

HORIZONS

The Official Newsletter of **CSSI, Inc.**

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To view this and past issues online and to learn more about CSSI, please visit us at www.cssiinc.com

CSSI Wins SE-2020 Contract from FAA

The Federal Aviation Administration (FAA) recently awarded CSSI, Inc. a \$280 million contract to perform crucial systems engineering work that will improve our nation's airspace system. This project involves all efforts to transform airspace into the Next Generation Air Transportation System (or "NextGen").

The contract was the first of up to six that will be awarded under an umbrella structure called System Engineering 2020 (SE-2020). SE-2020 has a ceiling of approximately \$7 billion, making it the largest contract in the FAA's history.

CSSI has been a trusted contractor to the FAA since 1990, providing comprehensive system engineering services for some of the agency's most critical programs.

CSSI has 20 years of experience helping the FAA achieve its goals.

Through SE-2020, CSSI is positioned to leverage its experience to provide a broad range of Systems Engineering, Investment and Business Case Analysis, Planning, Forecasting and Business/Financial/Information Management support services.

"CSSI has 20 years of experience helping the FAA achieve its goals," said Cynthia Castillo, president and CEO. "We look forward to using determination

and creativity to help the FAA take this important step in developing NextGen."

About CSSI and SE-2020

CSSI was founded as a provider of technical services in air traffic management. Today, it is a dynamic technical services company with expertise in engineering, information technology and safety and applied research, serving the aerospace, defense, and transportation sectors.



The work that CSSI completes under the scope of this contract will be Systems Engineering, Program Planning and Financial Management activities that occur throughout the Acquisition Management System (AMS) Life Cycle Management.

The CSSI SE-2020 team includes leading technical institutions, such as MCR, Grant Thornton, Honeywell, Flatirons Solutions, ISI, Noblis, AS&T, IAI, AvMet and eSTS. □



Letter from the CEO and President

What a year this has been for CSSI!

We're marking 20 years of excellence in serving our customers. We recently won the largest contract in our company's history. We were already growing by leaps and bounds, and the momentum we've gained in 2010 only accelerates our trajectory.

And we're not stopping now. We're so excited about what the future holds, and what we'll be doing this time next year – and the year after that. The possibilities are limitless, and we're thrilled that we have a great network of employees, customers, and partners along with us in this journey.

In this issue of Horizons, you'll read about a few of the exciting projects CSSI employees are working on now, and what we're gearing up for – including SE-2020.

SE-2020, the \$280 million contract CSSI recently won, was the first of up to six that the FAA will award. The work that CSSI completes under the scope of this contract will be Systems Engineering, Program Planning and Financial Management activities – all things CSSI has extensive experience doing.

This is a really big deal for CSSI as well as the FAA. After all, once all contracts are awarded, it will be the largest in the FAA's history, amounting to \$7 billion. It says a lot that CSSI was the first company selected as a service provider.

Dedicated People, Fascinating Projects

Our dedicated employees are very busy working on other projects, too. For example, a team here in Washington, D.C. is building and maintaining a very important site for the FAA called the National Airspace Enterprise Architecture Portal (NASEA Portal/NAS 7). This actually holds all of the organization's architecture information, offering a "one-stop-shop" for a comprehensive snapshot of the NAS. It's pretty impressive and very important stuff, and our people are at the center of it. You can read about it on page 7 of this issue.

Also in this issue of Horizons, you'll read about one of our employees, Salvatore Mazza, who's an Aircraft Geometric Height Measurement Element technician in our New Jersey office. Mazza practices a very specific science that plays an important role in our Reduced Vertical Separation Minimum (RVSM) work – and it could be an important part of NextGen, too. Read more on page 6.



As you can see, we're passionate about what we do, and we've earned our reputation for quality, reliability, efficiency and value. It's evident in our work – and in our growth. We've had an amazing 20 years and we look forward to 20 more.

Sincerely,



Cynthia Castillo, CEO & President


p.s. Do you know someone who might be a good fit for CSSI? Someone with dedication, vision, and a knack for getting things done? We're looking for a few great people – check out our Web site at www.cssiinc.com for more details!

CSSI Kicks Off 20 Year Anniversary Celebrations

As CSSI, Inc. celebrates 20 years of excellence throughout 2010, we look forward to breaking new ground in engineering, information technology, safety and applied research in the years to come.

CSSI was founded in 1990 by the late Frank G. Castillo, who was a Lieutenant Colonel in the U.S. Marines. Mr. Castillo had a passion for aviation that inspired him to pursue a flying career, which later led to reconnaissance and intelligence work. Castillo's history and impact on our company are described in more detail to the right. Notably, CSSI was first awarded Small Business Administration (SBA) 8(a) status in 1993. Due to the efforts of CSSI employees throughout the years, the company graduated from the 8(a) program in 2001 and then from most classifications of SBA status in late 2009.

Cynthia Castillo, Frank Castillo's daughter, has led the company as CEO since 1993. "We've worked hard for our customers for the past 20 years and have broken ground in many areas of expertise," she said. "We're passionate about our work and look forward to many more years of service." ■



Early CSSI employees and friends compete in the Governors Cup. CSSI's sailboat was a 41ft Mogan sailboat named the "Fair Winds."

The History of CSSI

by: Shauna Ferguson

Starting a company is not an easy task. Yet, Frank Castillo was not one to back away from a challenge. Prior to starting CSSI, Mr. Castillo served in the U.S. Marines as an Electronics Warfare Airborne Reconnaissance Officer and Airborne Radar Intercept Officer flying the E-6 A Intruder and F4-J Phantom Fighter jets. He served two tours in Vietnam and was decorated with a bronze star and 19 air medals during his service. Mr. Castillo also performed duties as an Air Support Control Officer and Aircraft Maintenance Officer.



Cindy and her father, Frank, 20 years ago.

Like many former military aviators, Castillo came to Washington and held positions at Vitro Corp. and Advanced Technology, Inc., where he became a principal staff member. He left ATI to become a program manager of Automatic Dependent Surveillance (ADS) at MyTech, Inc.

These experiences led Castillo to start his own company and he incorporated CSSI in 1990. The early days were tough with only a handful of employees, yet Castillo forged ahead leveraging every penny he had to keep the company growing. CSSI was awarded its first major contract as a small business from the FAA Office of Research and Development to help transform oceanic air traffic control automation.

On January 19, 1993 Castillo was killed in a traffic accident. CSSI only had 10 employees at that time. Upon his death, the 8(a) status of the company required that it be owned and led by a qualified family member for it to continue. Within weeks of the tragedy, daughter Cindy Castillo left her position at Hughes Aircraft Company in California to come to D.C. to assume the role as president. Cindy aggressively followed through on her father's dreams and commitment to his customers. Under her leadership, CSSI has become a highly successful business in the airspace arena and throughout the defense and transportation sectors, with sights set on new business areas. CSSI was built upon the aspirations of Frank Castillo and his legacy remains. ■



CSSI Achieves CMMI Level 2 in Charleston

by: Shauna Ferguson

CSSI's Charleston, South Carolina office has met the requirements of the Software Engineering Institute's Capability Maturity Model Integration (CMMI) Level 2. This achievement demonstrates CSSI's ongoing commitment to product and service quality as well as the use of process management and software development best practices.

The Software Engineering Institute (SEI) is a federally funded research and development center sponsored by the U.S. Department of Defense and operated by Carnegie Mellon University. CMMI ratings assist customers in selecting reliable and low-risk suppliers of software products and services. According to SEI documentation, some characteristics of an organization operating at a Level 2 rating include the following:

- ✦ Customer requirements are managed and processes are planned, performed, measured, and controlled
- ✦ Projects are performed and managed according to their documented plans
- ✦ Status of the work products and the delivery of services are visible to management at defined points
- ✦ Commitments are established among relevant stakeholders and are revised as needed. Work products are reviewed with stakeholders and are controlled

CSSI would like to recognize specific employees who were integral to this certification: Lora Francisco and various Project Managers, including Kirby Johnson, Rhona North, Jacki Major, Hans Schou and Jeff Soliven. In fact, the entire Charleston office deserves recognition for its assistance with the interview process.

Washington, D.C. Headquarters employees, including John Markey, Roni Raffensperger, June Flynn, and Juan

Matluk helped develop the enterprise tools known as the QMS Dashboard and the SharePoint-based Program Files.

“The CMMI Level 2 rating highlights not only our ongoing efforts to ensure quality for our customers, but also the significant efforts of our staff, said CSSI President and CEO Cynthia Castillo. “This appraisal is a component of a broader quality management system, which is designed to enhance the integrity of our process management and software development approaches.”

This achievement demonstrates CSSI's ongoing commitment to product and service quality as well as the use of process management and software development best practices.

CSSI also leveraged corporate processes within its ISO-9001 Quality Management System (QMS) to align with CMMI requirements. Recently, CSSI was notified that it achieved registration to ISO-9001:2008. CSSI has been annually audited and registered with ISO-9001 since 2001.

CSSI's integration of CMMI's best-practices approach, in conjunction with a ISO-9001-driven QMS, provides a robust platform that will allow the company to deliver quality products to customers while working on process improvements for operational efficiency. **□**

Call for Articles

If you would like to submit an article or want us to write about something (or someone), please contact **Denise Watters** at dwatters@cssiinc.com. We also welcome photos or other images.

CSSI Selected to Implement RVSM Program in Iraq

by: Shauna Ferguson

While the Next Generation of Air Transportation Systems (NextGen) is a major initiative of the FAA, it is also a key objective of other airline agencies around the world. As more planes and people take to the sky, airlines are seeking ways to optimize travel and improve airspace efficiencies. Regional air traffic controllers are responsible for accommodating traffic flow and ensuring safety using new technologies. Perhaps the greatest of these technologies is the application of Reduced Vertical Separation Minimums (RVSM), which is designed to increase airspace capacity by allowing more planes to fly in limited airspace.



CSSI has played an integral role in implementing and monitoring RVSM here and around the world. As a company, CSSI has supported more than 6,500 of the 11,000 monitoring flights conducted since 1990, consistently maintaining a 60 percent market share in the last 10 years.

Background

RVSM airspace was implemented in North America in 2005 to save fuel while allowing more aircraft to fly in congested airspace by increasing the number of flight levels between 29,000 and 41,000 feet. However, before aircraft can operate in RVSM airspace, they must conduct a height-monitoring flight to verify that their altitude-keeping systems meet RVSM requirements.

The work CSSI experts perform include boarding an airplane during a regularly scheduled flight or special test flights with a GPS-based monitoring unit (GMU) to collect about 30 minutes of data at RVSM altitude. For a demonstration of this process, please go to: <http://www.rvsm-monitoring.com/gms.html>.

How CSSI Can Help in Iraq

The airspace above the Middle East is among the busiest in the world, because of the region's central position between Europe, Africa, Asia, and Asia-Pacific, which

means that many transcontinental flights are required to pass overhead. Furthermore, the need for RVSM is mandated because of the growth of the region's air transportation system.* RVSM was implemented in the broader Middle East region in November 2003.

Airlines have indeed benefited from the implementation of RVSM, "as their aircraft are more often able to fly at the optimal level of fuel burn, which is usually from 35,000 ft. upwards. This has therefore had a significant impact on fuel usage - around a 2-percent cut," according to figures from the FAA. CSSI experts will continue to assist with RVSM monitoring work overseas.

CSSI in Iraq

CSSI is an industry leader in RVSM. Because of its expertise, CSSI was recently selected by Jeppesen to implement RVSM in Iraq. The work began in early 2010, will last approximately a year, and will involve at least five trips to Iraq.

To implement RVSM in Iraq, CSSI will conduct regional coordination throughout the implementation process and prepare a readiness assessment. With respect to air traffic, CSSI will provide controller training, support air traffic simulation, develop a concept of operations, establish a flight level allocation scheme, and build an error reporting system for the air traffic implementation reporting infrastructure.

CSSI will conduct a training run-through and provide post-session summaries using a scrutiny group. CSSI will also perform aircraft height-keeping performance monitoring and establish a Safety Management System (SMS) for RVSM. After implementation, CSSI will conduct a 90 day and a one-year post RVSM review. The project is managed by Stephanie Beritsky in Bob Miller's Aerospace Division.

To read more about RVSM, please see: <http://www.rvsm-monitoring.com>. □

* Denslow, Neil. 3 January 2005. "Crowded Skies," *ArabianBusiness.com*, article retrieved at <http://www.arabianbusiness.com/crowded-skies-205822.html>.

Employee Spotlight:

Salvatore Mazza
AGHME Technician

by: Cara Kurtz




Salvatore (Sal) Mazza has been a valued CSSI employee since June 2003. For the last several years, Mazza has brought Aircraft Geometric Height Measurement Element (AGHME) designs to life. AGHME systems are used to measure the Altimetry System Error of RVSM aircraft, in order to make sure that each aircraft remains compliant with FAA standards.

The AGHME is able to determine the altitude of RVSM aircraft within plus or minus one hundred feet of their flight level. If they are outside of the allotted margin of error, the FAA will then advise the aircraft operator. Each system is made up of five AGHME elements, and when the project is complete, there will be five systems in the United States. The units are assembled at the William J. Hughes Technical Center in New Jersey and then shipped to their destination for installation. So far, four out of five national systems have been completed. They are in Atlantic City, NJ; Cleveland, OH; Wichita, KS; and Phoenix, AZ. The fifth system is presently still under construction and will be located in Eugene, OR. There are also two systems in Canada.

Mazza also works on enhancements to the system. For example, the Remote Maintenance Monitoring (RMM) system was added which develops status reports on the system. Mazza's most recent endeavor is to upgrade the AGHME RMM system and redesign its power supply to allow for future upgrades and hardware compatibility. Under NextGen, there is a possibility that the AGHME may also be used to validate the ADS-B (Automatic Dependent Surveillance Broadcast) system.

About Mazza

Mazza began his career as an electronics technician after graduating with an A.S. in Electronics from DeVry University. He then earned a B.S. in Electronics Engineering Technology from Thomas Edison State College and later worked as a Manufacturing Test Engineer who also managed two technicians for a company that produced semi-conductor process control equipment. He then worked in electronic field service for two years before joining CSSI. In 2003, Sal relocated from Denville, NJ to accept an offer with CSSI as an Aircraft Geometric Height Measurement Element (AGHME) technician.

Sal looks forward to furthering his career at CSSI. He is currently enrolled in a Master's program in Aeronautical Science from Embry Riddle Aeronautical University. He sees himself working to advance the AGHME system, possibly getting into project management, and contributing his technical expertise as needed at CSSI. He is pursuing his private pilot license and lives in Little Egg Harbor, NJ with his wife, Leslie, and young son, Michael. 



How CSSI Makes a Difference: The NAS EA Portal

by: Brian Anschuetz and Steven Amato

What is the NAS EA Portal (NAS 7)?

The NAS EA Portal is a web-based system that records the FAA's architecture information on the National Airspace System (NAS). It is designed to show what the organization currently has, what it plans to put in place through 2025, and how it expects to get there. The portal combines input from a number of groups to present a "one-stop-shop" for a comprehensive snapshot of the NAS.

What role does CSSI play?

CSSI took over the initial architecture website in 2000 when we joined at the start of the SETA II contract. Stephen Roberts has been on the project since CSSI started work in that year. He is one of the two lead developers and also maintains the complicated data model of the system. Tim Link, the other lead developer, is the co-technical lead on the project. Finally, Ephrem Madebo supports in the critical roles of requirements analysis and quality assurance.

Check out the NAS EA Portal today at: <https://nasea.faa.gov>

Why are there different views of the data?

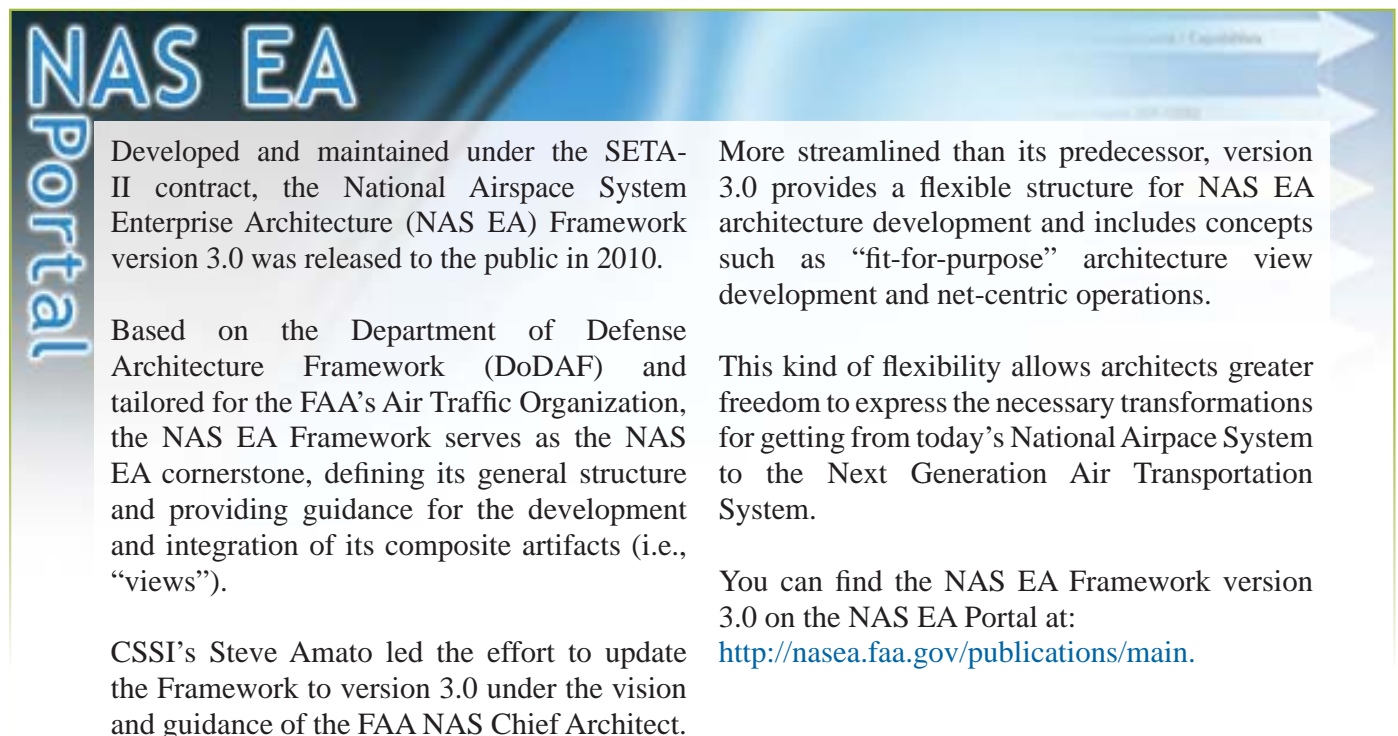
The architectural data is accessed by several different groups of people. These groups have unique requirements and are typically interested in only certain pieces of the architectural puzzle. For example, a financial group's requirements are very different from those of an implementation group. The portal breaks the data into 'views' in order to help classify the data for different needs.

How & where does the portal get its data?

About 50 subject matter experts (SMEs) keep the portal's content current. They maintain data in the system and prepare graphic 'roadmaps' that show how Operational Improvements (OIs) are implemented.

Over the past 10 years, the site has become an integral part of the FAA's Architecture Planning Process. This year's release brings the site to a new level, with its inclusion of a Department of Defense Architecture Framework (DODAF) compliant data model. The inclusion of this framework into the NAS represents a great step forward in meeting the FAA's needs into the future. Steve Amato and Don Embt are leading the work in this growing area of the site. ■

The Latest Update:



NAS EA Portal

Developed and maintained under the SETA-II contract, the National Airspace System Enterprise Architecture (NAS EA) Framework version 3.0 was released to the public in 2010.

Based on the Department of Defense Architecture Framework (DoDAF) and tailored for the FAA's Air Traffic Organization, the NAS EA Framework serves as the NAS EA cornerstone, defining its general structure and providing guidance for the development and integration of its composite artifacts (i.e., "views").

CSSI's Steve Amato led the effort to update the Framework to version 3.0 under the vision and guidance of the FAA NAS Chief Architect.

More streamlined than its predecessor, version 3.0 provides a flexible structure for NAS EA architecture development and includes concepts such as "fit-for-purpose" architecture view development and net-centric operations.

This kind of flexibility allows architects greater freedom to express the necessary transformations for getting from today's National Airspace System to the Next Generation Air Transportation System.

You can find the NAS EA Framework version 3.0 on the NAS EA Portal at: <http://nasea.faa.gov/publications/main>.

Highlights of CSSI's Accomplishments:

- ✦ Winning our first FAA 8(a) set-aside contract award in 1993 supporting the FAA Oceanic Program Office and playing a key role in all FAA Oceanic programs for 17 years.
- ✦ Providing technical support services to the Navy's Space and Naval Warfare Systems Center's Aviation Command and Control Division (SPAWAR) in Charleston, SC for more than 14 years (winning our first full and open procurement in 2005).
- ✦ Providing applied research and development services to the National Aeronautics and Space Administration (NASA) Aeronautics Research Mission Directorate for the past 12 years.
- ✦ Providing RVSM services to institutions around the world for the past 10 years, while also maintaining a 60% market share during that period.
- ✦ Supporting the development of the FAA's Emissions Dispersion Modeling System (EDMS) for over 10 years.
- ✦ Supporting the development of the FAA's NAS Architecture and NextGen EA for the past 10 years.
- ✦ Emerging as a leading provider of safety services.
- ✦ Winning the ATCA Small and Disadvantaged Business Award for an unprecedented three years in a row.
- ✦ Growing from 3 to over 280 employees (our most important asset) across the the past 20 years!

Keep checking the CSSI Web site for more information about 20th anniversary celebrations. ■

CSSI is a dynamic engineering, IT, and applied research company providing innovative solutions to very tough and high-consequence problems facing our government customers. What sets us apart from other businesses is our ongoing investment in technology and an uncommon commitment to truly understand our customers' needs. With an in-house think tank and a high-level technical team, we are moving research to reality, making our tagline very real and part of our overall mission.

CSSI Charity Committee: *Committed to Giving Back*

CSSI believes in giving back, and has a very active Charity Committee. Throughout the year, the committee gathers supplies, offers monetary donations, and sponsors employees in important causes.

In 2010, CSSI participated in or donated to several charitable organizations, including the Alzheimer's Association, Cystic Fibrosis Foundation, Breast Cancer Research Foundation and the National Military Family Association, and many others.

Our recent contributions include:

- ✦ Air Traffic Control Association Scholarship Fund
- ✦ Alzheimer's Association
- ✦ American Cancer Society
- ✦ Angel Flight East
- ✦ ARCH Riding Program
- ✦ Arc of Southern Maryland
- ✦ Children's Hospital(s)
- ✦ Cystic Fibrosis Foundation
- ✦ Darkness to Light
- ✦ Gonzaga High School (DC Classic)
- ✦ Haitian Relief Fund
- ✦ Making Strides Against Breast Cancer
- ✦ March of Dimes
- ✦ National Multiple Sclerosis Society (MS Walk/Run)
- ✦ Nickajack Elementary School Foundation (Smyrna, GA)

Learn more about CSSI's contributions on <http://www.cssiinc.com/public/charity.html> ■

CEO/President..... Cynthia Castillo
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*For more information about the company
visit us online at www.cssiinc.com.*

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