund organization, meaning that it operates similar to a nonprofit business, in effect not making a profit as industry would, but providing products to various government sponsors (naval, joint, federal and coalition) based on an agreed-to cost for labor and materials. Although systems centers must think like a business, they don’t measure success based on the balance sheet but on the warfighting effects on the battlefield. The successful fielding of C4ISR equipment to Marines in OIF and OEF is directly traceable to the MCSC program managers teaming with SSC Atlantic engineers to find the best balance between acquisition and

technology to meet urgent time-sensitive requirements. The relationship between Marine and engineer is best exemplified in SSC Atlantic’s vision: “Make IT Count for the Warfighter and the Nation.” This is most evident in the field, from the strategic corporal to the commanding general who are using C4ISR systems to make decisions faster than the enemy.



Dr. John Burrow

Together MCSC and SSC Atlantic share many intangible values that can’t be measured on a balance sheet. They share a common cause to support Marines with the best equipment. This equipment, placed in the hands of Marine leaders, enables the command of forces that create options and decision space for the nation’s leaders. In the chaotic nature of war, the strengths are flexibility and adaptability. Value, affordability and competition are the new and accepted benchmarks for acquisition success.

While the intangible values and benefits are hard to measure, SPAWAR’s contributions to the success of Marine Corps expeditionary operations can be measured in some typical areas:

- SPAWAR provides C4ISR solutions for more than 80 MCSC programs and projects.

- SPAWAR science advisors are embedded with the fleet at two Marine Forces Commands (MARFORS) and two Marine Expeditionary Forces (MEFs) to communicate Marine Corps operational requirements through the Marine Corps Combat Development Command (MCCDC), Office of Naval Research and the naval labs.

Additionally, SSC Atlantic:

- Understands the science and engineering challenges associated with developing and delivering complex C4ISR solutions to Marines.

- Supports approximately 70 percent of MCSC’s C4ISR programs, spanning each element of the Marine Air-Ground Task Force (MAGTF).

- Employs more than 240 government technical employees on MCSC tasks, which is a significant enabler for each command to become a smart buyer.

- Deploys government technical experts to support forward deployed Marines enabling the best possible combat readiness.

--Employs 1,185 military veterans, approximately 33 percent of its workforce, of which 297, about 8 percent of the total workforce, have a service-connected disability.

C4ISR systems used by the Marines

While more than 74 percent (2,700 employees) of SSC Atlantic's workforce is composed of scientists, engineers and technicians, their wide array of technical skills include (but are not limited to): information assurance, enterprise and systems architecture, C4ISR platform integration, service-oriented architecture, cloud computing, software engineering, mobile tactical command and control systems, tactical wireless networks, command center technologies, enterprise cyber IT, etc. The full list of technical skills can be accessed via the Naval System Engineering Resource Center website.

This government workforce provides the technical hands-on work and oversight to put trusted and reliable C4ISR products into the hands of Marines. While there are too many successful C4ISR programs to mention by name, there are critical C4ISR systems built by engineers, managed by program managers and used by Marines in the command, air, ground and logistics elements that have been responsible for the day-to-day successes in Iraq and Afghanistan.

Some systems are more recognizable than others, such as the Mine Resistant Ambush Protected (MRAP) program where, to date, SSC Atlantic has integrated a diverse array (as many as 14) C4ISR systems onto 24,000 MRAP/MRAP All-Terrain Vehicles (MATVs) for all four services and Special Operations Command. This one system is generally credited as being the single greatest lifesaver in OIF and OEF against improvised explosive devices. But, SSC Atlantic is also a major partner with the fifth element of the MAGTF bases and stations. It is a key partner in the installation of



Photo by Harold Senn

MRAPs are integrated with C4ISR systems at SSC Atlantic.

air traffic control systems at all Marine Corps air stations; as well as the key integrator of electronic security systems for 35 Marine Corps installations worldwide.

Navigating the future

During the past 10 years of war, Marines have used critical C4ISR systems developed by SSC Atlantic. Just as the Marine Corps brings the best value to the nation as an expeditionary middleweight force, so too does SSC Atlantic offer the best value to the Marine Corps, based on its C4ISR technical strengths, understanding of the USMC's operational requirements and perhaps most importantly, the shared responsibility that its systems enable Marines to fight smarter than the enemy.

Leadership Development Workshop held Feb. 8, 9

An SSC Atlantic Leadership Development Workshop was held Feb. 8 and 9.

The first day of the workshop featured discussions on STRL and performance improvement plans, followed by break-out sessions for the Council of Supervisors and for business portfolio managers and sub-portfolio leads.

The second day featured briefs from Rear Adm. Jerry Burroughs, PEO C4I, and Dr. John D. Burrow, Executive Director for MARCOR-SYSCOM.

At right, supervisors discuss a leadership challenge during the Council of Supervisors break-out session.



Photo by Joe Bullinger



Photos by Holly Quick

Above, SSC Atlantic Commanding Officer Capt. Mark Glover speaks at the conference. At right, the SPAWAR exhibit was one of the most popular destinations on the technology floor.



SPAWAR personnel take center stage

Project managers, subject matter experts shine at DoN IT and West 2012 conferences

**By Sharon Anderson
CHIPS Senior Editor**

SPAWAR, the Navy's information dominance provider, proved to be a stellar participant in two of the year's most popular technology conferences – the Department of the Navy Information Technology Conference, hosted by the DoN Chief Information Officer, and West 2012, co-sponsored by the Armed Forces Communications and Electronics Association (AFCEA) International and the U.S. Naval Institute.

The conferences provide a venue for government and industry to discuss best practices and for government leaders to convey their vision for IT efficiencies and warfighting effectiveness to the workforce.

The conferences were held simultaneously at the San Diego Convention Center Jan. 23-26, providing attendees with multiple opportunities for learning and sharing information. The DoN IT Conference featured topics that focused on the DoN's IT efficiencies and savings initiatives, such as data center consolidation, cloud computing and naval enterprise networks.

The Space and Naval Warfare Systems Command's chief technology officer and the DoN's director for data center consolidation, Robert Wolborsky, joined Robert Harden from the office of the Deputy Chief of Naval Operations for Information Dominance, and other distinguished panelists in a spirited discussion about data center consolidation. SPAWAR is playing a pivotal role in the Navy's plan to close excess data centers and consolidate resources into three regional sites in Charleston, S.C.; New Orleans, La.; and San Diego, Calif. SPAWAR is also the Navy's single authority for IT procurement to achieve greater economies of scale and to better support programming, planning and budgeting in accordance with the DoN IT Expenditure Approval Authorities memorandum to meet the DoD's budget reductions.

SSC Pacific's Suzi Ellison, who is a Navy software product manager for the DoD Enterprise Software Initiative, participated in multiple DoN IT Conference panel discussions aimed to showcase the advantages of enterprise-wide licensing to obtain better pricing and terms and conditions that will also yield significant savings for the department.

SPAWARSYSCOM Commander Rear Adm. Patrick H. Brady and Program Executive Officer for Command, Control, Communications, Computers and Intelligence (PEO C4I) Rear Adm. Jerry K. Burroughs served on West 2012 panels and spoke about warfighter needs and the dimensions



Photo by Holly Quick

SPAWARSYSCOM Commander Rear Adm. Patrick H. Brady discusses SPAWAR's development as the Navy's Information Dominance Systems Command.

of weighing security risks and costs.

The conference drew about 9,000 attendees, and the SPAWAR exhibit was one of the most popular destinations on the technology floor, featuring an impressive slate of speakers, including Capt. D.J. LeGoff, program manager for the Consolidated Afloat Networks and Enterprise Services (CANES) network; Rear Adm. James Rodman, SPAWAR Chief Engineer; and the commanding officers of Systems Centers Pacific and Atlantic, Capt. Joe Beel and Capt. Mark Glover, respectively.

During the conferences, a former commanding officer of SSC Atlantic, Capt. Cloyes (Red) Hoover, major program manager for the command and control program office under PEO Integrated Warfare Systems, was presented the prestigious Copernicus Award by AFCEA International and U.S. Naval Institute Jan. 25 at an awards banquet. The Copernicus Award recognizes individual contributions to naval warfare in C4I, information systems and information warfare. (See sidebar at right.)

Because of their expertise in acquisition planning and execution, C4I engineering and communications, and scientific research and development, SPAWAR leadership and personnel proved to be in high demand throughout the dual conferences. With more than 8,000 military, government and contractor support professionals working around the world, SPAWAR builds the right solutions at the right price.



Photo courtesy of AFCEA International

Former SSC Atlantic Commanding Officer Capt. Red Hoover, third from left, poses with other Copernicus Award recipients during the recent conferences.

Former CO Hoover receives Copernicus Award

Former commanding officer of SSC Atlantic Capt. Red Hoover, currently major program manager (MPM) for the command and control program office under PEO Integrated Warfare Systems, was recently presented the prestigious Copernicus Award.



Hoover

As the MPM for the command and control program office, Hoover is the Navy's expert on sensor netting and tracking with extensive experience in C4I engineering, interoperability and acquisition. He led the initiative to conduct system interoperability testing throughout 2010 and 2011, which resulted in the collection of important interoperability related data and a subsequent three-phase solution plan.

In December 2010, Hoover began a cross-PEO, cross-program initiative to develop a plan to improve interoperability by correcting track identification issues for the **USS John C. Stennis** (CVN-74) Carrier Strike Group prior to deployment. This near-term solution was complete in just 18 months and is being installed in all carrier strike groups.

Hoover and his team are also on track to deliver the first "core solution" across six programs that will correct the Fleet "Big 6" interoperability issues. The core solution will be demonstrated during the Trident Warrior Exercise in 2012, 18 months ahead of schedule.

At the joint level, Hoover led the Navy's effort in developing the Joint Track Management Capability (JTMC) bridge between Navy Integrated Fire Control and Army Integrated Fire Control systems. This is the first Single Integrated Air Picture at the fused track management level for use by the joint services.



Photos by Joe Bullinger

SSC Atlantic figures prominently in government/industry C5ISR conference

The fifth annual Charleston Defense Contractors Association (CDCA)-sponsored Command, Control, Communications, Computers, Combat Systems, Intelligence, Surveillance and Reconnaissance (C5ISR) conference was held Nov. 14 through 17 in North Charleston and featured significant SPAWAR involvement and attendance.

With the theme “Achieving Efficiencies in Information Dominance,” the conference included national-level speakers, interactive workshops and panel discussions, technical tracks, exhibits and networking opportunities.

The conference was kicked off by SSC Atlantic Commanding Officer Capt. Mark Glover. SPAWARSYSCOM Commander Rear Adm. Patrick Brady spoke Nov. 16, and SSC Atlantic Executive Director Christopher Miller addressed the attendees Nov. 17.

Other speakers included Terry Halvorsen, the Navy’s Chief Information Officer; James W. Cluck, Acquisition Executive, Director, SORDAC, U.S. Special Operations Command; Vice Adm. Kendall L. Card, Deputy Chief of Naval Operations for Information Dominance/Director of Naval Intelligence, N2/N6, OPNAV; Rear Adm. Jerry K. Burroughs, Program Executive Officer for Command, Control, Communications, Computers and Intelligence; Brig. Gen. Kevin J. Nally, USMC, Director C4/CIO, Deputy, MARFORCYBER, U.S. Marine Corps; and Col. Richard D. McComb, USAF, commander of Joint Base Charleston.

SSC Atlantic portfolio managers moderated several panel discussions on current information dominance issues. Mike Kutch, SSC Atlantic Battlespace Awareness and





Integrated Cyber Operations Portfolio Manager, moderated two panels exploring cyber challenges. Charles Adams, SSC Atlantic's Transport and Computing Infrastructure Portfolio Manager, led two panels on data transport and enterprise delivery. Kevin McGee, then-Decision Superiority Portfolio Manager for SSC Atlantic, headed up a panel discussion on C2 and cloud computing.

Industry representatives speaking at the conference or participating in panel discussions were from Google, Deloitte Consulting LLP, Microsoft, Boeing, Amazon, Cisco, Harris Corporation, VMware Federal, EMC Federal Group, Intel Federal LLC, Textron and AAI Corporation.





New Professionals congregate for networking, team building

New Professionals (NPs) from all SSC Atlantic sites gathered in Charleston Oct. 26 and 27 for a series of team building and leadership events.

Sponsored by the NP Council Atlantic, the all hands meeting featured guest speaker retired U.S. Air Force Lt. Gen. John Rosa, president of The Citadel, and a brief by SSC Atlantic Executive Director Christopher Miller.

During a team activity called Innovation Lite, NPs went through the process used to submit research proposals for SSC Atlantic's Innovation Program. A panel of judges gave them feedback and selected the best proposals.

Several NPs shared their job rotation experiences, and the attendees participated in a Continuous Process Improvement (CPI) activity in which they used various CPI tools to streamline a process.

Mentoring and other professional development options for NPs were also discussed.



Photos by Joe Bullinger

The tokens are coming!

The tokens are coming, the tokens are coming!

SSC Atlantic Code 58100 is coordinating the Navy implementation of SIPRNet PKI hardware token and is acting as the Central Distribution Point for all tokens, readers and software associated with this effort.

The Department of Defense-issued CIO Memorandum of Oct. 14, 2011, "DoD SIPRNet Public Key Infrastructure Cryptographic Logon and Public Key Enablement of SIPRNet Applications and Web Servers," directs the issuance of SIPRNet hardware-based Public Key Infrastructure (PKI) tokens to all users by Dec. 31, 2012, along with the following timelines:

- Complete configuration of user accounts on secret network to support cryptographic logon (CLO) using SIPRNet PKI tokens by March 31, 2013.
- Implement network CLO using SIPRNet PKI tokens by April 1, 2013.
- Complete PK enablement of all SIPRNet applications and web servers to support cryptographic authentication by June 29, 2013.
- Implement cryptographic authentication to access SIPRNet applications and web servers by June 30, 2013.

The SIPRNET smartcard, designed to provide more robust and secure authentication methods, is considered unclassified, therefore no additional

security measures are needed for protection, and password controls will become much easier. The security of the token can be handled in the same manner as for the Common Access Card (CAC). In order for the Navy to meet the dates listed, the following timelines must be met:

Network	Card Readers and Middleware Software Distribution Schedule	Accelerated Tokens Issuance Schedule
NMCI	Present-December 2012	April-December 2012
Afloat	August-December 2012	September-December 2012
ONE-Net	Present-December 2012	April-December 201
Legacy (Excepted)	Present-December 2012	April-December 2012

As of March 1, 2012, SIPR users must coordinate with their command Trusted Agent (TA) for token issuance.

For command readiness, the Active Directory should be updated by scrubbing SIPRNet accounts for inactive accounts; configure domain controllers to support CLO; and configure webservers and applications to support PKI. Commands should designate TAs (2 or more) and large commands are encouraged to appoint one to two LRAs. Card readers and middleware can be requested from the Distribution Center at SSC Atlantic PKI; Middleware from the Navy InfoSec website <https://infosec.nmci.navy.mil/pki/tools;html#software> and card readers via email from pkihd@infosec.navy.mil.

Existing workstations will be used in commands' SIPRNet facilities. The 90Meter Interface software will be provided by SSC Atlantic for legacy

networks and pushed to NMCI workstations. Smart Card Manager will be deployed on every workstation with Certificate Issuance Workstations (CIW) only being issued to LRAs, TAs and Kiosks. Validation software is Tumbleweed Desktop and Server Validator which will be provided by SSC Atlantic for legacy workstations and pushed to NMCI workstations.

OmniKey 3121 is the only NSA-approved card reader at this time. It will be provided to local commands by SSC Atlantic PKI. Workstations with CIW installed will need two readers (e.g., TA, LRA). The NSA-approved hardware token is SafeNet SC650, to be provided by Regional LRAs during token issuance.

Commands may choose to set up their own LRA to provide dedicated support, however would still be required to work with their regional LRA to receive their tokens located at the following Regional SIPRNet Token Distribution Centers: LRA Washington, D.C.; LRA Norfolk, Va.; LRA Charleston, S.C.; LRA San Diego, Calif.; LRA Hawaii; LRA Naples, Italy. Names of the regional LRAs can be found at <https://infosec.nmci.navy.mil/pki/nss.html>.

Refer questions to Betty Collins, or Johnnie Martin-Ayers via email. Both are listed in the NMCI GAL.

New Data Center

Continued from page 15

significant capacity for future work and growth.

Data center consolidation is part of a larger effort within the department to find efficiencies and cut spending in business IT. It was mandated by President Obama in February 2010 with the launch of the Federal Data Center Consolidation Initiative, which instructs federal CIOs to inventory their agency data centers and develop consolidation plans for implementation in fiscal year 2012 budget

submissions. The goal, as with the DoN's consolidation efforts, is to reduce costs, enhance the department's IT security posture, apply best practices and promote energy efficiencies. The federal goal is to reduce the number of data centers -- which grew from 432 in 1998 to 2,094 in 2010 -- by at least 800 over five years.

Through data center consolidation and the development of modern enterprise facilities, the department will increase its IT efficiencies, reduce spending and increase its operational effectiveness.



Photos by Joe Bullinger

Former SSC Atlantic Executive Director James Ward makes a presentation to Kevin McGee during McGee's retirement luncheon above at left, and McGee shows off his new casual attire, above at right.

McGee, Algozzini, Meddick, Engelman retire

A number of SSC Atlantic employees in key leadership positions ended their long civil service careers during the month of December.

Kevin McGee, Business Portfolio Manager for the Decision Superiority Business Portfolio, retired in December. McGee began his career as a cooperative education program student at Patuxent River Naval Air Station and Virginia Tech. He transferred from Naval Electronic Systems Engineering Activity (NESEA) to Naval In Service Engineering (NISE) East in 1994. He served as a division head from 1997 to 2002, and as a department head from 2002 to 2010. He was also Portfolio Board chairman for SSC Atlantic in 2010 and 2011.

After 37 years and four months of government service, Glenda Algozzini, SSC Atlantic Inspector General, retired at the end of 2011. Beginning her federal career with the Office of Personnel Management, she moved on to the Naval Medical Research Laboratory Detachment in New Orleans, La.; NASA Test Facility in Mississippi; the IRS; Defense Contract Audit Agency (DCAA), Alexandria, Va.,

and Charleston office; and NISE East. Retirement offers her a chance to enjoy her family and traveling, RVing, ballroom dancing with her husband, and walking her two dogs, Phoebe and Baci.

Bob Meddick brought to a close more than 35 years of civil service with his retirement. An Army veteran who served in Vietnam, he is a graduate of Ohio Northern University with a bachelor of arts in business administration. As deputy for SSC Atlantic's Small Business Programs, he ensured the command's compliance with the applicable provisions of the Small Business Act and served as the corporate liaison officer to industry partners. He was named the South Carolina Minority Small Business Champion of the Year in 2009. He was previously employed at Wright Patterson AFB, Ohio; Norton AFB, Calif.; and Southern Division, Naval Facilities Engineering Command, Charleston, S.C., before coming to SSC Atlantic.

David Engelman retired Dec. 31 after 36 years and four months of federal civilian and military service. The former naval officer began his federal civilian career at Charleston

Naval Shipyard in 1980. At SSC Atlantic he served as a management/program analyst in the office of the Chief of Staff, and more recently as chief analyst for the Strategic Planning Office. In 2007 he was awarded the Governor's Order of the Silver Crescent, South Carolina's highest honor for community service.



Algozzini



Meddick



Engelman



Photo by Joe Bullinger

Some of SSC Atlantic's recent SMU master's degree recipients include, from left, standing, Wally Jack, Carlos Herbas, Don Barber, John Storie, Steve Black, John Coville, Seth Gainey, Brandon Friesner, Patrick Leitner and seated, from left, are Daniel Stroud, Andrew Poe, Karen Cooke and Tom Sessions.

SSC Atlantic's newest master's recipients

Twenty-one SSC Atlantic employees gave up eight hours of their weekends every other Saturday for two years for a very worthwhile cause: earning master of science degrees in systems engineering from Southern Methodist University (SMU).

Marking this milestone were Tony Ayers of 52540; Don Barber of 63300; Steve Black of 56220; Karen Cooke of 55160; John Coville of 521B0; Greg Fisher, Brandon Friesner and Justin Williams from 58250; Jason Garrett of 55230; Carlos Herbas of 56230; Terrence Hutnik of 52510; Wally Jack and Sean Mehaffey of 54240; Patrick Leitner of 58230; Leonard Perry Jr., of 63200; Andrew Poe of 55130; Tom Sessions of 59440; John Storie of 41120; Daniel Stroud of 52110; Seth Gainey of 54250 and Alicia Hilton of 52120. Eighteen members of the group have officially graduated, and three have a few more classes. Gainey, who started after the rest of the group, has three classes to complete and will officially receive his degree later this year.

To earn their master's they had to complete 10 courses, each normally lasting about three months. Courses covered systems analysis methods, systems engineering processes, integrated risk management, systems analysis and optimization, systems integration and testing, software systems engineering, systems architecting, systems engineering design, systems engineering tools and systems engineering planning and management

"We started classes in January of 2010 and finished requirements Dec. 10, 2011," said Barber, 6330 program manager. "The professor was live via the web," he explained. "We could ask questions and he could ask us questions. Classes were also taped and archived for class members who needed to view them later due to travel or other reasons," he added.

The program is part a partnership with SMU that allows

SSC Atlantic to invest in its workforce. SSC Atlantic helps cover tuition costs for those who want to enhance their professional development with a master's degree. "People are the most important asset in our command," said SSC Atlantic Executive Director Christopher Miller, "And we must keep investing in them." SSC Atlantic also has a partnership with The Citadel, which offers a master's degree program that allows the SMU grads to apply much of their completed SMU coursework to a second master's degree.

As expected, the SMU graduate program became more difficult and demanding as it progressed, requiring the SSC Atlantic students to stay focused and motivated. Unlike other grad students who had the benefit of walking the SMU hallways, they had to confront some challenges associated with distance learning. They also had the challenge of wearing two hats, as SPAWAR employees and as students, in addition to the normal pace of everyday life. Poe and Leitner added one each to their families when their wives had babies during their master's degree pursuits. While Jack was earning his degree, one of his kids graduated from college. Mehaffey had to tune in from Bahrain for his classes while he was TAD, and Jason Garrett did so from Alaska. Barber once had to take his Saturday class from a hotel in Washington, D.C., while working with the FBI.

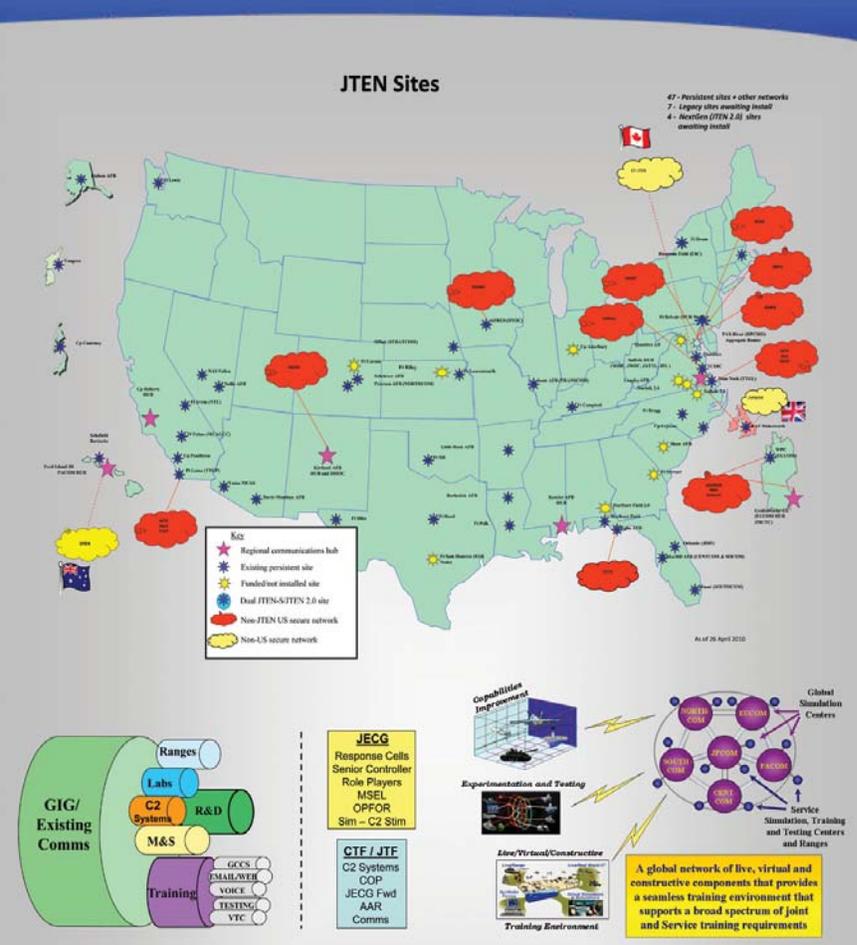
"The first year was a challenge," said Jack, "We were all getting accustomed to the coursework and missing the big weekends. The second year seemed even longer because we all knew what it was going to be like."

When they could, the SSC Atlantic students would get together and compare notes. During the two-year endeavor friendships were formed, and collectively they recently celebrated their impressive educational achievement ... and getting their Saturdays back!

- Susan Piedfort, Chronicle Editor

JTEN 2.0

Joint Training Enterprise Network v2.0



The JTEN 2.0 design enhances JTEN capabilities to achieve a robust, globally connected environment in which multiple simultaneous warfighter training events can interconnect seamlessly among one another well into the 21st century. It is engineered to maximize compatibility with the DISA Global Information Grid in a carrier-to-carrier (provider-to-provider) configuration. It offers warfighters a higher-capacity training capability to support larger events as well as multiple, concurrent events, irregular warfare and higher fidelity training.

JTEN 2.0 is used by all COCOM Tier 1 and 2 and many major service training programs to host their exercises and provide joint context to training by using simulations to drive training events.

It is capable of connecting to other networks, among them the Navy and Air Force training networks, the Secret Defense Research and Development Network (SDREN) and the SIPRNET, to provide training resources to them and extend the reach and realism of joint training.

The JTEN 2.0 program began in 2007, when the Joint Warfighting Center (JWFC) J7 (now Joint Staff, Deputy Director J7) anticipated changes in technology, coupled with the rapid growth of live, virtual and constructive (LVC) training activities and the approaching obsolescence of current hardware. JWFC determined a more robust, technically-adept and advanced JTEN was necessary. They called upon SPAWAR to engineer the solution.

The SPAWAR team built upon the strengths of the first JTEN and developed a robust, globally-connected, new network design specifically engineered to meet the unique and high-demand requirements of modeling and simulation (M&S) applications required to execute joint warfighter training well into the future.

“JTEN 2.0 not only solves the problems of technological obsolescence in JTEN 1.0 by replacing aging infrastructure, moving to IP v6 from IP v4, and moving away from the obsolete Asynchronous Transfer Mode (ATM) communications backbone technology to state-of-the-art Multi-Protocol Label Switching (MPLS) communications technology,” Gerrek explained. “It also most importantly provides a quantum leap in capability to the training customer using simulations to drive Live-Virtual-Constructive (LVC) training events.”

JTEN 2.0 has an order of magnitude increase in capability

JTEN:

Unmatched in the world of military training

Joint Training Enterprise Network (JTEN) 2.0 is advancing to the next level in providing realistic joint training capabilities to United States Combatant Commands (COCOMs), services and coalition partners, thanks to the hard work of a SPAWAR Team led by David Gerrek of SSC Atlantic, chief engineer of the project.

Gerrek, along with Xavier Calderon of SSC Atlantic and David Jones and Craig Thomasson of SSC Pacific, has made significant improvements to the critical training platform, creating better, faster and more robust network training capabilities. JTEN 2.0 now supports a modeling and simulation environment with greater fidelity and broader reach to more customers than ever before, making it a system that is unmatched in the world of military training.

to support simultaneous LVC events over its predecessor, Gerrek added.

“The new network design provides enhanced Quality of Service (QoS) and traffic isolation mechanisms to improve the network environment, support more events with higher resolution simulations and deliver larger entity counts,” he said. The team also designed and developed the Next Generation Data Center to facilitate the virtualization of Modeling and Simulation Applications.

“Security of JTEN 2.0 was a design attribute from the start,” Gerrek said. “We developed new security approaches to protect the data center edge, peering points and the transport control plane.”

Their approach, in conjunction with tools for IA Behavioral Analysis, provides JTEN a scalable security capability. Not only did the JWFC benefit from SPAWAR’s solution, DISA took notice and realized it could also have large implications for other DoD organizations.

“During initial JWFC/DISA technical interchanges, DISA realized the JTEN2.0 solution can be applied across DoD as a path forward to transition from legacy technology to modern IP advanced network services,” Gerrek said.

As a result, a Joint Integrated Projects Team (JIPT) was formed in July 2010 to provide DoD-wide cooperation, synergy and implementation. The results are that the Navy’s next generation NMCI is implementing the JTEN 2.0 DISA GIG solution, and the Navy Continuous Training Environment is adopting the JTEN 2.0 design.

In October 2010, the Strategic Command (STRATCOM) committed to modeling their Strategic Training Enterprise Network (STEN) design based on JTEN 2.0. STEN will link STRATCOM and their components (JFCC-Space, JFCC-IMD, DC2Ns) training environment. This technology sharing considerably reduces research and development (R&D) efforts and expenses to DoD.

JCW began distributed developmental testing at five sites in November 2011. The goal is to be completely transitioned to JTEN 2.0 and be fully operational by the end of 2013.

As JTEN 2.0 becomes the gold standard for distributing joint LVC training, it will provide the pathway and tools necessary to succeed in today’s dynamic and changing battle landscape. With increased scalability, manageability and more exercise opportunities at various levels of complexity and fidelity, Joint Staff, J7, Joint and Coalition Warfighting will produce better prepared and skilled warfighters to succeed on the battlefield today and tomorrow.

JTEN 2.0 was conceived, designed, engineered, tested and deployed thanks to a small but dedicated team of professionals at the Joint Warfighting Center, with critical assistance from DISA, working with short timelines and constrained resources. Soldiers, Sailors, Marines and airmen, as well as their coalition and interagency partners, will enjoy the most realistic and effective training environment in the world thanks to the efforts of this small team.

CMS/ID CAC login makes life easier for Sailors, reduces Help Desk calls

By Sea Warrior Program (PMW 240) Public Affairs

Sometimes the smallest changes make the biggest impacts. That’s what happened when the Career Management System/Interactive Detailing (CMS/ID) technical team enabled new users to access the application using their Command Access Card (CAC). Before this seemingly simple enhancement, Sailors, detailers and other users new to CMS/ID had to login to the system using a password and their social security number. CMS/ID was yet another set of system login credentials that new users had to remember; an unrealistic expectation given the system is used on an “as needed” basis, which sometimes could be only during the orders negotiation process.

“Sailors usually called the CMS/ID help desk an average of 500 calls per month with 50 percent of the calls for password reset,” said Donald Pellinen, CMS/ID project director. “The Sea Warrior Program [PEOEIS PMW 240] leadership asked us to see if there was anything we could do to reduce the help desk calls related to password resets.”

For the solution, the CMS/ID technical team recommended using the Electronic Data Interchange Personal Identifier (EDIPI) to “bind” a Sailor’s identity within CMS/ID to his or her CAC. This eliminated the need for CMS/ID users to establish a system password. By populating the EDIPI field of every Active and Reserve Sailor, CMS/ID validates the user’s CAC, requires the PIN, and then allows system entry.

“One month after implementing the CAC login we received only 17 help desk calls requiring assistance in accessing CMS/ID,” said Pellinen.

Improving and streamlining information technology to generate business efficiency is a critical goal of the U.S. Navy. “There’s no question the budget pressures are here to stay,” said Laura Knight, Sea Warrior Program Manager. “We are looking at all opportunities to maximize technology in order to make business tasks faster and easier. This will free up Sailors’ time to focus on their mission at hand.”

CMS/ID has evolved over the years from a basic job advertising website to a core career management tool. For example, Sailors can view aspects of their personnel information, search for job opportunities and submit applications for their next duty assignment. Much of the functionality found in CMS/ID is a direct result of input and request from Sailors and career counselors.

Rear Adm. Jerry Burroughs is briefed during the demonstration which utilized a High-Mobility Multipurpose Wheeled Vehicle (HMMWV) parked outside of the SSC Atlantic Main Engineering Building.



Photos by Joe Bullinger

Live E2C demonstration is successful

SSC Atlantic personnel performed a live Enterprise Engineering and Certification (E2C) demonstration for Rear Adm. Jerry Burroughs, Program Executive Officer, Command, Control, Communications, Computers and Intelligence (PEO C4I), during the admiral's visit Nov. 18.

This demonstration focused on E2C capabilities providing a conceptual understanding of Distributed Lab Environment, System Engineering and Collaborative Tools Environment. E2C is designed to provide up-front engineering rigor to support system of systems integrated across PEO C4I and extend across other Navy/joint systems, in support of the fleet.

The demonstration elements consisted of an exterior prop utilizing a High-Mobility Multipurpose Wheeled Vehicle (HMMWV) parked outside of the SSC Atlantic Main Engineering Building. The HMMWV was receiving data from the System Under Test (SUT) for demonstration purposes. The E2C demonstration held inside the SSC Atlantic Main Engineering Building, in the Integrated Product Center (IPC), was utilized to display static and dynamic scenario information on the large screens as depicted in from E2C mission thread vignette script.

The goal of the demonstration was to showcase an end-to-end E2C event test using a mission thread scenario-based approach, providing realism and alignment in support of Program of Record systems risk mitigation. An arduous target architecture was developed for this demonstration to illustrate multiple capabilities of E2C program processes in

a very tight timeline with seamless execution.

The team acquired and configured the necessary E2C and IPC assets for the demonstration. Examples of the assets utilized include: E2C workstations, network circuits, glimpse boxes and video wall equipment to present simultaneous live equipment operation. Additional equipment in the system was located on the Atlantic campus, with live data feeds into the IPC.

The mission thread scenario was a joint operation involving a Marine Expeditionary Unit performing counter proliferation operations in the Persian Gulf supported by an Expeditionary Strike Group and a Navy destroyer performing Maritime Interception Operations. The mission thread proceeded with the action of Office of Naval Intelligence providing intelligence on impending arms shipment which included mission coordination information between the three nodes to gain situation awareness.

The E2C team was extremely successful at showcasing the Rapid Reconfiguration and Configuration Management capability during the demonstration utilizing various test tools such as HP Load Runner, BladeLogic, InterMapper, Wire Shark and Chariot, while simultaneously displaying the tools to show the SUT was operating correctly. (In addition, an M&S presentation utilized Optimized Network Engineering Tool Modeler, one of the M&S tools used by E2C to assist with test event planning, execution and analysis.)

The team then purposely imposed a fault to simulate

that the system no longer operated correctly. This was reflected by the InterMapper display. Within 90 seconds, the team restored the system to the known “good” baseline configuration with several keystrokes, demonstrating the ability to monitor and track changes and rapidly reconfigure servers, routers, switches to reconstruct the environment. This distributed lab infrastructure allowed for multiple events to be supported by instantiating and replicating required nodes quickly from multiple server locations while being centrally maintained.

This demonstration was successful in providing evidence that the E2C team is able to decompose and “select just what is needed” from the mission thread to provide the level of fidelity and clarity in better support of system Verification, Validation & Accreditation (VV&A) processes and capture valuable Measures of Effectiveness/Measurements of Performance data attributes traceable to E2C event test cases.

This demonstration focused on E2C capabilities providing a conceptual understanding of Distributed Lab Environment, System Engineering and Collaborative Tools Environment, to achieve acquisition excellence in a virtual and dynamic environment, for future federation.

Before becoming PEO C4I, Burroughs served as SPAWARSSCOM chief engineer. As PEO C4I, he is responsible for acquiring communications and information technology systems that enable the command and control of maritime forces.



SSC Atlantic Executive Director Christopher Miller, second from right, makes a point to Rear Adm. Jerry Burroughs during the E2C demo, as SSC Pacific Executive Director Carmela Keeney, third from left, listens.

Burroughs views MSE prototyping initiative

While in Charleston in November, Rear Adm. Jerry Burroughs, Program Executive Officer, Command, Control, Communications, Computers and Intelligence (PEO C4I), also attended a demonstration of the Tactical Mobile Multiple Security Enclave (MSE) prototyping effort.

Tactical Mobile (TacMobile) is the ground support element of the Maritime Patrol and Reconnaissance Force (MPRF) Family of Systems (FoS) supporting the Navy’s P-3C Orion, P-8A Poseidon, future BAMS UAS and EP-3 follow-on Maritime Patrol and Reconnaissance Aircraft in performance of anti-submarine warfare, anti-surface warfare and intelligence surveillance and reconnaissance missions.

The MSE prototyping initiative is

intended to explore the concept of inserting multiple security enclave and Service Oriented Architecture (SOA) technologies into the existing TacMobile Operations Control Center General Service (GENSER) Secret environment. The prototype results in a cohesive MPRF FoS environment capable of exploiting aircraft sensor data at multiple security levels and introducing SOA principles to integrate the strategic and tactical chains of command into the decision making processes.

Naval Air Systems Command (NAVAIR) PMA 290 is instrumental in the cooperative effort to bring SOA-based data exchange services to TacMobile and the aircraft platforms. This initiative has the poten-

tial to consolidate current standalone aircraft support capabilities that operate at a higher than Secret level into a single Operations Control Center, and to expeditiously expose correlated data to the Global Information Grid (GIG).

PMW750 and PMA290 anticipate a reduction in the overall doctrine, organization, training, materiel, leadership and education, personnel and facilities costs to the Navy as a result of the prototyping, refinement and ultimate deployment of this capability.

The PEO C4I PMW750 TacMobile Program of Record is supported by the SSC Atlantic TacMobile IPT which is staffed by SSC Atlantic Codes 6.0, 5.2, 5.8 and 5.9 under the Decision Superiority Portfolio and Naval C2 Sub-Portfolio.



Photo by Joe Bullinger



Photo by Diane Owens

Observances celebrate Native American, Hispanic, African-American heritage

A variety of SSC Atlantic events were held recently to celebrate the diversity which has made our nation and Navy stronger. Native American, Hispanic, African-American and disability awareness (see next page) events were held in October, November and February.

The events helped create an appreciation of the uniqueness, different perspectives and talent of different cultures, and fosters an environment in which each individual's worth is based on his or her performance, regardless of race, gender or creed.



Photos by Joe Bullinger

Clockwise from left, employees observe Native American Heritage month Nov. 16 as Jean Mercer, a Native American who is the director for Human Resource Systems and Business Transformation for the Navy, speaks to the crowd. The event also featured dancing by Tsalagis Trading Post, music and food samples. Above, salsa dancers from Elite Dance Studio perform Oct. 5 before providing dance instruction to SSC Atlantic employees in Charleston. Other National Hispanic Heritage Month activities also included performances by a mariachi duo, a flamenco guitarist and a Brazilian jazz guitarist; sponsorship of a booth at the Latin American Festival at Wannamaker Park in North Charleston; flags and poster displays; and a Hispanic history and culture contest. Below, employees sample food at a Feb. 22 National African-American History Month event. SSC Atlantic Commanding Officer Capt. Mark Glover listens as guest speaker Dr. Sherron McQueen Jackson, director of MUSC's Pediatric Sickle Cell Clinic, speaks about her professional journey as a physician. An African-American history and culture contest was also featured.

"We champion diversity not for the sake of diversity itself. We champion it because we should reflect the nation that we serve," said Glover. "Diversity -- in the backgrounds of our people, in the variety of engineering disciplines of the people we employ and in the variety of skill sets our people possess -- makes us stronger," the captain added.



Disability Awareness

Event features Jackson, Hurricanes

A National Disability Employment Awareness observance held Oct. 18 celebrated the contributions of disabled individuals to the workplace and economy. Organized by the Finance Competency, the event featured SSC Atlantic's own Alex Jackson of 851, who gave his personal perspectives on overcoming disabilities.

The North Charleston Hurricanes wheelchair basketball team, with a few guest players, then showed their moves on the basketball court behind Bldg. 3147. Playing along were SSC Atlantic Commanding Officer Capt. Mark "Big G" Glover, Executive Director Christopher "Make Every Dollar Count" Miller and Finance employees "Downtown" Mary Brown, Virginia "Boom Boom" Pitts, pictured below, and Steve "Capt. America" Rogers.



Photos by Joe Bullinger





Contracts Competency Lead William Paggi speaks to the SBIOI group.

Photos by Joe Bullinger

Small Business & Industry Outreach Initiative held Jan. 19

SSC Atlantic leaders headlined the most recent Small Business and Industry Outreach Initiative (SBIOI) symposium which began Jan. 19 at Trident Technical College. Sponsored by the Charleston Defense Contractor's Association, the quarterly event attracted more than 300 participants.

SSC Atlantic Commanding Officer Capt. Mark Glover kicked off the event with a brief explaining how new defense strategies will guide SSC Atlantic in the future. The captain discussed the new National Defense Strategy, CNO's Sailing Directions, SPAWARSYSCOM guidance and SSC Atlantic's 2012 guidance.

SSC Atlantic Executive Director Christopher Miller discussed the center's contract strategy, stressing that SSC Atlantic will continue to do the work it does well -- that which is beneficial to the Navy and Marine Corps and aligns with core mission areas.

Contracts Competency Lead William Paggi gave an update on SSC Atlantic's pillar contracts and the command contracting strategy.



SSC Atlantic Commanding Officer Capt. Mark Glover talks about DoD, SPAWAR and SSC Atlantic strategies.



SSC Atlantic Executive Director Christopher Miller briefs the small business and industry representatives.

IT SHADOW DAY

SSC Atlantic brought more than 60 high school students and teachers onto its campuses for its second annual IT Job Shadow Day Feb. 13. The students got a first-hand look at how science and information technologies are creating information dominance for America's Navy during a variety of tours, demonstration and hands-on activities in Charleston, S.C.; Norfolk, Va.; and New Orleans, La.

IT Shadow Day, which supports the Federal Chief Information Officers Council federal-wide initiative, is designed to give students a unique opportunity to observe the federal IT work world and learn about the many challenging IT careers within the Department of Defense.

In Charleston, 25 students from 20 schools in Charleston, Berkeley and Dorchester county school districts participated. They saw how center personnel test communications and intelligence systems and platforms at the Vehicle Integration Bay. At Depot Maintenance they saw how electronic and electrical-mechanical equipment is repaired and refurbished. They received a command brief, and toured work areas where different C4ISR equipment is integrated into Navy and Marine Corps systems. They toured the Integrated Product Center (IPC), which showcases engineering and network products, and later worked with a computer simulation tool based on gaming technologies in the Real World lab. They wrapped up the day with a system-of-systems demonstration in Bldg. 3147.

In Norfolk, 11 students from Wilson High School, Churchland High School and I.C. Norcom High School participated in IT Shadow Day events. A teacher from Norcom High School also attended, along with the Secondary Science Program Specialist for Portsmouth Public Schools. They started the day with a brief by SSC Atlantic Executive Officer Cmdr. Mike Trovato.

Students see possibilities of federal IT careers



Above, SSC Atlantic Commanding Officer Capt. Mark Glover, seated at left, and the visiting students listen at SPAWARSSYSCOM Commander Rear Adm. Patrick Brady speaks to them via VTC. Below, Electrical Engineer Kevin Votapka shows the visitors equipment in the Depot Maintenance area.

An Agile software development brief and demonstration were followed by a tour of the computer room that supports the Research, Development, Test and Evaluation networking environment for SSC Atlantic.

In New Orleans, nine students from Ben Franklin High School's FIRST® Robotics Competition team were welcomed for IT Shadow Day events, which included local presentations and discussions, a robotics demonstration and a tour of the data center and call center.

SPAWARSSYSCOM Commander Rear Adm. Patrick Brady spoke to the students at all sites via video teleconference (VTC) about how to be successful at finding a career in the science, technology, engineering and math (STEM) fields. SSC Atlantic Commanding Officer Capt. Mark Glover also spoke to the teens via VTC.

The IT Shadow Day events gives



Photos by Joe Bullinger

SSC Atlantic the opportunity to showcase its IT workforce and demonstrate IT skills. It is one of various outreach activities designed to inspire, develop and attract the STEM talent needed to deliver innovative solutions for the nation's and SSC Atlantic's current and future challenges.

- Susan Piedfort, Chronicle Editor

SOCOM executive visits

James W. Cluck, USSOCOM Acquisition Executive for the Special Operations Research, Development and Acquisition Center (SORDAC), second from right, is briefed by Chris Romig during a demonstration Nov. 15 in Charleston. Cluck was briefed on deployable SATCOM equipment and systems within the Special Operations Forces Tactical Assured Connectivity System (SOFTACS) program family of systems which are supported by the Special Operations Communications Systems IPT at SSC Atlantic. Also pictured, from left, are George Anderson, Mark Renard, Romig, Deb Woods, Eric Gustafson, Donna Bedford, John Chap, Cluck and Eric Barnes.



Photos by Joe Bullinger

Joint Base commander visits

U.S. Air Force Col. Richard McComb, Commander, 628th Air Base Wing and commander of Joint Base Charleston, visited SSC Atlantic Nov. 22. Hosted by Capt. Mark Glover, SSC Atlantic commanding officer, and Executive Director Christopher Miller, the colonel received briefs (shown at right with Glover and Miller) and tours that highlighted the center's worldwide capabilities.

Following a command overview briefing and discussion, McComb toured Complex D, the Air Traffic Control building, the MRAP/MATV Integration Facility (shown above with Joe Rodgers, Program Manager for MRAP/M-ATV integration), the Common Submarine Radio Room production area and Buildings 198, 187 and 3112.

McComb assumed command of the 628th Air Base Wing and Joint Base Charleston July 14 last year.



S.C. delegation staffers visit for Congressional Days

Staffers supporting the South Carolina Congressional delegation pose for a photo op during a Sept. 26 visit to SSC Atlantic. Pictured are, from left, Roger Yongue and Earl Copeland, Military/Veterans' Affairs staffers for U.S. Rep. Tim Scott, representing the First District of S.C.; Bill Tuten, state director for U.S. Sen. Lindsay Graham; SSC Atlantic Commanding Officer Capt. Mark Glover; Kenneth Barnes, regional director for



Photo by Joe Bullinger

U.S. Rep. James Clyburn, representing the Sixth District of S.C.; SSC Atlantic Executive Director Christopher Miller; Ellen Weaver, state director for U.S. Sen. Jim DeMint; Bill Walker, military liaison for U.S. Rep. Joe

Wilson, representing the S.C. Second District; Van Cato, state director U.S. Sen. Lindsay Graham; and Jack O'Neill, Congressional Liaison Officer for SSC Atlantic.

'Old Crows' converge at SSC Atlantic

SSC Atlantic Executive Director Christopher Miller prepares to kick off the Converging Cyber, Information Operations and Electronic Warfare conference Nov. 29. Sponsored by the Palmetto Roost Chapter of the Association of Old Crows (AOC), the conference was attended by more than 200 military personnel, government employees and contractors.



Photo by Joe Bullinger

SSC Atlantic Executive Director Christopher Miller prepares to address AOC conference attendees.

SSC Atlantic Commanding Officer Capt. Mark Glover introduced the center's session of the conference. SSC Atlantic employees presenting were Jessica Reno, Samuel Yaryan, Jeff Bullock and Jeff Scaparra. Mike Shafer, SSC Atlantic

Intelligence, Surveillance and Reconnaissance/Information Operations Competency Lead and local AOC chapter industry advisor, was emcee for part of the conference.



Photo by Joe Bullinger

He likes pie...

... or at least one would hope, as Dave Needham goes above and beyond the call of duty to raise money for SSC Atlantic's Combined Federal Campaign Oct. 28 in Charleston. Needham, Marine Corps Electronic Security Systems SubIPT Lead; Jeff King, 5.9 Competency Lead; and Jody Prather, Document Closeout Supervisor; received the most votes from their adoring employees and friends in what has become a much-anticipated annual event.

The pie-in-the-face contest, bake sales, a popcorn social and ice cream social, pizza sales, chili contests, trivia competitions, silent auction and other popular events augmented traditional donations to more than 2,000 charities made during the annual campaign.

More than \$339,570 was raised throughout SSC Atlantic in the campaign, with Tidewater, New Orleans and Tampa sites exceeding their goals.

Find SSC Atlantic on the web

Check out SSC Atlantic, SSC Pacific and SPAWAR headquarters news on Facebook, Twitter, Flickr and YouTube.

If you wish to become a SPAWAR Facebook fan, visit <http://www.facebook.com/spaceandnavalwarfaresystemcommand>.

To follow us on Twitter, see <http://twitter.com/SPAWARHQ>. To view the SPAWAR YouTube Channel, visit

www.youtube.com/teamsparwar. To view SPAWAR photos on Flickr, see: www.flickr.com/teamsparwar.

SPAWAR's official U.S. Navy website is at <http://www.public.navy.mil/spawar/Pages/default.aspx>. SSC Atlantic's public website is also accessible at this site (<http://www.public.navy.mil/spawar/Atlantic/Pages/Home.aspx>).

If you have a news or success story you'd like to share via social media or any other medium, call SSC Atlantic's public affairs office at (843) 218-5801.

What's your story idea?

Have a story idea about a project that is helping achieve the Navy's information dominance vision? About an interesting SSC Atlantic personality or achievement?

We're always looking for relevant topics for *The Chronicle*, but there's just no way we can find all of the interesting stories without your help. To pass on a story idea, email susan.piedfort@navy.mil.

THE CHRONICLE PHOTO CONTEST

Thank you to all who submitted!

And the winner is...



Andenes, Norway
December 2011

Rick Nelson
Code 5414

Hit us with *your* best shot

We are now soliciting submissions from
SSC Atlantic employees for next issue's contest.

The Employee Services Association will offer the winner a choice of a command coin, thermal mug, cookbook (if available) or \$5 credit on another logo item.

MWR will offer a certificate for a free lunch in the Cooper River Cafe to the winner.

Send your best shot to susan.piedfort@navy.mil or joseph.bullinger@navy.mil.



A Native American friendship dance is enjoyed by all during a Nov. 16 observance that celebrated the customs and culture of the first Americans. See more on page 30. Photo by Joe Bullinger.