



# TRANSITIONS

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## From the Director

**With my hope** that all in the SBIR/STTR community enjoyed a well-deserved 2012 holiday season, it's time to open the door on 2013 opportunity in our rejuvenated SBIR/STTR programs across the federal government. What's key is for the SBIR community to share clarity on program changes, which is the focus of the article below on DoD SBIR Program Solicitation FY 13.1 and its Dept. of the Navy (DoN) section – the first article I call your attention to in this issue:

### Welcome to MARCOR SBIR/STTR Program Manager Elizabeth Madden

Beth Madden has been familiar to the NAVSEA SBIR/STTR community through her strong support to the PEO Ships organization. Her experience as a veteran SBIR/STTR activist in one of the Dept. of the Navy's largest PEOs can be expected to benefit the Marine Corps SBIR/STTR Program as MARCOR becomes increasingly requirements-driven.

### Navy Energy Goals

Both NAVSEA and NAVAIR have helped lead the way on Naval energy efficiency, with some interesting collaborations including an innovative SBIR-funded shipboard lighting system technology by C3I that debuted in the 2010 Navy *Opportunity Forum*<sup>®</sup> and has successfully commercialized their solution.

### Joint Tactical Radio System (JTRS)

After years of joint Army-DoN management by SPAWAR PEO JTRS, this vital ACAT program is moving to the Army for subsequent management, with an important element of JTRS remaining with NAVAIR rotorcraft programs.

### DoD SBIR Program Solicitation FY 13.1

Whether or not you propose in response to an SBIR Topic published in Solicitation 13.1, I urge you to read carefully the very important Solicitation preface to 13.1 Topics, which clarifies DoD-wide SBIR procedures going forward, as well as supplemental procedures of various DoD Components including the Dept. of the Navy (DoN). This Solicitation has a DoD-wide

preface on SBIR procedures covering some 30 pages organized into 11 sections at the front of the Solicitation. This preface is followed by Topics for the Army, Navy, Air Force, ChemBio Defense, DARPA and Special Operations Command programs – but each of these DoD Components has its own set of SBIR instructions, preceding their Topics, which supplement the DoD-wide preface. Therefore, please take care to read both the DoD-wide preface and each of the Component's instructions. (In the DoN 13.1 case, for example, there are four pages of DoN-specific SBIR instructions, labeled NAVY-1 through NAVY-4.)

Here are 18 key SBIR procedures or issues addressed in DoD SBIR Program Solicitation FY 13.1, either in the DoD-wide preface in pg. 4 through pg. 33, or the DoN section in pg. NAVY-1 through pg. NAVY-4:

**Definitions** (pp. 6-9) – several familiar terms have been redefined, some of which may apply to you.



*The Nimitz-class aircraft carrier USS Carl Vinson (CVN 70) sits pierside at Naval Air Station North Island with the San Diego skyline in the background.*



The amphibious transport dock ship USS New York (LPD 21) underway in the Atlantic Ocean.

**Phase III** (pp. NAVY-3 to 4) – clarifies conveyance and protection of data rights won in SBIR/STTR Phase I or II to Phase III contracts executed by either government or industry.

**Offeror Eligibility** (pg.10) – confirms that proposers must qualify as small firms at time of award, and other requirements, and that deviations must be approved in writing by the Contracting Officer.

**Proprietary Proposal Information Marking** (pg. 7, 17) – provides revised methodology and required language.

**Proposal Page Limit** (pg. NAVY-1) – prescribes a 20-page limit across all SYSCOMs, no exceptions, with additional detail.

**FAST** (pg. NAVY-3) – The DoD and DON have eliminated the Fast Track program.

**Award Amount Guidelines** (pg. NAVY-1, 3, 4) – describes Phase I (\$80K base + \$70K option) and II levels, and Phase II.5. *Note: while the Phase II award guideline allows an award up to 50% above \$1M, a waiver is required to exceed this amount.*

**FFRDC and/or Federal Lab Participation** (pg. 20 under Subcontractors) – permits subcontracts with Federal Laboratories and with FFRDCs without a waiver. *Note: for DoN, the Naval Postgraduate School and Naval Academy now qualify as Research Institutions for partnering purposes.*

**One Subsequent Phase II Award** (pg. NAVY-3, 4) – only one “second” or “sequential” Phase II award may be made per firm per Topic, and the first Phase II award must be preceded by a Phase I award.

**Direct to Phase II** (pg. NAVY-3) – DoN will not exercise the authority in the statute by which Agencies may make Phase II awards with no Phase I award having been made on the same Topic.

**Phase II Proposal Submission** (pg. NAVY-2) – Phase I awardees may submit an initial Phase II proposal according to requirements provided by the awarding SYSCOM in the Phase I award or subsequently. *Note: this provision applies to 13.1 only and is NOT retroactive to prior DoN Solicitations which observe the “invitation only” Phase II proposal rule.*

**Funding Another Agency’s Phase II** (pg. NAVY-4) – requires Head of Agency determination before a different agency may make a Phase II award against the sponsoring agency’s topic.

**Protest Management** (pg. 12) – describes Solicitation protest process. *Note: for DoN, selection and award protests are managed by SYSCOM authority.*

**Certification Requirement** (pg. 10, 15 and 31) – describes Phase I offeror qualification, update of Phase II commercialization results at [www.dodsbir.net/submission](http://www.dodsbir.net/submission), and other requirements.

**Mandatory Commercialization Updating** (pg. 31) – describes requirement that Phase II contractors to periodically update Phase II commercialization results in carefully defined categories at [www.dodsbir.net/submission](http://www.dodsbir.net/submission).

**Award Notification Timeline** (pg. 12, and 13 under Timing for both Phase I and II) – stipulates that normally, a Phase I offeror will be notified of selection or non-selection within 90 days of the Solicitation’s close; and that the median time between Solicitation closure and contract award is approximately four months (Phase I) and six months (Phase II).

**Phase II Submission Process** (pg. NAVY-3) - notes that for DoN, a Phase II must be preceded by a Phase I award under that Topic, and that Phase II awards from pre-13.1 Solicitations will be made according to procedures specified in those Solicitations, i.e., by invitation only.

**Majority Ownership by VC, Hedge Fund and Private Equity Firms** (pg. 10) – small businesses that are owned in majority part by multiple VC, Hedge Fund and Private Equity Firms are ineligible to submit SBIR proposals under 13.1.

In fact, there’s one more key issue I’ll bring to your attention, although it’s not a 13.1 issue:

**Performance Benchmarks** – *Although Performance Benchmarks are described in detail in the reauthorization statute, and the SBIR and STTR Policy Directives, and are posted on [www.sbir.gov](http://www.sbir.gov), they are NOT in effect for 13.1.*

We’ll appreciate your feedback, going forward, on the revitalized and expanded SBIR/STTR program, and what I can do to help ensure your success.

  
John Williams  
Director, Navy SBIR/STTR Programs

## Announcement: MARCOR SBIR Welcomes Elizabeth Madden

Ms. Elizabeth Madden, former Team Ships SBIR Assistant Program Manager, stepped into a new role as the SBIR Program Manager for Marine Corps Systems Command in late 2012. The goals of the Marine Corps SBIR Program are twofold. One is to assist small businesses in developing new technologies and the second is to transition those technologies into United States Marine Corps' Programs of Record. This "win-win" philosophy stimulates our country's economy and maintains our technological edge while at the same time providing our Operating Forces with state-of-the-art technology to aid in the accomplishment of their war-fighting mission. In her new role, Ms. Madden will be responsible for upholding these goals by fostering collaboration, aligning SBIR investments and working with the individual Program Sponsors, SBIR firms and technical communities to support effective technology development, implementation and integration.



## SPAWAR JTRS Program Shifting to Army

**Stood up on October 1, 2012**, the Joint Tactical Networking Center (JTNC) replaces the Joint Program Executive Office (JPEO) Joint Tactical Radio System (JTRS) following its reorganization. JTNC supports U.S. and Coalition Forces by providing Joint Tactical Networking applications and waveforms for use by both, Programs of Record, and commercial radios. The Center utilizes a government-owned open architecture that enables affordable, interoperable, and secure tactical wireless networking.

The JTNC organization is founded on three pillars: the Joint Tactical Networks (JTN) Program Management Office (PMO); the Joint Reference Implementation Laboratory (JRIL); and the Technical Directorate. The JTN PMO has a role similar to that played by JPEO JTRS in that it manages software, promotes competition, and leverages new technologies. JRIL provides assistance to hardware vendors and program offices to port JTRS waveforms to their hardware platforms, conducts waveform standards conformance testing, and manages the Information Repository.

JTNC's Technical Directorate manages software standards, the Software Communication Architecture (SCA), and Application Program Interfaces (APIs) standard sets. The Technical Directorate uses test results from JRIL, the National Security Agency (NSA), and Joint Interoperability Test Command (JITC) to provide risk assessments for radio purchasing authorities and JTRS Certification and Compliance ratings. The Directorate also includes the Chief Technology Officer, which provides the organizations' guiding S&T principles, and supports the Small Business Innovation Research (SBIR) program.

JTNC is managed by the Army's Program Executive Officer (PEO) Command, Control and Communications-Tactical (C3T) and falls under the authority of the Assistant Secretary of the Army for Acquisition, Logistics, and Technology (ASA ALT). However, due to the Center's physical location in San Diego, JTNC still maintains an administrative relationship with the Navy's Space and Naval Warfare Systems Command (SPAWAR) as a customer of support services. Additionally, NAVAIR PEO (T) will continue to pursue its customer interest in the MIDS component of JTRS for aircraft communications.

For Fiscal Year 2013 (FY13), JTNC funding remains under the Navy's budget. JTNC also has teaming arrangements in place with the HMS, MIDS, and AMF hardware program offices to manage the JTRS SBIR program through FY13. As such, SBIR participants will not experience any changes during FY13. Moving forward, JTNC will only manage networking related SBIR efforts. Hardware-centric SBIR efforts will transition to the hardware program offices within the Services. JTNC will, however, provide technical input on waveforms and network managers to the radio platform program offices.

According to John Armantrout, JTNC Technical Director, the Center has a critical mission to ensure interoperability, security, and conduct risk assessments while providing the networking waveforms and applications that will allow U.S. and Coalition Forces to network and communicate. In addition, JTNC will continue to need the Science and Technology (S&T) expertise and innovation provided by its small business partners to successfully achieve its mission.



# SBIR Success: C3I, Inc. | Improved Lighting Control Illuminates Successful Transition, Bright Future

Located in Hampton, New Hampshire, C3I, Inc. was founded in its current form in June 2000, having evolved from a sole proprietorship and consulting activity that began in 1993. Today, the C3I team has grown to 35 employees who boast an average of 25 years of individual experience. The company has designed and manufactured a range of critical controls and instruments across four major product lines, including Advanced Lighting Systems, Interior Communications, Distributed Data Acquisition, and Bridge Display Systems.

According to Charles Wagner, founder and Chief Technology Officer of C3I, the Small Business Innovation Research (SBIR) program played a key role in the company's technical and commercial success with its ACCS® (Advanced Communication and Control System)/ALS® (Advanced Lighting System) – a core technology the company has spent the last 10 years developing and transitioning to the Navy.



*Test Engineer Nick Davis Conducts Sub-System Test*

## Addressing the Need

ACCS®/ALS® provides a comprehensive, fully-distributed ship and enterprise integrated control and monitoring system that has proven applicability in a number of areas. In particular, the technology addresses the need for integrated interoperability between previously stand-alone flight deck lighting systems, and provides new, emergent night vision system operation capabilities. On a flight deck during NVIS (Night Vision Instrument System) operations, any light emitted that isn't carefully controlled has a "blooming" effect on a pilot's night vision goggles – in essence, the goggles absorb and retain the light's footprint for an extended time, making it difficult – if not impossible – for the wearer to see. If this "bloom" was to occur during a critical stage of operations, the wearer would be temporarily blinded, and forced to immediately remove the goggles to see, which can be potentially hazardous to his or her own personal safety, compromising both the safety of others on the flight deck and the mission of the aircraft. C3I's technology mitigates this risk, providing a tremendous safety benefit by means of precisely managing the flight deck lighting present in the environment. C3I's technology allows lighting to be precisely changed and controlled based on the ever-changing darkness of the environment, so pilots are able to accurately assess the ship deck - without being blinded in the process, while at the same time, providing personnel on the flight deck the ability to see, using a light spectrum not magnified by the pilot's NVIS devices. Prior to this technology development, displays in control rooms that operated under NVIS conditions would have to be turned completely off, or completely covered to avoid the impairment of night vision.

## A Unique Transition Path

C3I's successful transition of this technology spans the last ten years with their interest in shipboard lighting pre-dating their involvement with the SBIR program.

C3I was awarded a Phase I proposal for a flight deck lighting driver for conventional lighting technology. However, following the completion of that initial effort, and in the long interim between the Phase I completion and the effort to find funding for the award of a Phase II effort, C3I identified a leveraging opportunity. This was the opportunity to mate the conventional flight deck driver technology of the SBIR Phase 1 with a shipwide control system and software suite already under C3I IRAD funded development, to result in a proposal for an entirely new integrated flight deck lighting control system. C3I proposed this concept and competitively won the opportunity to supply this system to Titan (Now a part of L-3) for a technology demonstrator ship, the Littoral Surface Craft-Experimental LSC(X) Sea Fighter (FSF-1). Utilizing this contract opportunity, NAVAIR working with C3I, was able to move ahead with the refinement and testing of its new "Next Generation Visual Landing Aids (NGVLA)" concept in an operational environment. Following its success onboard the Sea Fighter, the technology went into what Wagner describes as a "long hold period," while potential funding for Phase II continued to be decided. During this time, the company maintained its strong relationship with NAVAIR, and also took the uniquely proactive approach of directly marketing to NAVSEA the technology's potential applicability to the then-current development of the DD(X) platform, citing its benefit as a COTS (Commercial Off The Shelf) solution that would ultimately reduce manning requirements on the ship. C3I was successful in convincing NAVSEA of the technology's merits for the ship, and the technology was written into the DD(X) performance requirements, for the control of the Navigation Lighting, General Lighting, and the Flight Deck NGVLA system.

When the Phase II award eventually commenced, C3I continued to develop the technology, specifically focusing on

completing the driver technologies NAVAIR now required for flight decks on air capable vessels, which included the original application for legacy incandescent lighting as well as the emergent LED lighting planned for future ships.

### Strong Relationships

From the beginning and throughout the evolution of this technology, C3I has given persistent credit to the government personnel who played a key role in the success of this project. According to Wagner, “We were enormously fortunate to be working with government people who were the most accomplished technologists in this area – they were key to our success.” Among others, the company credits Kurt Hartig (program management), George Bray (engineer, technical specialist, who Wagner describes as a national treasure), and program manager Kim Reymann for championing the technology within the Navy. According to Wagner, Reymann under the direction of her Command, has been committed to getting this new technology to the fleet to meet the requirements for upgrading flight decks on air capable ships. While NAVAIR is responsible for the flight wing, NAVSEA owns the ship itself; Reymann has worked tirelessly both in front of and behind the scenes, to successfully craft a relationship between the two Navy Commands to see this visionary new technology (NGVLA) to fruition for the benefit of the U.S. Navy and U.S. taxpayers.

Support from the Technical Point of Contact (TPOC) and NAVAIR program office has also been essential. “There’s nothing about our system they don’t know intimately, and in many cases, helped to develop – that relationship is so important, and I don’t know if you can get that without working with your TPOC on a daily basis. They are fully vested in it,” Wagner said. On the contractor side, C3I was successful in developing a number of relationships as this technology evolved and transitioned to a number of applications. In addition to receiving the award for the DDG 1000 lighting control system through a sub-contract to RSL Fiber Systems (Hartford, CT), C3I became a vendor to Maritime Applied Physics (Baltimore, MD) to use the control system for the company’s personnel safety barriers, for use on the DDG 1000. At the same time, C3I became a vendor to supply the operator controls for the automatic Tele-Robotic Firefighting Nozzles to Akron Brass Co. (Wooster, OH).

At this point in the DDG 1000’s development, as a significant cost saving measure to the program, the DDG 1000 Program Office, recognizing the built-in capability of the C3I ACCS® technology, combined all of the individual systems utilizing C3I’s ACCS® technology into one shipwide control network. This implementation is currently underway under the direction of General Dynamics’ Bath Iron Works.

### Lessons Learned

As C3I has grown both in size and success over the years, key lessons can be learned from the company’s foundation that guides its approach to conducting business. Wagner breaks this down into three simple essentials:

First, understand what your business is, and where you want to go with your company. The team at C3I firmly believes the model for defense-related business is dramatically changing, and the company is prepared to meet that change head-on through COTS-enabled acquisition – a challenging endeavor,

according to Wagner. “Funding is short, technology changes at an enormously rapid rate, and the methods the Navy uses to acquire technology are being challenged,” Wagner said. To counter this, C3I looks at what direction they think the Navy is heading, and based on that assumption, develops now what they anticipate the Navy will need in the future.

Second, know where your technology is going. “We entered Phase I with Phase III in mind. We started this with a commercialization plan in place to keep focus, and reduce risk. We knew a commercial market was already lined up regardless of the Navy market.” C3I maintains a very specific commercial plan that identifies private market opportunities, and remains evergreen – it’s a plan that was in place prior to Phase I, and has continuously shifted and modified as the technology has progressed and requirements have eroded.

Third, know what you’re good at and leverage it. Rather than trying to develop something that’s listed as an SBIR solicitation, C3I pursues only those SBIR projects that fit into its internal R&D program, and will support technology already under development. C3I finds success in utilizing SBIR funding to complement its internally-funded technology development.

In addition, C3I counts people – internal and external – as a key to success. Within the company, all of the company officers are ex-Navy personnel, including Wagner. “These are people who have actually used the equipment and experienced the deficit, and know where the value to the Warfighter is going to be,” said Wagner. Externally, the company relies on its ability to develop and maintain relationships with its customers. According to Wagner, “You need to get very close to your customer and actually listen to them: as a result you will find out what it is they’re looking for your technology to do. Working closely with NAVAIR, we’ve been able to have a continuous evolution.” With respect to the ACCS®/ALS® technology, this closeness and ability to communicate became crucial to the project’s success.

Another important element of the process, according to Wagner, is to know and protect the company’s data rights and intellectual property. “Because we control the IP on the design and technology, we are able to justify the investment to keep it fresh and meet new requirements without so much worry about it being taken away from us – SBIR data rights are absolutely crucial to our success.”

### A Bright Future

To date, the company has received approximately \$7.8 million, not including another \$10 million in negotiated contract options, and additional amounts in commercial sales still pending. In anticipation of the work ahead, C3I recently acquired Integrated Marine Systems (IMS), located at the decommissioned Brunswick Naval Air Station in Maine. C3I now has a 22-year lease on a portion of Hangar 5 on the station’s runway, which provides approximately 44,000 square feet of space. The company plans to use this space to take its core technology and integrate it into larger systems for a variety of present and future applications in both military and commercial markets.

# Is Navy Blue Being Replaced by Navy Green?



**Green evokes ideas of newness**, change, and promise – all of these ideas are captured by the Navy’s Energy Goals. Indeed, “navy blue” might be replaced by “navy green” as the U.S. Navy works to meet its goals - by 2020, 50% of total Department of the Navy’s (DoN) energy consumption will come from alternative sources. When Secretary Mabus first introduced DoN’s energy goals in 2009 he stated “Leading change is not new for the Department of the Navy. We are a better Navy and a better Marine Corps for innovation. We have led the world in the adoption of new energy strategies in the past. This is our legacy.”

Recently, we had the opportunity to interview Glen Sturtevant, the Director for Science and Technology for the United States Navy Department’s Program Executive Office for Ships to discuss how energy efficient technologies are making their way into the Fleet. Mr. Sturtevant described three possible pathways to integrate technologies into surface ships:

- » Today’s Navy can integrate and test technologies from a variety of sources on existing ships to see how they help address goals
- » Tomorrow’s Navy can introduce new technology into ships that are currently in construction
- » The future Navy can introduce new technology into new, “paper” ship designs

Of the possible pathways, Mr. Sturtevant views the easiest way to validate projected energy efficiency is through today’s Navy, “We find the culture of the Navy to be very receptive to trying new things – Operators are a very willing audience.” To that end, the Navy demonstrated this eagerness over the summer at RIMPAC 2012. RIMPAC, held every two years, is a multinational maritime exercise that takes place in and around the Hawaiian Islands. Seven new

energy efficient technologies were showcased over the summer as part of RIMPAC:

- » Energy dashboard
- » Stern flap
- » Solid state lighting
- » Smart voyage planning decision aid
- » Online gas driven water wash
- » Alternate fuels
- » Fuel flow meters

To vet technologies that could meet the Navy’s needs PEO Ships has implemented a *Maritime Energy Portfolio Process*, “We go through a discovery phase, and look broadly – commercial shipping, non-traditional partners, tankers, container ships, cruise ships – we examine what have they tried and learn about what has worked for them. Our non-traditional partners may also have budding technologies in their laboratories that could be modified to work for the Navy. After the discovery phase, we run possible solutions through various algorithms to determine projected energy efficiency. Those that remain we may try at sea, and finally - if it makes sense, will work into a follow-on procurement program.” To date, the hybrid electric drive and energy storage modules demonstrated at RIMPAC have gone through this process.

These new approaches and nontraditional partnerships are also helping the Navy conduct a baseline study on energy consumption on ships to reveal major power consumption sources and inefficiencies. Currently, a company is conducting these energy surveys on Navy ships after having done this previously for commercial ships. They are able to ride and walk the ships and take measurements to better understand, in real-time, how to be more energy efficient. Today’s ships are very well designed, and the Navy knows where the energy goes, but as they age and are modified it becomes challenging



to know where energy is going. A major benefit of these third party energy surveys is the potential to make data-driven decisions when designing and modifying the Fleet.

Making these data-driven decisions takes advantage of the Navy's impressive human capital. Ship operators can use an *Energy Dashboard* for example with a graphical user interface (GUI) that shows where energy is being used. This provides decision aids to the operators, allowing them to make energy conscious decisions. Mr. Sturtevant noted that one of the most pleasing, and unintended consequences of the new energy dashboard technology is that it reinforces how bright our young people are. They look for ways to utilize these data and continually improve the overall energy efficiency of the fleet. For example, they are exploring the link between energy efficiency and maintenance.

For small businesses that are looking to introduce their energy efficient technologies into the Navy Fleet, Mr. Sturtevant provided the following insights, "For the past three years energy efficiency has been an SBIR focus area. That's how we in ships operate, and we share this with our program offices and when we brief industry. In today's climate, people would be surprised if we didn't have energy efficiency as an SBIR topic." In his view, the most difficult entry point for new technology is into ships that are currently under construction – making modifications to contracts and players delays the process and is very difficult. "There's more freedom with paper ships, in the design phase," said Mr. Sturtevant.

To meet the goal of sailing the Great Green Fleet in 2016 the Navy continues to collaborate with new partners and groups. "We felt that it was prudent to engage nontraditional partners. It's more compelling to reach out to NASA, the Department of Energy, and others, and it has been rewarding. People in other agencies are eager, good partners," said Mr. Sturtevant. Through these partnerships, the Navy may have the lead and another agency will join us and participate, which provides cost savings that both partners can take advantage of. However, some unique applications and modifications may be needed. For example, a technology originally designed for a wind farm may need some modifications to work aboard a Navy ship.

To further ensure that the Great Green Fleet becomes a reality Mr. Sturtevant concluded by reiterating how the Navy is implementing other approaches as well. "We have turned up the volume on RFIs, RFPs, industry days, and BAAs – we're taking advantage of innovative acquisition processes to cast a wide net and engage segments of the industry we wouldn't normally engage, and these efforts are getting the desired results. Working with a lot of nontraditional partners and seeing opportunities to seek new ways to challenge conventional thinking has been very rewarding."

In FY2009, in response to legislation, DoN SBIR/STTR and its SYSCOM leads launched a multi-faceted energy initiative. As a result, up to 25% of Topics in any given Solicitation are energy-related, with each SYSCOM offering Topics. Today, as the Navy moves closer to meeting its energy efficiency goals by 2020, expect to see many new, innovative, and most importantly, green solutions mingled with the traditional navy blue. The Navy is on course to lead the world in the adoption of new energy strategies.

## Program Manager Corner

Steve Sullivan, STTR Program Manager

Under the watchful direction of program manager Steve Sullivan, the Navy Small Business Technology Transfer (STTR) program has undergone a few policy changes relative to the preparation and submission of Navy STTR Phase II proposals. Since joining the Navy SBIR Program Office in 2007, Sullivan's focus has been on improving small research firms' effectiveness in meeting Navy technology needs, while making an effort to streamline and simplify the STTR process and increase accountability for transitions. In this role Sullivan has drawn upon his 20 years of experience in the Navy where he has been involved in design, manufacturing, test and evaluation, and various working groups for change and cost saving.

### STTR Program in Brief

The STTR program was established by Congress in 1992 and was recently reauthorized in 2012. While it has a similar statutory purpose as the SBIR program, a key difference between the programs is that the STTR requires the small business to have a research partner from one of three areas: a University, a Federally Funded Research and Development Center (FFRDC), or a qualified non-profit research institution. The STTR requirement for a small business to partner with academia is something even SBIR firms should consider. "Numerous small business owners and their employees hail from excellent universities and bring valuable knowledge capital. However, for a small business in the critical stages of development, principals juggle efforts and resources to meet all of the business needs as well as the R&D work," Sullivan explained. "Often, access to expertise, equipment and favorable labor expense can be secured through a partnership with one of these institutions." As with any partnership, it requires additional work and small business must negotiate a written agreement with the research institution. This agreement must be finalized and signed by both parties within 15 days of the small business' receipt of notification of a Phase I STTR award.

Within the STTR program, the small business acts as the prime contractor, performing at least 40% of the work, while the research partner must perform at least 30% of the work. The remaining balance may be performed by either party and/or by a third party.

### Three Phases of STTR

Solicitations for the Navy STTR program are issued once a year and contain "Technical Topics" that describe the areas in which the Navy and its SYSCOMs have a need and/or interest. Small businesses may then submit proposals targeting one or more of the solicitation topics.

Sullivan establishes policy and manages STTR across all Navy SYSCOMs, which include ONR, NAVSEA, MARCOR, SPAWAR and NAVAIR. However, NAVAIR is provided their portion of the STTR budget to manage along with their SBIR budget. Phase I contracts for all other SYSCOMs are processed and awarded at ONR and subsequent Phase II contracts are then processed and awarded at the SYSCOM that originated the topic.

» **Phase I:** During Phase I, the small business is expected to perform a feasibility study to determine the scientific or technical merit of the proposed innovation. Approximately 1-in-5 Phase I proposals receive an award. The Phase I base period is 10 months, with a 7-month period of performance, and a base amount of no more than \$80,000. There is also the potential of a Phase I option that is not to exceed \$70,000 and generally exercised for an additional 6-month period for those companies selected for a Phase II. NOTE: Beginning with the 13.A solicitation, each Phase I company will need to submit an optional Initial Phase II Proposal along with their final report. Without this initial proposal, a company will not be eligible to submit a Phase II Proposal or receive a Phase II contract. This is an important change to address requirements of the new legislation. If you are awarded a Phase I contract, please read the Contract Data Requirements List (CDRL) carefully.

» **Phase II:** If a company's Phase I efforts are successful, they have submitted a Phase II Initial Proposal and the need is still relevant to the Navy, the company may submit a follow-on Phase II Proposal. Phase II is quite competitive with an award ratio of 1 award per topic. Phase II continues the Phase I efforts and demonstrates the theory of the innovation by the building and testing of a prototype, which involves a substantial R&D effort. Phase II for STTR has a base period of 18 months with a base award of up to \$500,000, a \$250,000 first option, and a \$750,000 second option.

» The first option should have a performance period of 9 months not to exceed \$250,000. A Technology Transition Plan (TTP), coordinated with the office transitioning the technology, is required prior to exercising the first option.

» The second option should have a performance plan of 18 months with an award not to exceed \$750,000. To exercise the second option, companies are required to secure a minimum 50% cost share from a non-SBIR/STTR funding source and a Technology Transition Agreement (TTA) from the program office transitioning the technology. Funding beyond \$750,000 is considered Phase II.5, described below.

For the total effort, base and all options, companies must meet the STTR minimum requirements that 40% of the work be done by the small business and 30% by the research institution.

» **Phase II.5** is not necessary to get to Phase III. Phase III is simply a contract award that derives from, extends, or completes efforts made under prior SBIR/STTR funding agreements authorized under 10 U.S.C. 2304(b)(2) or 41 U.S.C. 3303(b), and funded with non-SBIR/STTR funding. Phase II.5 is a Navy term used for identifying SBIR/STTR awards beyond \$1M for Phase II as identified by policy directive. **An STTR firm should ALWAYS focus on Phase III over Phase II.5.** Phase II.5 is predicated on matching funds, transition potential, and availability of SBIR/STTR funding. Much of the Phase II.5 funding justification is built around the potential for Phase III. A savvy STTR firm will focus on commercialization or transition of the technology with Phase III which will support the case for further develop-

ment with Phase II.5. The purpose of using options and new contracts to fund technology development is to provide the clear stopping points if a technology is not maturing toward commercialization or transition. Phase III success demonstrates a winning technology that will attract additional investment. In the end, the commercialization or transition success resides with the small business.

» **Phase III:** This is the Phase that involves transitioning the technology into the Fleet or other government/commercial markets that are appropriate for the technology. Although no government STTR funds are involved, Phase III funding can come from government and/or private sources.

"A key goal of the STTR program is to improve the transition potential of technologies at the earliest stage possible. We currently have projects in development to do this by increasing the flow of information and further supplementing the acquisition knowledge stream. Small firms should look for programmatic additions in the next year. Status quo is not an option for the Navy. In fact, we are always looking for ways to improve the program, so comments from small businesses are always welcome," Sullivan said.

As for future STTR companies, Sullivan offers some sage advice.

» Work closely with your TPOC. Your TPOC will be your transition champion.

» Take advantage of transition support offered, such as the Transition Assistance Program (TAP). The program will help you understand your customer and the prime contractors who are the lead system integrators.

» Do not rule out partnerships with other small businesses or primes when proper agreements are in place.

### STTR 13.A Solicitation

The next STTR solicitation will open for Pre-solicitation January 25, 2013 and close February 24, 2013. This is a period in which small businesses may ask the topic author any technical questions about the topic. Once the solicitation opens on February 25, 2013, all questions must be posted through SITIS on the DoD solicitation website. Answers are posted for all respondents. Proposal evaluation will commence after the solicitation closing on March 27, 2013 with Phase I awards around the end of June 2013.



Take a look at these links for resources, information and upcoming events:

Navy SBIR/STTR Website:  
[www.navysbir.com](http://www.navysbir.com)

Department of Defense Resource Center:  
[www.dodsbir.net](http://www.dodsbir.net)



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Steve Sullivan, STTR Program Manager

**TRANSITION ASSISTANCE PROGRAM & STTR PROGRAM MANAGER**  
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## Upcoming Events

**National SBIR Conference | May 14 – 16, 2013**

Gaylord National Hotel & Convention Center  
National Harbor, MD 20745

[www.nationalinnovationsummit.com/program/National\\_SBIR\\_Conference.html](http://www.nationalinnovationsummit.com/program/National_SBIR_Conference.html)

**Intelligent Ships Symposium (ISS) X | May 22 – 23, 2013**

University of Pennsylvania Annenberg Center  
Philadelphia, PA

[www.navalengineers.org/events/individualeventwebsites/Pages/ISSOH.aspx](http://www.navalengineers.org/events/individualeventwebsites/Pages/ISSOH.aspx)

**2013 Navy Opportunity Forum® | June 3-5, 2013**

Hyatt Regency  
Crystal City, VA

[www.navyopportunityforum.com/](http://www.navyopportunityforum.com/)

**Mega Rust 2013: Naval Corrosion Conference | June 24-26, 2013**

Newport News, VA 23606

For information about exhibits and sponsorships,  
please contact Mike Huling at [mhuling@navalengineers.org](mailto:mhuling@navalengineers.org)

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