DEPARTMENT OF THE NAVY
SBIR/STTR
TRANSITIONS
2018 Spring

FROM THE DIRECTOR

Three years ago, you and I continued our journey to "a great program and make it better." Looking back, I'm astonished by the energy that American entrepreneurs brought to a series of successful Naval SBIR/STTR pilot programs. A simple charge: Let's make 2018 the year we kick our efforts into high gear!!

Baseball Cards

If we were to use baseball as a metaphor for SBIR/STTR success, and collecting famous baseball cards was our hobby, Naval SBIR/STTR winners would be the cards that the other kids on the block would envy. Who could have imagined that as 2018 dawned, SBIR/STTR would be the Naval warfighters' gold standard; both in new capabilities and in reductions in cost of operations and improvements in fleet and force sustainment. "Baseball cards" in my back pocket include:

- Torpedo defense by surface ships
- Remote condition-based maintenance of the Navy's most complex weapons system
- Port protection
- Laser-assisted weapons
- Automated testing
- Battlefield brain injury detection
- Hearing and ear protection
- Hypoxia training and prevention

..... and that's just a short stack that we're ready to show to SECNAV Richard Spencer, and our new ASN(RDA), SOFWERX champion, James "Hondo" Geurts. With their leadership, the Fleet and Force are moving rapidly to close the gap between invention, transition, and deployment – for operational and sustainment needs. In turn, SBIR has a story to tell about small business and is positioned to answer the nation's urgent need to reassert maritime superiority.

During 2018, we're going to get a lot better at telling this story – starting with our 18th annual Forum for SBIR/STTR Transition, opening April 9 and now fully integrated into the massive global maritime expo, Sea-Air-Space.

Section 809 Advisory Panel on Streamlining Regulations

The SBIR/STTR programs have the attention of Congress, which is still deliberating an "SBIR Improvement Act". The FY2017 National Defense Authorization Act tasked a highly reputable panel – the Section 809 Panel – to recommend regulatory reforms needed to create a "dynamic acquisition marketplace". The panel's first formal report back to Congress (**https://section809panel.org**) says emphatically that DoD is underutilizing small business to meet warfighter needs for decisive innovation and provides several SBIR/STTR recommendations:

- Make SBIR/STTR permanent and roughly double the DoD SBIR fund over the next five years, to seven percent of extramural RDT&E.
- Authorize baseline Phase I awards of $500,000 and Phase II awards of $1.5M.
- Allow SBIR awards to be made via simplified acquisition procedures, grants, cooperative agreements, or "Other Transaction Authorities".
- Reinstate and expand the "Direct to Phase II" authority.
- Make SBIR and STTR projects seeking Phase III investment eligible for sole-source Rapid Innovation Fund (RIF) awards, and eliminate the RIF award cap.

What will Congress do with these recommendations? Time will tell – but when the 809 Panel's Interim Report was delivered in 2017, Congress quickly enacted into law all three of the Panel's statutory recommendations. What an opportune time for small businesses across the land to talk to their Congressional representatives!

Pilot Program for Streamlining Awards for Innovative Technology

We heard you on DCAA audit issues!! In two Defense Procurement Acquisition Policy (DPAP) "Class Deviation" notices – January 9, 2017 and again on January 9, 2018 – you've been given relief:

- SBIR/STTR awards or associated subcontracts and/or modifications less than $7.5M are exempted from certified cost and pricing data at FAR 15.403-1(b).
- SBIR only awards or associated subcontracts and/or modifications less than $7.5M are exempted from both audit and records examination requirements at FAR 52215-2 on Audit and Records-Negotiations.

However, per a small firm's past performance, the Head of Contracting Activity (HCA) may deny either or both exemptions. Moreover, if cost-type contracts are proposed or other types of awards are proposed based on reimbursement for costs incurred, a Contracting Officer may still require that you have an appropriate accounting system, verified either by DCAA or an independent certified public accountant. (See "Class Deviation – Pilot Program for Streamlining Awards for Innovative Technology Projects", January 9, 2018 – DARS Tracking # 2018-O0009).

Finding Advanced R&D and Manufacturing Opportunities

A new generation of university "innovation centers" closely tied to emerging industries and advanced manufacturing facilities are opening their doors to proximate SBIR/STTR awardees. Opportunities such as the U. of Connecticut's Innovation Partnership Building (**https://techpark.uconn.edu**), could be game-changing for growing small firms located near such centers.

Two years ago, in expanding Naval SBIR/STTR Program ties with defense prime contractors, we began to partner with centers on U. of California and U. of Massachusetts campuses; urging them to engage with the SBIR/STTR program and its awardees. Now, this outreach is spidering out to Michigan, Arizona, Nevada, Indiana, and other states. SBIR/STTR firms say the synergies are promising.

Our 3rd Annual invitation-only SBIR/STTR Primes Summit, scheduled for April 11-12, will share with NIST's Innovation & Industry Directorate the happy task of ratcheting up linkage with such innovation centers. Stay tuned for results, including new productization doors which are being opened to SBIR/STTR firms.

Economic Impact

Have you heard us crowing about your huge impact on regional economies nationwide? TechLink, the same Montana firm that performed Naval and Air Force SBIR/STTR economic impact studies on 2000-2013 Phase II contracts, is now wrapping up a similar DoD-wide economic impact study. In January 2018, TechLink confirmed that the Naval SBIR/STTR investment for those 14 target years generated $44B – yes, Billion – in total economic output, for a whopping ROI of 19:1! Sen. Jeanne Shaheen (D-NH) cited this figure in a recent Senate Armed Services Committee hearing. At this year's Forum for SBIR/STTR Transition, we'll have a powerful Naval SBIR/STTR economic impact brochure ready for your use.

Forum Reprise

As I've said, your great energy, ingenuity, and flat-out brilliant engineering takes us ever higher in the eyes of Naval leadership. This year, for example, we're not just "co-located" with Sea-Air-Space – the celebrated global maritime expo branded as "SAS-FST" for 2018, we're an integral part of this great Navy League production in concert with the DON Office of Small Business Programs and OPNAV/HQMC, from April 9 – 11 at The Gaylord in National Harbor, MD.

An estimated 90 SBIR/STTR firms and 115 of their most promising Phase II solutions will be offered in this landmark innovation marketplace – plus hundreds more exhibits on the main floor of Sea-Air-Space. Moreover, along with the DON Office of Small Business Programs, we'll offer eight substantive small business-themed panels, including two Congressional panels on SBIR improvement and DoD acquisition reforms, and senior Naval leadership will be discussing Fleet and Force transformation.

Check us out at **www.seaairspace.org** and **www.NavyFST.com**, and, of course, our Forum app will be loaded with everything you'll need for an inspiring event.

I'll see you at The Forum!!

Best regards,

Robert L. Smith

Healthy Approach to Understanding Condition of Helicopters

Understanding the health of an aircraft is critical for Sikorsky Aircraft Corporation; a part of Lockheed Martin Rotary and Mission Systems.

In several areas of Sikorsky Engineering, one being aircraft health management systems, relationships with small companies have been developed to help foster the maturation of lower-level technologies.

The CH-53K helicopter is an all-composite aircraft with large composite structures, and the largest in the U.S. inventory, with three jet engines, a seven-bladed rotor system, and a complex transmission.

“Our focus has been on high-value and mission critical assets,” said Jim Cycon, Director of Aircraft Health Management Systems and SBIR Lead at Sikorsky. “Little problems can lead to bigger ones. It can be very expensive if a helicopter experiences a cascading failure that causes it to land unexpectedly.”

The Integrated Hybrid Structural Management System (IHSMS) and Capability-Based Operations Sustainment Technology-Aviation (COST-A) are health and diagnostics system programs focused on expanding aircraft health management capabilities on helicopters through the addition of advanced sensors and algorithms, incorporation of system and sub-system reasoners, and ground-based decision support tools.

U.S. Marine Corps

“Today we monitor everything about the drive train so we can watch for the deterioration of shafts, gears and bearings,” Cycon said. “There is a big advantage in having data on the condition of the system and its parts.”

Cycon went on to add that Sikorsky required technology that they didn’t already have in-house. “We were interested in new and different ways of looking at things that affects an aircraft where degraded conditions and damage can have a major impact. We were able to partner with small companies who developed the technology we needed through SBIR.”

Luna Innovations, Metis, and KCF are all examples of small companies that contributed to the IHSMS and COST-A effort by modifying/suppling technologies and supporting integration/testing on full-scale components to verify/validate their technology.

“At early stages of development we supply a small company a letter of support and technical guides. As the technology matures we look to pull it into a larger CR&D effort, usually one that is integrating and maturing technologies from TRL 3-4 to 6-7,” said Cycon.

Those prognostic and analytical tools can be applied to many other complex systems and equipment. “At Sikorsky, much of the technology we look at for rotary-wing aircraft applies to all the services, and the commercial world, too. I’m focused on the helicopter community, but the technology applies to fixed wing aircraft, ground vehicles, or ships like LCS,” Cycon said.

“Fortunately,” Cycon added, “the Navy brings small companies and their technologies together each year so big companies can see what’s available.”

“We send people to the Forum for SBIR/STTR Transition (FST) to see what the small companies have to offer. It’s great to be able to meet so many different companies in one place. Our team is looking for technology that can help us in health management. In some cases, these small companies might not have technology that our team is looking for, but their technology might apply to something we’re aware of, or be of interest to some other part of Sikorsky. So, we have our eyes wide open.”

Acellent Technologies is one company Cycon found at the FST. “They had some innovative solutions for damage detection.

HEALTHY APPROACH... *continued*

We've developed a relationship, and have taken it to the next level. They needed the opportunity to apply their technology on real parts, and we had the parts and facilities where they could install and test."

"We had been participating in SBIR for close to a decade, but COST-A was a real turning point for our technology," said Seth Kessler, CEO of Boston-based Metis Design. "Sikorsky did a great job taking our technology to the next level, helping with real life installation, integration and operation issues, and showcasing it to the Army, and later the Navy through IHSMS. They took our devices that had been hovering around a TRL4 up through a TRL6 and are still engaged with us through collaborations that will further elevate the technology to a TRL7 by end of 2018. Due to Sikorsky's and the interest of their Navy and Army end-users, Metis was able to exclusively license this patent portfolio to United Technologies Aerospace Systems."

Beyond rotorcraft, Metis Design now has other large programs working with UAVs, fixed-wing aircraft and naval vessels to achieve a TRL7 between 2017 and 2019; and a complete monitoring system was integrated with the International Space Station (ISS) in early 2017. "The ISS application is the same exact system we put on COST-A," said Kessler.

Cycon said Sikorsky closely monitors the SBIR topics when they come out. "A lot of companies will come to us and ask for letters of support. If we're interested, we can endorse their proposal and say why we think it's worth pursuing. If they win, we give them guidance on maturation and integration. We can also suggest ways to make it easier to apply their technology to known applications and make the end product more transitionable."

Cycon went on to add that in some cases, small companies can take advantage of what the world's leading manufacturer of helicopters can offer. "We ask them to invite us to their program reviews. If they move to Phase II, we can give them access to a facility or a test chamber to help mature their technology. We can run full scale tests with subsystems to check out their technology in real-world scenarios. We can help mature their technology and turn it into something that can be transitioned."

"We don't constrain them," Cycon said. "It's their technology and they retain their IP rights. But if it works, we want to be the first to be able to incorporate it. It's a win-win scenario."

The SBIR/STTR Program (STP) is all about connecting participating Phase II SBIR/STTR companies with people that can further their transition opportunities. One aspect of STP—called the Transition Channel Initiative—deals with developing relationships with Associations and Professional Societies that can greatly extend the visibility of companies participating in STP. This is where Propel LLC (a small company located in Rhode Island) and the Naval Submarine League (NSL) enter the picture.

In November 2017, the NSL offered STP participants a reduced exhibit rate at their Symposium, and Propel jumped at the opportunity to showcase their Steam Suit that makes use of their innovative seamless technology. Their exhibit efforts were rewarded when Senator Jack Reed (D-RI) was escorted to Propel's booth. Senator Reed appreciated the chance to meet and discuss how he might support one of his small business constituents.

Also while at the Symposium, the NSL was able to help Propel secure an interview with the Defense and Aerospace Report (view the interview at : https://defaeroreport.com/2018/01/08/propels-king-pollack-steam-suit-designing-defense/). "If we had not been there this would not have happened...we got a lot of experience and exposure," says Clare King, President of Propel. In addition, NAVSEA has recently nominated Propel for a 2017 SECNAV Technology Innovation Award for their Steam Suit.

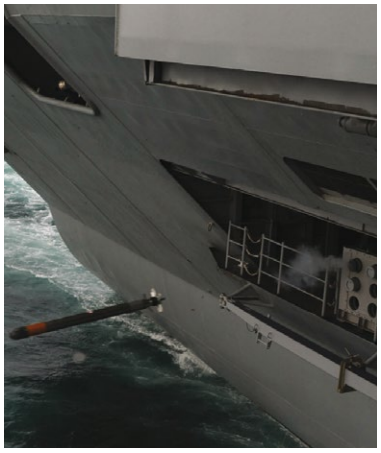
Senator Jack Reed (D-RI) talks with Clare King, President of Propel LLC at the Naval Submarine League Symposium.

Prepare Path for Production While You Build Your Prototype

Roca, Nebraska, is a long way from the Pacific Ocean. In fact, it's a long way from any ocean! However, thanks to SBIR investments, Nebraska-based Pacific Engineering, Inc. (PEI), has become an important supplier to the U.S. Navy.

PEI has brought its expertise in composite materials and structures to fabricate some interesting parts for the Navy and Marine Corps—from trailers to torpedo launchers. PEI is located near the state capital of Lincoln, which has been the home of several companies that developed composite materials for commercial and defense purposes.

PEI's composite expertise has helped design, fabricate, and deliver prototype lightweight composite components of the Anti-Torpedo Torpedo (ATT) launcher cradle and canisters. Since 2013, over 60 PEI composite canisters have been deployed in the fleet and are in full production.



The company's expertise with composite components led to other SBIR awards, including the development of storage containers for hazardous materials. PEI also designed, fabricated, and tested a prototype lightweight, reconfigurable, modular, composite trailer bed for the Marine Corps, PEO Land. This work has led to PEI designing structural composite parts for the Marine Corps family of Assault Amphibious Vehicles. PEI is currently working on three Phase II projects developing additional composite products for the Navy.

Even though PEI is far from the fleet, they do have a number of engineers who have worked in composites to support the Navy and the other services. They understand military specifications, test procedures, and contracts. The technical development team is led by Dale B. Tiller, P.E., vice-president of engineering, a longtime leader in composite pressure vessels, filament winding, and vacuum assisted resin transfer molding (VARTM).

"Since production is the key metric to successfully transitioning, our business model is to only go after SBIR projects that fit our in-house core capabilities in design and fabrication, so we can control the transition and quality of our products to the warfighter and thus avoid the valley of death," said Dexter Myers, PEI's vice-president for business development and marketing.

"When you start a SBIR/STTR Phase I you should already be planning and thinking about transitioning, what you will need to do to start production so you will be able to deliver to the warfighter. You need to design and acquire the tooling and manufacturing processes while you're in Phase I and II so you can expeditiously transition. For example, we created the production and inspection documents in parallel when we created the composite canister prototype."

Myers also advises having sufficient financial resources devoted to the project so you won't stumble if there's a lag in funding.

For SBIR topics, Myers said it is vital to identify the key players and engage with them early in the process. "You can't just read about the Navy. There are professional conferences and technical meetings where you can meet your potential customers. You have to attend and participate in key small business events; such as, the DON Forum for SBIR/STTR Transition (FST) during the Navy League's annual Sea-Air-Space Exposition, the Surface Navy Association annual symposium, NAVSEA annual Small Business Industry Day, and the DON Office of Small Business Programs events like Gold Coast. You need to get to know your customer, and you might need to bring someone onboard who speaks the language."

"NAVSEA has various small business events, where they help put small businesses together with programs," said Myers. "The State of Nebraska

Department of Economic Development has funding to help small companies like us, too, especially when we've been awarded an SBIR contract. Your state probably does, too."

"Once you get a Phase II SBIR, the Navy offers the SBIR/STTR Transition Program, or STP, with free business consulting and expert advice that will help you navigate the SBIR process and plan for transition," Myers said. "Your business consultant can help you identify where there are logical extensions of your technology that you haven't thought of; such as, with other programs, or even other services. If you are invited to participate in STP, take full advantage of the opportunity."

Myers said PEI is looking for organizations with expertise in design, manufacturing, composites, marine resins and coatings, analysis, and simulation and testing. The company is actively seeking to team with universities, centers of excellence, DoD prime contractors, and other small firms. "Our extensive experience with manufacturing; our staff's expert knowledge of major DoD programs and products; and, our success in the Small Business Innovative Research/STTR program makes us a value-added team member."

Myers said PEI will continue to look for SBIR opportunities to not only generate more avenues to generate business; but, to develop innovative programs and products that increase the Navy's capabilities. "Our collective goal is and should always be to increase war fighting capability."

"We don't look at SBIR as research, we look at it as a path to production," he said. "You need more than a brilliant idea. You need a business plan."

For many small businesses, responding to SBIR topics and being selected for Phase I and II can lead to the successful development and transition of an extremely valuable warfighting capability. And, in some cases, that success can be compounded through the Rapid Innovation Fund (RIF).

SBIR, RIF Enables Small Company to Develop Big Capability

We all rely on the accuracy of the Ground Positioning System (GPS). GPS has become an everyday essential location tool for just about everyone everywhere. It tells us where we are, where the traffic jams are, where our Uber driver is, and when our pizza will arrive.

It's especially important for warfighters; who need to know exactly where they are and the precise time, at all times. In a military life-and-death context, the GPS equipment must be precise, compact, and reliable; and it must be free from jamming effects.

To make matters worse, putting an antenna for GPS satellite signals on a helicopter is a challenge; not only because it has to be small and lightweight, but because the satellite signal is constantly being interrupted by the spinning rotors.

In response to a Broad Area Announcement (BAA) in 2007, managed by the U.S. Navy SPAWAR Systems Center and sponsored by the USAF GPS Directorate, a small company in Massachusetts developed the Small Antenna System (SAS) to be mounted on U.S. Army space constrained rotary wing aircraft. The SAS was integrated with the onboard GPS receiver in order to protect the GPS signal from hostile jamming. Mayflower Communications, located in Bedford, Mass., was one of six companies offered a Phase I SBIR; and the only one of the six to go beyond Phase II. At the end of Phase III, the Mayflower SAS was the only system that met all Technical Requirements Document (TRD) objectives, (the TRD is the requirements document sent to all the contractors by the Government) including simultaneous suppression of jamming, interference, and rotor blade

modulation effects. The Mayflower SAS is now at technology readiness level (TRL) 9 and is currently flying in an operational environment.

Due to the success of the SAS, Mayflower's technology caught the eye of the U.S. Navy submarine community; which also has an interest in a very small size, weight and power (SWaP) GPS antenna for the OE-538B submarine multifunction mast antenna system. The Navy funded a program called Submarine Anti-Jam GPS Enhancement (SAGE), and Mayflower is currently under contract with Lockheed Martin to support the PMW 770 OE-538B program.

Success has led to more success. The Navy saw a need for an even more compact version of the SAGE to be installed on unmanned air vehicles (UAVs) and small vessels. Bill Joo, an engineer and Science & Technology Assistant Program Manager (S&T APM) at SPAWAR in San Diego, was forward-looking; watching SAGE developments and thinking about how he could leverage that technology through the Navy's Rapid Innovation Fund (RIF) to address a known technology need in PEO C4I PMW/A 170: Assured Positioning, Navigation, & Timing (PNT) Services. Mayflower was awarded a contract on 24 July 2014, which was competitively selected from among more than a dozen proposals.

"Bill wanted us to take the SAGE and improve its performance level, and make it even smaller," said Mayflower's Director Government Programs, Joe Thomas. "So we developed two separate products: the Multi-Platform Anti-Jam GPS Navigation Antenna (MAGNA) Federated System (MAGNA F), which consists of two separate pieces, an antenna and the antenna electronics; and the MAGNA Integrated System (MAGNA I), with all of the associated GPS anti-jam electronics located on the inside of the antenna. All this was accomplished in one RIF."

"Warfighters are sent in to harm's way with advanced communications systems that require precise timing which is provided by the GPS receiver," said Joo. "The warfighter must also navigate in less than ideal conditions where the usual landmarks may no longer be present or are invisible due to battlefield conditions or the cover of night. So, while the warfighter's adversaries realize that jamming GPS is an effective countermeasure, MAGNA offers the counter-countermeasure that restores the advantages afforded by reliable GPS sources."

Joo said MAGNA will enable warfighters to operate in an electronically denied environment with reliable PNT sources. "Unmanned vehicles will also be able to navigate further into electronically denied areas to perform their missions and return safely with reliable GPS PNT sources."

The RIF effort was able to extract more value from the initial SBIR technology for a very small level of funding. "The RIF program enabled Mayflower to get more performance with the federated system, and develop an entirely new product with the integrated system. Or, looked at another way, the Navy was able to develop two new products by leveraging an older product, and getting more out of that older product," said Thomas.

Thomas said it's crucial to have a champion—like Bill Joo—who can help build relationships with primes and their platforms; which leads to greater visibility within other services.

While the SBIR programs yielded the necessary MAGNA capabilities, Joo said the RIF program provided the means to fully integrate the critical technologies, perform the core qualification tests, and produce a production representative article with a high TRL.

MAGNA F is on SOCOM platforms and flying missions today against real threats. One of those has over 500 flight hours in an operational environment to date. The MAGNA I will also be integrated into the Army's Shadow UAV program and the Navy's Fire Scout.

The Army has continued the Navy's SBIR and has awarded Mayflower a Phase III contract.

NAVY FY17 PHASE III AWARDS — TOTAL: $405,226,779

SYSCOM	FIRM	CONTRACT #	TOPIC #	AMOUNT
MCSC	Orbital Traction, Ltd.	M6785417C6584	N112-165	$2,902,180
MCSC	Electro-Mechanical Associates	M6785417C6582	N133-148	$2,893,169
MCSC	Physical Optics Corporation	M6785417C6580	SOCOM10-006	$2,283,627
MCSC	InfraScan, Inc.	M6785414D5014	OSD04-DH4	$6,337
MCSC Total				**$8,085,313**
NAVAIR	MZA Associates Corporation	N6833517C0005	N13A-T001	$699,990
NAVAIR	Monterey Technologies, Inc.	N6833517C0026	A03-070	$2,952,109
NAVAIR	Metis Design Corporation	N6833517C0027	N10A-T042	$2,579,633
NAVAIR	Toyon Research Corporation	N6833517C0029	N02-189	$2,950,000
NAVAIR	Physical Optics Corporation	N6833517C0067	SOCOM10-006	$597,198
NAVAIR	Architecture Technology Corporation	N6833517C0068	N151-015	$1,939,555
NAVAIR	Fuse Integration, Inc.	N6833517C0069	N151-015	$4,999,991
NAVAIR	Electro Standards Laboratories	N6833517C0082	N02-133	$3,300,000
NAVAIR	Freedom Photonics LLC	N6833517C0123	N151-018	$2,088,814
NAVAIR	Thermal Wave Imaging, Inc.	N6833517C0257	N092-097	$810,945
NAVAIR	SensorMetriX	N6833517C0260	N121-044	$599,842
NAVAIR	KCF Technologies, Inc	N6833517C0337	N08-006	$149,997
NAVAIR	Bihrle Applied Research, Inc.	N6833517C0372	N08-005	$303,000
NAVAIR	Oceanit Laboratories, Inc.	N6833517F0045	N103-205	$341,431
NAVAIR	Innovative Defense Technologies	N6833517F0049	N07-034	$199,790
NAVAIR	DDL Omni Engineering, LLC	N6833517F0071	N00-123	$2,730,152
NAVAIR	Frontier Technology Inc.	N6833517F0073	N07-010,N132-096,OSD07-CR4	$925,892
NAVAIR	KOR Electronics	N6833517F0074	N06-036	$8,554,248
NAVAIR	RDA Inc.	N6833517F0082	N98-035, N04-247, N06-011	$2,203,500
NAVAIR	Navmar Applied Sciences Corporation	N6833517F0087	N92-170, N08-023	$11,172,808
NAVAIR	Diversified Technologies, Inc.	N6833517F0107	N06-043	$285,981
NAVAIR	Technical Data Analysis, Inc.	N6833517F0115	N08-006,N091-008	$542,430
NAVAIR	Navmar Applied Sciences Corporation	N6833517F0118	N08-023,N92-170	$3,439,135
NAVAIR	Frontier Technology Inc	N6833517F0134	MDA09-021	$834,972
NAVAIR	Frontier Technology Inc.	N6833517F0151	N07-010, N132-096, OSD07-CR4	$1,800,000
NAVAIR	Physical Optics Corporation	N6833517F0158	N102-129	$3,835,026
NAVAIR	Frontier Technology Inc.	N6833517F0162	N07-010,N132-096	$2,246,000
NAVAIR	Stottler Henke Associates, Inc.	N6833517F0174	N96-232	$1,549,895
NAVAIR	PHYSICAL OPTICS CORPORATION	N6833517F0185	N102-129	$12,934,898
NAVAIR	Frontier Technology Inc.	N6833517F0188	OSD08-T003, OSD08-CR3	$1,127,130
NAVAIR	Innovative Defense Technologies	N6833517F0196	N07-034	$299,833
NAVAIR	Global Engineering and Materials, Inc	N6833517F0219	N092-095, N121-042	$685,408
NAVAIR	KOR Electronics	N6833517G0017	N06-036	$8,554,248
NAVAIR	Frontier Technology Inc.	N6833517G0024	OSD08-CR3, OSD08-T003	$3,866,763
NAVAIR	FIRST RF CORPORATION	N6833517P0328	N06-106	$149,931
NAVAIR	MZA Associates Corporation	N6893617F0549	N091-009	$133,349
NAVAIR	International Association of Virtual Org., Inc.	N6893617F0580	N05-017	$249,900
NAVAIR	International Association of Virtual Org., Inc.	N6893617F0690	N05-017	$334,147
NAVAIR	Adaptive Methods, Inc	N6833515G0018	N02-152	$1,450,000
NAVAIR	Advanced Acoustic Concepts Incorporated	N6134016C0004	N03-074	$1,035,192
NAVAIR	Aptima, Inc.	N6134016C0013	N08-T004	$2,940,463
NAVAIR	Architecture Technology Corporation	N6833516C0255	N091-037	$49,595
NAVAIR	Arete Associates	N6833515G0016	N06-002	$500,000
NAVAIR	Physical Optics Corporation	N6833516C0085	N092-148	$374,666
NAVAIR	Binghamton Simulator Company, Inc.	N6134014C0002	N03-190	$6,271,974
NAVAIR	Chesapeake Technology International Corporation	N6893613D0006	N101-019	$883,889
NAVAIR	Coherent Technical Services, Inc.	N6833516C0420	N142-095	$97,798
NAVAIR	Combustion Research and Flow Technology, Inc.	N6833516G0041	N103-195	$110,000
NAVAIR	Creare LLC	N6833516C0169	N08-014	$794,835
NAVAIR	DDL Omni Engineering, LLC	N6833514G0057	N00-123	$4,237,114
NAVAIR	Electrodynamics Associates, Inc.	N6833515C0079	N112-116	$367,124
NAVAIR	Engineering Software Research & Development, Inc.	N6833514G0004	N03-169, N06-005	$60,000

NAVY FY17 PHASE III AWARDS TOTAL: $405,226,779

SYSCOM	FIRM	CONTRACT #	TOPIC #	AMOUNT
NAVAIR	Hydronalix, Inc	N6833514G0039	N102-182	$390,000
NAVAIR	Innovative Defense Technologies	N6893611D0005	N07-034	$960,000
NAVAIR	Insitu Group Inc	N6833516G0046	N03-138	$5,036,997
NAVAIR	International Association of Virtual Org., Inc.	N6893614D0019	N05-017	$674,743
NAVAIR	Lambda Science, Inc.	N6833515G0033	N06-123	$750,000
NAVAIR	LOGIS-TECH, inc.	N6833515C0003	N90-085	$42,180
NAVAIR	LOGIS-TECH, inc.	N0001916P1000	N90-085	$21,054
NAVAIR	Out of the Fog Research LLC	N6833512G0059	N06-036	$10,811,837
NAVAIR	NP Photonics, Inc.	N6833516G0042	N103-210	$750,000
NAVAIR	Advanced Avionics Incorporated	N6833515G0013	N08-008	$7,541,091
NAVAIR	Navmar Applied Sciences Corporation	N6833510G0026	N92-170, N94-178, N04-237	$1,485,114
NAVAIR	Navmar Applied Sciences Corporation	N6833514G0040	N04-266	$13,866,622
NAVAIR	Oceanit Laboratories, Inc.	N6833516G0028	N103-205	$3,289,982
NAVAIR	Organizational Strategies, Inc.	N6833515C0077	N98-057	$2,107,242
NAVAIR	PC Krause and Associates, Inc.	N6833512G0006	N06-T007	$25,000
NAVAIR	Physical Optics Corporation	N6833512G0045	N102-129	$5,847,485
NAVAIR	Physical Optics Corporation	N0001915C0039	N05-004	$3,967,524
NAVAIR	RDRTec Inc.	N6833514G0006	N12A-T002	$3,254,000
NAVAIR	REYNOLDS SYSTEMS, INC.	N6893613D0020	N96-061	$49,269
NAVAIR	Scientific Systems Company, Inc	N6833515G0030	N112-127	$400,000
NAVAIR	Signal Systems Corporation	N6833515G0032	N101-005	$1,485,000
NAVAIR	Technical Data Analysis, Inc.	N6833516G0009	N08-006,N091-008	$2,043,756
NAVAIR	Technical Data Analysis, Inc.	N6833511G0033	N08-006	$18,273
NAVAIR	Trident Systems Incorproated	N6833514C0216	AF01-106, OSD06-IA4, SOCOM03-004	$1,328,661
NAVAIR	Vista Research Inc.	N6833514C0353	N91-165	$141,006
NAVAIR	Zivko Aeronautics, Inc.	N0042115C0051	N01-139	$934,816
NAVAIR Total				**$182,486,719**
NAVSEA	VRC Metal Systems, LLC	N0002417C4020	N151-052	$2,706,673
NAVSEA	Progeny Systems Corporation	N0002417C4017	N151-041	$998,225
NAVSEA	Monterey Technologies, Inc.	N0002417C5244	A03-070	$100,000
NAVSEA	Mide Technology Corporation	N0002417C4022	N04-073	$2,799,921
NAVSEA	Dragonfly Pictures, Inc.	N0002417C4011	N131-039	$2,835,451
NAVSEA	Benthos, Inc.	N0025317F0025	N02-082	$200,076
NAVSEA	SEA CORP	N6660417F1537	N95-208	$575,000
NAVSEA	SimVentions, Inc	N0017817F0112	A03-207, N05-053	$499,325
NAVSEA	Innovative Defense Technologies	N0002417F4107	N05-163	$250,000
NAVSEA	Innovative Defense Technologies	N0002417G4115	N05-163	$7,252,914
NAVSEA	Innovative Defense Technologies	N0002417F4120	N05-163	$410,000
NAVSEA	3 Phoenix, Inc.	N0002413C6264	N04-138	$3,601,884
NAVSEA	3 Phoenix, Inc.	N0002411C6287	N07-070	$16,993,500
NAVSEA	3 Phoenix, Inc.	N6339416C0016	N04-138	$2,017,236
NAVSEA	Adaptive Methods, Inc	N0002415C5220	N06-109, N05-044, N05-043	$2,548,465
NAVSEA	Adaptive Methods, Inc	N0002415C5252	N01-127, N03-146, N99-224	$4,629,605
NAVSEA	Adaptive Technologies, Inc.	N0002412C6311	N04-065	$8,586,674
NAVSEA	ASSETT, Incorporated	N0002416C6421	N05-149	$2,483,765
NAVSEA	Arete Associates	N6133111C0007	N96-150	$22,479,839
NAVSEA	Arete Associates	N0002415C4051	N122-141	$763,883
NAVSEA	The Consulting Network, Inc.	N0002413C5207	N01-150	$985,000
NAVSEA	L-3 Chesapeake Sciences Corporation	N0002415C6275	N05-125	$15,927,167
NAVSEA	L-3 Chesapeake Sciences Corporation	N6660416D0845	N95-209, N05-147, N03-117, N91-130	$3,273,754
NAVSEA	Mide Technology Corporation	N6449816P5041	N04-073	$435,134
NAVSEA	MIKEL, Inc	N0002411C6295	N05-149	$561,904
NAVSEA	Mikros Systems Corporation	N0016410DGR63	N02-039	$278,255
NAVSEA	Mikros Systems Corporation	N0002413C4545	N02-039	$1,499,993
NAVSEA	Sonatech, Inc.	N6133116C0008	N04-051	$2,232,874
NAVSEA	Pacific Engineering, Inc	N0002414C6230	N102-144	$1,173,298
NAVSEA	Progeny Systems Corporation	N0002413C6283	N03-048	$11,823,539

NAVY FY17 PHASE III AWARDS — TOTAL: $405,226,779

SYSCOM	FIRM	CONTRACT #	TOPIC #	AMOUNT
NAVSEA	Progeny Systems Corporation	N6572614C0001	N96-278	$160,571
NAVSEA	Progeny Systems Corporation	N0002414C5209	N96-278	$3,967,775
NAVSEA	Progeny Systems Corporation	N0002414C6220	N00-049, N96-274, N96-278, N98-122	$18,206,718
NAVSEA	Rite-Solutions	N0002416C6422	N05-149	$1,836,780
NAVSEA	Sedna Digital Solutions, LLC	N0002413C6272	N05-059	$6,505,573
NAVSEA	Seemann Composites, Inc.	N6554015D0015	SOCOM96-002	$895,134
NAVSEA	Benthos, Inc.	N0025313D0001	N02-082	$7,899
NAVSEA Total				**$153,984,855**
ONR	Progeny Systems Corporation	N0001417F1004	N08-077	$49,639
ONR	Progeny Systems Corporation	N0001417F1008	N08-077	$669,777
ONR	Navatek Ltd	N0001417C2035	N152-101	$10,000
ONR	Aptima, Inc.	N0001416C1041	OSD11-CR1	$600,000
ONR	Arete Associates	N0001413C0131	N07-079	$2,481,250
ONR	Aurora Flight Sciences Corporation	N0001412C0671	N10A-T039	$33,259,348
ONR	Commonwealth Computer Research, Inc.	N0001416C1005	N132-135	$475,000
ONR	Continuum Dynamics, Inc.	N0001414C0014	N07-042	$106,000
ONR	HS Owen LLC	N0001416C3067	N07-139	$217,269
ONR	Commonwealth Computer Research, Inc.	N0001416C1022	N132-135	$475,000
ONR	NextGen Aeronautics	N0001414C0028	N10A-T031	$240,701
ONR	Progeny Systems Corporation	N0001415C0099	N08-077	$722,896
ONR	Progeny Systems Corporation	N0001415C0111	N08-077	$127,418
ONR Total				**$39,434,298**
SPAWAR	Trident Systems, Inc	N0003917C0023	N04-054	$743,053
SPAWAR	Busek Co. Inc.	N0003917C0004	N122-146	$2,911,690
SPAWAR	Diversified Technologies, Inc.	N0003917C0018	N123-161	$840,870
SPAWAR	Trex Enterprises Corporation	N0003917C0020	N02-104	$1,473,399
SPAWAR	Innoflight, Inc.	N0003917C0064	AF083-221	$1,342,791
SPAWAR	Solute, Inc.	N0003917R0062	N093-196	$2,199,930
SPAWAR	Basic Commerce and Industries Inc.	N6600115D0061	N06-072	$48,852
SPAWAR	L-3 Chesapeake Sciences Corporation	N0003913C0028	N95-209	$1,664,125
SPAWAR	Makai Ocean Engineering, Inc.	N0003909D0134	N99-171	$445,000
SPAWAR	Progeny Systems Corporation	N0003916D0006	N121-103	$5,595,270
SPAWAR	Progeny Systems Corporation	N6523616D8013	N96-273	$3,501,614
SPAWAR	Scientific Solutions, Inc.	N0003914C0024	N02-207/1	$469,000
SPAWAR Total				**$21,235,594**

Grand Count: 146
Grand Total: $405,226,779


U.S. Navy

DEPARTMENT OF THE NAVY

2018 FST

Forum For SBIR/STTR Transition

an STP Event

Tomorrow's Technology, Today.

★ APRIL 9-11, 2018 ★

Gaylord National Resort & Convention Center
National Harbor, MD

Co-located with SeaAirSpace
The Navy League's Global Maritime Exposition

QUICK LOOK AGENDA

DAY 1 Monday, April 9

8:00 am - 5:00 pm	FST Exhibit Hall Open
9:00 am - 10:00 am	FST Policy Panel
10:00 am - 11:00 am	FST Acquisition Panel
11:00 am - 12:00 pm	DoN Technology Transfer
11:00 am - 12:00 pm	OSBP Acquisition Panel
FST Tech Talk Sessions	
1:30 pm - 2:40 pm	Corrosion Control & Coatings
1:30 pm – 2:20 pm	Fiber Optic Link Advancements
1:30 pm – 2:40 pm	Missiles, Projectiles and Reactive Materials
1:30 pm – 2:10 pm	Sonobuoys
2:20 pm – 3:20 pm	Turbine Engine Technologies
2:30 pm – 3:30 pm	Sensors & Optics
3:30 pm – 4:30 pm	Intelligence & DCGS Applications
3:30 pm – 4:40 pm	Precision Navigation & Timing (PNT) Technologies
3:30 pm – 4:50 pm	Networks & Cyber
3:30 pm – 4:30 pm	FST Innovation Panel

DAY 2 Tuesday, April 10

8:00 am – 5:00 pm	FST Exhibit Hall Open
9:00 am – 10:00 am	FST Policy Panel
10:00 am – 11:00 am	OSBP Acquisition Panel
FST Tech Talk Sessions	
10:50 am – 12:00 pm	Electronic Warfare (EW) Technologies
10:50 am – 12:00 pm	C2 & Datalink Technologies
11:00 am – 11:50 am	Batteries
11:00 am – 11:50 am	Manufacturing Advancements
1:30 pm – 2:10 pm	High Power System Components
1:30 pm – 2:30 pm	Warfighter and Expeditionary Support
1:30 pm – 2:40 pm	Engineering Tools – Modelling and Analytics
1:30 pm – 2:40 pm	ASW & Undersea Warfare
1:30 pm – 2:30 pm	OSBP Acquisition Panel
FST Tech Talk Sessions	
2:10 pm – 2:50 pm	Laser/Counter Laser
2:40 pm – 3:20 pm	Sonar, Acoustics, Undersea Sensors
3:20 pm – 4:10 pm	Ship Repair, Maintenance Technologies
3:30 pm – 4:40 pm	Prognostic/System Health Management
3:40 pm – 4:50 pm	Mission Planning Tools
4:00 pm – 4:50 pm	Composite Materials

DAY 3 Wednesday, April 11

8:00 am - 12:00 pm	FST Exhibit Hall Open
8:30 am - 9:30 am	FST Readiness Panel

@NavyFST

For more information or to register, please visit us at **NavyFST.com**

A DoN Approved Event

UPCOMING EVENTS

April 2-6	2018 Materials Research Society Spring Meeting and Exhibit http://www.mrs.org/spring2018	Phoenix, AZ
April 3-4	2018 AFCEA Belvoir Industry Days https://www.fbcinc.com/e/AFCEABelvoir?	Oxon Hill, MD
April 5	NAWCAD Pax Industry Day 2018 https://www.fbo.gov/index?s=opportunity&mode=form&id=62ac45668c2ff127169004cc92d22121&tab=core&_cview=0	California, MD
April 9-11	Sea-Air-Space 2018 http://www.seaairspace.org/	National Harbor, MD
Co-located		
April 9-11	DoN Forum for SBIR/STTR Transition (FST) https://navyfst.com	National Harbor, MD
April 11-13	2018 Frontier Conference http://www.aiaa.org/B2BStartupShowcase	New Orleans, LA
May 10	Navy Information Warfare Industry Day https://afcea.informz.net/AFCEA/pages/Navy_Information_Warfare_Industry_Day_2018	Chantilly, VA
May 13-16	National SBIR/STTR Conference 2018 https://www.techconnectworld.com/SBIRSpring2018/	Anaheim, CA
May 15-17	Naval Submarine League Submarine Technology Symposium https://www.navalsubleague.org/events/submarine-technology-symposium/	Laurel, MD
June 18-20	Technology, Systems and Ships 2018 http://www.navalengineers.org/Symposia/TSS2018	Washington, DC
June 25-19	AIAA Aviation Technology, Integration, and Operations Conference http://aviation.aiaa.org/ATIO/?_ga=2.245238085.1580907299.1507303838-1951027850.1507303838	Atlanta, GA
August 7-8	Department of the Navy Gold Coast Small Business Procurement Event https://www.navygoldcoast.org/	San Diego, CA
October 22-25	OCEANS 2018 Charleston http://charleston18.oceansconference.org/	Charleston, SC

For more event information, please visit **NavySTP.com**

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SBIR/STTR TRANSITION PROGRAM