SBIR/STTR Program Outreach to the Newport SBIR Community

Richard McNamara
NAVSEA SBIR/STTR Program Support
12 January 2023
Purpose and Objectives

**Purpose:** To educate and share information on NAVSEA’s Small Business Innovation Research (SBIR) and Small Business Technology Transfer Research (STTR) Programs, its recently released FY23 topics, and new program requirements since reauthorization

**Objectives:**
- To facilitate and increase participation in proposal submission for SBIR/STTR Topics released for FY23
- Encourage small business solutions to Navy technical challenges
- Demonstrate impact of SBIR/STTR technologies
- Dispel “myths” associated with SBIR/STTR
Agenda

I. NAVSEA and Navy SBIR/STTR
II. FY23 SBIR/STTR Topics Review
III. SBIR/STTR Program Observations
Federal SBIR/STTR Organization

- SBA
  - DoD
    - HHS
    - NASA
    - DOE
    - NSF
    - USDA
    - EPA
    - DHS
    - ED
    - DOC
    - DOT
  - Army
  - Navy
    - Air Force
    - MDA
    - DARPA
    - OSD
    - DHA
    - SOCOM
    - CBD
    - DTRA
    - DLA
    - DMEA
    - NGA
  - NAVAIR
    - Kristi Wiegman
  - NAVSEA
    - Jason Schroepfer
  - ONR
    - Lore-Anne Ponirakis
  - NAVWAR
    - Shadi Azoum
  - SSP
    - Mike Pyryt
  - NAVSUP
    - Tara Castelletti
  - MCSC
    - Jeff Kent
  - NAVFAC
    - Tim Petro
Focuses on the design, construction and delivery, and lifecycle support of all aircraft carriers and the integration of systems into aircraft carriers.

Manages surface ship and submarine combat technologies and systems, and coordinates Navy Open Architecture across ship platforms.

Responsible for the design, development, build, maintenance, and modernization of unmanned maritime systems, mine warfare systems, and small surface combatants.

Manages acquisition and complete life-cycle support for all U.S. Navy non-nuclear surface ships.

Focuses on the design, construction, delivery, and conversion of submarines and advanced undersea and anti-submarine systems.

Manages the engineering, design, construction, and delivery requirements for NAVSEA HQ & Directorates, including Diving & Salvage Operations.
# SBIR Phase III New Contract Awards

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<th>Funding Total ($M)</th>
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![Graph showing Total New PH3 Award Amount by FY](chart.png)

- # of New Contracts
- Funding Total ($M)
## SBIR Phase III Obligations by FY

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th># of Contracts</th>
<th>Funding Total Obligated ($M)</th>
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<tr>
<td>2017</td>
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</table>
SBIR Phase I and II

- Phase I awards administered by NAVAIR Lakehurst are remaining at $240K
- NAVSEA Phase II awards remain at $1.8M*
  - *Reauthorization increased Phase II award amount to $1.9M
  - Reauthorization permits third Phase II awards but DoD will maintain its two-award limit
- Reachback awards remain a useful way to tap into previous SBIR work and apply it in a new setting or new customer
  - A second reachback is considered a Commercialization Readiness Program (CRP) project, which requires matching funding
  - Reachbacks often lead to many of the NAVSEA Phase III awards that originate outside of NAVSEA topics (currently about 20% of SBIR Phase III awards are non-NAVSEA topics)
Paths to SBIR Phase III Awards

• Traditional contract awards
  – NAVSEA Contracts (as long as 18 months)
  – Warfare Centers (typically 12 months)
  – GSA Assisted Acquisitions (up to 6 months)
  – Small purchase orders (limited to $250K)

• Other Transactional Authority (OTA)
  – UTIC (NUWC)
  – MSTIC (NSWC)
  – NCMS

• Contract vehicles are harder to obtain than funding
Understanding SBIR Phase III

• Experience demonstrates that many individuals inside the Navy do not understand SBIR Phase III awards as defined in the SBA SBIR/STTR Policy Directive Section 4c
  – This applies to both Acquisition Managers and Procurement Contracting Officers (PCO)
    • Training material to address this has been approved by NAVSEA but requires distribution and implementation of training
    • An internal process and roadmap for use of GSA for Phase III has also been formalized but requires distribution and implementation in 2023
Understanding SBIR Phase III

• Common myths regarding SBIR Phase III:
  – Phase III awards are made due to special data rights associated with SBIR
  – The Navy loses alternatives by awarding SBIR Phase IIIs
  – Certain companies are treated favorably

• Yes and No
  – OTAs/PIAs are not subject to SBIR Policy
  – Data Rights can be used as Evaluation Criterion*
Understanding SBIR Phase III

• The facts of SBIR Phase III need to be communicated:
  – Phase III awards are made because of Congressional statute that requires award to the SBIR company “to the greatest extent practicable…”
    • The SBA Policy Directive details a path to follow when award is not practicable
  – Data Rights are not a problem unless used for competition
    • Licenses and Non-Disclosure Agreements avoid issues with data rights but the Navy sometimes fails to apply these properly
    • Data Rights clause 252:227-7018 states that OMIT is unrestricted from the start—enabling a Form, Fit, and Function competition
  – Winning companies often repeat as SBIR winners because they understand Navy customer needs better than their competitors
PEO Topic Release FY23
**Topic Number:** N231-053  
**Technology Objective:** Electromechanical Actuators (EMAs) are used extensively on the GERALD R. FORD Class Aircraft Carrier flight decks for the Jet Blast Deflectors (JBDs), Integrated Catapult Control System, Barricade Stanchions, and Landing Signal Officer Display Systems. Existing EMAs are unable to lower in the event of mechanical or select electrical failures, creating a risk to flight deck operations, including loss of aircraft. The objective of this topic is to develop an EMA that can lower in a safe, controlled manner in the event of a system or component failure.  

**Technological Challenge/Risk:** Current mitigations to lower a failed, extended EMA require significant shipboard alterations and introduction of manually operated hydraulic systems. The technology challenge is to develop an actuator that can lower with minimal external power and within the required time, in the event of system or component failure.  

**Navy/Program Requirement:** Must meet desired specifications for installation and integration across desired Aircraft Carrier platforms. Must meet clearance of landing area requirements within required time to prevent potential loss of aircraft in blue water operations.  

**Benefit/Payoff/ROI:** A planned alteration to introduce a lowering capability into a single Jet Blast Deflector has high costs and disruption to air warfare availability. A successful self-lowering EMA would avoid this installation on each ship in the class, while extending the self-lowering capability to all systems using these EMA’s.  

**Transition/Acquisition Strategy:** Current EMA modified configurations are in installed with marginal mitigation to operational risk. Improved EMAs could be back-fit during limited modernization periods, but there significant cost, schedule and technical risk. As automation integration on ships progresses, future surface ships will make use of the new and improved EMA technology, particularly where there is a need to secure a load in the event of system failure (such as weapons handling systems).
**Topic Number:** N231-052

**Topic Title:** Advanced Reliable Wide-Range Hull Hydrodynamic Appendage

**Technology Objective:** Develop an Advanced Reliable, Wide-Range Hull Hydrodynamic Appendage (HHA) that provides fuel savings over a broad range of Froude numbers.

- Fn: 0.25 (350’ LCS @16kts, 190’ OUSV @12kts)
- Fn: 0.55+ (350’ LCS @+35kts, 190’ OUSV @+30kts)

**Transition Programs:** PMS 406

**Topic Authors:** Lawrence Murphy and Michael Lacny

**Topic Number:** N231-051

**Topic Title:** Underwater Diver-Applied Composite Patch Repair For Crack Arresting

**Technology Objective:** Research, develop, test, and evaluate an underwater composite patching solution to arrest hull cracking on a variety of hulls. Investigate whether this repair procedure could be considered for a longer-permanent repair, or be categorized as a temporary emergent repair

**Transition Programs:** PMS 505, SEA 00C

**Topic Authors:** LT Dustin Shelley and Scott Posey

Distribution Statement A: Approved for public release; Distribution unlimited.
NAVSEA PEO IWS FY23 Topics

**Topic Number:** N23A-T011

**Topic Title:** Innovative Optics for Wide Field of View Infrared Sensors

**Technology Objective:** Develop fast (large aperture) optics for a wide field of view (WFOV) imaging sensor operating in the mid-wave and short-wave infrared (MWIR and SWIR) bands with large format focal plane arrays (FPAs).

**Technological Challenge/Risk:** Developing an optical design that meets the depth of field requirements without the need for prohibitively expensive assembly, alignment, positioning, or dynamic compensation techniques.

**Transition Program:** Initial transition is to an ONR FNC or Tech Candidate, followed by a final transition into a future increment of the SPEIR program of record.

**Topic Author:** Lawrence Dressman

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**Topic Number:** N231-045

**Topic Title:** Multi-Spectral, Multi-Sensor Image Fusion

**Technology Objective:** Develop algorithms for real-time fusion of digital infrared (IR) video imagery originating from different sensors operating in different IR bands to create a fused image stream of high fidelity and resolution thereby improving target classification and identification.

**Technological Challenge/Risk:** Fusing video image data in real-time from high frame rate, high resolution, large format sensors. Fusing data from sensors that are widely separated (spatially) is another technical challenge.

**Transition Program:** Transitions to SPEIR program of record.

**Topic Author:** Lawrence Dressman

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*Statement A: Approved for Release. Distribution is unlimited*
Topic Number: N231-056

Topic Title: Intelligent Capture of Digital Imaging for Systems Engineering, Modeling, and Training

Technology Objective: Develop a high-capacity digital video imagery recording system that provides intelligent selection and efficient organization and storage.

Technological Challenge/Risk: Developing a video identification algorithm that correctly selects video samples under highly dynamic conditions. Optimal compression of stored video is a secondary challenge and risk.

Transition Program: Initial transition is to the Shipboard Panoramic EO/IR (SPEIR) program of record. The technology is not in the SPEIR critical development path and transitions to the program when ready.

Topic Author: Lawrence Dressman
### Topic Number: N231-030

**Topic Title:** Model-Centric Safety Analysis Tools

**Technology Objective:** Apply Model Based System Engineering (MBSE) tools to create a model representing the safety process required to develop and deploy advanced Navy munition systems.

**Technological Challenge/Risk:** Apply MBSE approaches to integrate multiple munition safety requirements and procedures in order to build a data-centric understanding of the required space. This will allow for a level of automation to design analysis which will drive down overall costs to the program.

**Transition Program:** This technology will be developed for and transitioned to Naval Missiles (e.g., SM-6 and Over-The-Horizon (OTH)) and Projectile programs.

**Topic Author:** LCDR Ashley Wessel

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### Topic Number: N231-037

**Topic Title:** Gun Weapons Systems Synthetic Unmanned Aerial Systems Imagery Data Set

**Technology Objective:** Develop a synthetic imagery dataset of Unmanned Aerial Systems (UAS) using machine learning for computer vision discriminator applications.

**Technological Challenge/Risk:** Visualization models can be unstable and diverge, produce limited varieties of samples, and the generator gradient vanishes so nothing is learned. Discrimination techniques can have high error rates.

**Transition Program:** Navy Gun Weapons Systems (e.g., MK 160 and MK 110). Other PEO IWS C-UAS Systems (as appropriate)

**Topic Author:** Benjamin Goldman

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Statement A: Approved for Release. Distribution is unlimited
**NAVSEA PEO IWS STTR 23A Topics**

**Topic Number:** N23A-T009  
**Topic Title:** Generalizable Tactical Software Artificial Intelligence or Machine Learning-Informed Debloating  
**Technology Objective:** Develop a capability that leverages artificial intelligence and machine learning (AIML) technologies to de-bloat tactical software to reduce support costs, improve run-time stability, and reduce cybersecurity vulnerability.  
**Technological Challenge/Risk:** Reduce the time required to de-bloat software. Achieve high accuracy in de-bloating while maintaining or improving system performance  
**Transition Program:** IWS 5.0 Software Production processes  
**Topic Author:** Meg Stout

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**Topic Number:** N23A-T010  
**Topic Title:** Sonar Dome Anti-Fouling Tracking and Prediction Tool  
**Technology Objective:** Develop a capability to collect, analyze, and predict levels of Tributyltin Oxide (TBTO) in deployed sonar domes.  
**Technological Challenge/Risk:** TBTO remains the only viable means of preventing biofouling on sonar domes. Developing a solution to track maintenance and predictions of TBTO efficacy.  
**Transition Program:** Transition will be a stand-alone tool for tracking TBTO data collected for a hardware measurement capability in radomes in PEO IWS 5  
**Topic Author:** Patrick Lockhart

Statement A: Approved for Release. Distribution is unlimited
**NAVSEA PEO IWS FY23 Topics**

**Topic Number:** N23A-T014  
**Topic Title:** Automated Knowledge Base Extraction and Student Assessment  
**Technology Objective:** Develop an automated capability to generate exams with answer keys using Artificial Intelligence or Machine Learning (AI/ML)-powered data mining for Undersea Warfare (USW).  
**Technological Challenge/Risk:** Assimilation of complete USW reference information Ability to transition more instructional content and time to high-fidelity virtual trainers  

**Transition Program:** IWS 5.0 Training Infrastructure  
**Topic Author:** Meg Stout

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**Topic Number:** N231-029  
**Topic Title:** Software Incident Report Capture and Scripting  
**Technology Objective:** Develop a continuous event recording and incident capture tool that collects metadata to enable the recreation of conditions associated with an error observed by the test team and generates test scripts for automated testing of conditions to validate fixes.  
**Technological Challenge/Risk:** Validation of Bugs fixes will rely on properly capturing data and associated metadata. AI/ML needed to parse bug-related data from background data flows  

**Transition Program:** IWS Combat System T&E FFR  
**Topic Author:** Rob McNeal

Statement A: Approved for Release. Distribution is unlimited
Topic Number: N231-031

Topic Title: Automated Cavitating Waterjet Cleaning Device

Technology Objective: Develop an automated cavitating waterjet cleaning device for conformal hull array areas.


Transition Program: In-Service Support

Topic Author: Robert White

Topic Number: N231-032

Topic Title: Launchable Mini-glider for Variable Payloads

Technology Objective: Develop a launchable mini glider sensor platform able to survive 48 hours in service within the water column.

Technological Challenge/Risk: Current XBT buoys are single-use. Current collection requires specific deployment on a periodic basis, resulting in point measurement.

Transition Program: USW systems

Topic Author: Pete Scala
Topic Number: N231-034

Topic Title: Open Architecture Telemetry First Level Multiplexer with Array Power Distribution

Technology Objective: Develop a single Open Architecture Telemetry (OAT) component which combines the functionality of an OAT First Level Multiplexer (FLM) with the array power distribution component (power shunt).

Technological Challenge/Risk: Optimization of shunt functionality for efficiency. Regulation of augmented dynamic power

Transition Program: Future USN towed arrays using OAT

Topic Author: Rob Cutler

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Topic Number: N231-044

Topic Title: Undersea Warfare Decision Support System Virtualized Training and Expeditionary Unit

Technology Objective: Incorporate advances in virtualization and gamification to modernize USW DSS training from current curricula toward integrated USW C2 training. Develop a portable expeditionary user interface that can deliver this training throughout the enterprise.

Technological Challenge/Risk: Operators need training that better supports proficiency, enables operators to keep pace with CI/CD upgrades USW-DSS systems are present throughout the locations supported by the Navy, driving expeditionary requirement

Transition Program: USW-DSS

Topic Author: Mike Essig
**Topic Number:** N231-049

**Topic Title:** Artificial Intelligence or Machine Learning Video Processing and Packaging

**Technology Objective:** Develop an automated tool to identify video images of interest using Artificial Intelligence/Machine Learning (AIML) to be sent to warfighters in real-time.

**Technological Challenge/Risk:** Using AI/ML approaches to identifying video content of interest to maximize information density in imagery transmitted in real-time.

**Transition Program:** USW-DSS, MPRA systems

**Topic Author:** Mike Essig
N231-028 - Artificial Intelligence/Machine Learning (AI/ML) Hull Mechanical & Electrical Controls

Develop autonomous controls to significantly reduce the cognitive burden on operators in the monitoring, operation, actuation of engineering plants, detection, diagnosing, troubleshooting, and recovery of machinery casualties to improve long-term operation and sustainment of Navy surface combatants.

Transition Program: PMS 460, DDG(X) Guided Missile Destroyer

N231-033: Radio Frequency Transparent AN/SPY-1 Array Cover

Develop a Radio Frequency transparent protective cover for the AEGIS AN/SPY-1 Array that extends the life of the array coating. The covers should be removable for replacement, refurbishment or repairs and must be designed to encapsulate the array face while allowing access to array alignment points.

Transition Program: PMS 407, Surface Ship Modernization
N231-039: Boat & Combatant Craft Electric Drive Propulsion System

Develop a marinized, electrically driven propulsion system to increase fuel economy and reduce noise. Current engines tend to be very inefficient at loiter speeds resulting in inefficient fuel consumption. The new system should enable total ownership cost reduction through reduced fuel consumption and less maintenance, as well as more efficient operation at loiter speeds.

Transition Program: PMS 300, Boats & Combatant Craft

N231-040: Rugged High-Temperature Superconductor Wire Bundles

Develop an HTS wire bundle that can be pulled throughout the ship and cut to length at the time of installation. This will eliminate the need to fabricate pre-determined cables with fixed lengths. In the event that extra lengths of cables are required, cables would not need to be re-manufactured. The new system will be used in installation of magnetic degaussing systems pre and post delivery.

Transition Program: PMS 377, LPD 17 Amphibious Transport Dock
N231-041: Improved Distance Measurement During Underway Replenishments (UNREPs)

The Navy is seeking the development of a portable device to replace the current phone/distance line. It should provide the capability to accurately measure the distance between two ships and provide wireless communications during Underway Replenishments. During UNREPs, two ships must maintain a precise safe operating distance between ships.

**Transition Program:** PMS 400D, DDG 51 New Construction

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N231-043: Extreme Cold Weather Resistant Gasket Material

As the Navy sails continues to sail in Polar regions, seals and gaskets are exposed to extreme cold weather which increases the potential for performance degradation and premature seal failure. Navy is seeking a durable gasket material capable of withstanding temperatures as low as -50°F and that can sustain heavy loads and other forces associated with ship motion.

**Transition Program:** PMS 400D, DDG 51 New Construction
N231-050: Autonomous Crane System for Payload Motion Control

The Navy seeks the development of a cargo stabilization system to accommodate different load types in a safe and timely manner without requiring assistance from tag line handlers. Tag line handlers are frequently exposed to hazards and are in close proximity to the moving payload.

Transition Program: Strategic and Theater Sealift (PMS 385)
**Topic Number:** N231-046

**Topic Title:** Revolutionize Undersea Training Target Motors

**Technology Objective:** Modernize, innovate, and improve the efficiency of the MK39 EMATT motor that leverages the advancements in printed circuit board (PCB) stators, as well as, the reduction in space, noise, and weight of the motor enabling additional capabilities of the EMATT.

**Transition Program:** PMS 404, Undersea Weapons

**Topic Author:** Robert Phillip, NUWC Division robert.j.phillip3.civ@us.navy.mil
**Topic Number:** N231-047

**Topic Title:** Alternative Materials and Fabrication Processes for US Navy Propulsor Shafting

**Technology Objective:** Develop low-cost non-traditional materials and repeatable, reliable, efficient, and robust manufacturing processes suitable for large, thick, waterborne propulsor shafting subjected to long-duration complex stress states.

**Transition Program:** SUB 073, Advanced Submarine Systems Development

**Topic Author:** D. J. Pohlit, Paul Coffin, NSWC Carderock, david.j.pohlit.civ@us.navy.mil
**Topic Number:** N231-054

**Topic Title:** Structural Design Process for High-Cycle Fatigue Performance of Composite Materials & Structures

**Technology Objective:** Develop, execute, and validate methodologies to efficiently establish high-confidence design allowables for high-cycle fatigue performance of composite materials and structures.

**Transition Program:** SUB073, Advanced Submarine Systems Development

**Topic Author:** D. J. Pohlit, Paul Coffin, NSWC Carderock, david.j.pohlit.civ@us.navy.mil
**Topic Number:** N23A-T012

**Topic Title:** Atmospheric Aerosol Model and Data Collection Over the Marine Boundary Layer for Imaging/RF and Laser Beam Propagation

**Technology Objective:** Develop a periscope imaging, EW, and HEL beam propagation model over the marine aerosol boundary layer for the integration of propagation modeling software into a system that will investigate absorption and scattering properties of marine aerosols, the interplay between aerosols and turbulence and impact on imaging and EW.

**Transition Program:** PMS 435, Submarine Electromagnetic Systems Program Office

**Topic Author:** Dr. Tariq Manzur; NUWC, tariq.manzur@navy.mil
N231-035: Automatic Target Recognition (ATR) in Complex Underwater Environments

- Develop adaptive Artificial Intelligence / Machine Learning (AI/ML) automatic target recognition (ATR) algorithms to support Autonomous Undersea Vehicle (AUV) operations in complex environments.

N231-036: Long-Range Acoustic Communications System

- Develop a long-range service-request system capable of transmitting relay-assisted service-request messages in littoral water environments that is robust to doppler effects and provides low-probability-of-detection guarantees for the messaging signal and service-requesting sources.
N231-038: Perceptually Lossless Unmanned Underwater Vehicle (UUV) Sensor Data Compression

- Develop an innovative data compression capability for unmanned vehicle sensor data that can send large amounts of sensor data acoustically and over the horizon using a limited bandwidth.

N231-042: Pressure-Tolerant Electronically-Steered Antennas (ESAs) for Satellite Communications

- Develop a electrically steerable, pressure tolerant phased array antennas for use on UUVs with the following RF electrical performance. This will enable closing high data rate communications links with proliferated low earth orbit (PLEO) satellite constellations, enabling transfer of large data file sets to/from the UUVs.
N231-048: Signal Processing for Underwater Explosion Detection and Localization

- Develop signal processing techniques to detect an underwater explosion and provide range and bearing information utilizing transducers from a program of record. Also, to include the current transducers that can be used to distinguish between two underwater explosions occurring over a short timescale.

N231-055: Centralized Automated Fault Monitoring

- Develop the capability for an automated centralized network fault monitoring for networked equipment. Solution must provide and capture open interfaces to ingest data from Navy Programs of Record (PoRs), Contractor Furnished Equipment (CFE) cross communicate with all network enclaves. Include, monitoring data from devices considered traditional security devices as well as non-traditional components such as Machinery Control systems.
N23A-T013: (STTR) Unmanned Underwater Vehicle (UUV) Sensor Data Transformation Tool

• Develop a software tool to transform and create synthetic sensor data from information received by a different sensor.
FY23 Topic Submissions

For further questions on HQ & DIR FY23 Topic Submissions, please contact:

PEO Ships
• TM - Emily Novak
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PEO Subs
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PEO Carriers
• TM – Russell Knowles
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• Coordinator – Melanie Parks
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PEO Integrated Warfare Systems (IWS)
• TM – Douglas Marker
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• Coordinator – Mike Kitchens
  david.m.kitchens4.ctr@us.navy.mil

PEO Unmanned and Small Combatants (USC)
• TM – Jennifer Greenwood
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• Coordinator – Amelia Moore
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HQ & DIR
• TM – Howard Franklin
  howard.l.franklin9.civ@us.navy.mil
• Coordinator – Jonathan Mulberg
  jonathan.l.mulberg.ctr@us.navy.mil
SBIR Reauthorization

• The 2022 SBIR/STTR Reauthorization introduces some new requirements for the new FY23 BAA
  – A commercialization index has been increased for companies that have won many SBIR awards
  – Vetting of business ownership
    • Closer examination of small businesses’ ties to foreign interests is required to better protect US technology
SBIR/STTR Program Observations

- Defense Industrial Base is confronting issues in trade and STEM disciplines
  - Capacity: how can SBIR reward more companies?
- Improved proposal debriefs would benefit unsuccessful offerors
- Sustainment problems can be addressed using SBIR
- New Navy programs should incorporate using SBIR technology from inception
- Excessive time without award funding is hampering small business
Questions and Open Discussion
Backup Slides
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<tr>
<td>N23A-T009</td>
<td>IWS</td>
<td>Generalizable Tactical Software AI/ML-informed Debloating</td>
<td>AI/ML; Cybersecurity</td>
<td>Meg Stout</td>
<td>(202) 498-6015</td>
<td><a href="mailto:margaret.c.stout2.civ@us.navy.mil">margaret.c.stout2.civ@us.navy.mil</a></td>
</tr>
<tr>
<td>N23A-T010</td>
<td>IWS</td>
<td>Sonar Dome Anti-Fouling Tracking and Prediction Tool</td>
<td>GWR</td>
<td>Patric Lockhart</td>
<td>(401) 832-4462</td>
<td><a href="mailto:patric.k.lockhart.civ@us.navy.mil">patric.k.lockhart.civ@us.navy.mil</a></td>
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<tr>
<td>N23A-T011</td>
<td>IWS</td>
<td>Innovative Optics for Wide Field of View Infrared Sensors</td>
<td>GWR</td>
<td>Benjamin Conley</td>
<td>(703) 588-0185</td>
<td><a href="mailto:benjamin.r.conley4.civ@us.navy.mil">benjamin.r.conley4.civ@us.navy.mil</a></td>
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<td>Atmospheric Aerosol Model and Data Collection Over the Marine Boundary Layer for Imaging/Radiofrequency (RF) and Laser Beam Propagation</td>
<td>DE; GWR</td>
<td>Tariq Manzur</td>
<td>(401) 832-6887</td>
<td><a href="mailto:tariq.manzur.civ@us.navy.mil">tariq.manzur.civ@us.navy.mil</a></td>
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<td>Andy Houck</td>
<td>(619) 226-5354</td>
<td><a href="mailto:andy.a.houck.civ@us.navy.mil">andy.a.houck.civ@us.navy.mil</a></td>
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# SBIR 23.1 Topics Released

<table>
<thead>
<tr>
<th>Topic Number</th>
<th>PEO</th>
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<th>TPOC Name</th>
<th>TPOC Phone</th>
<th>TPOC Email</th>
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<tbody>
<tr>
<td>N231-028</td>
<td>SHIPS</td>
<td>Artificial Intelligence/Machine Learning (AI/ML) Hull Mechanical &amp; Electrical Controls</td>
<td>AI/ML; Autonomy; Cybersecurity</td>
<td>Michael Ryan</td>
<td>(215) 897-2016</td>
<td><a href="mailto:michael.t.ryan121.civ@us.navy.mil">michael.t.ryan121.civ@us.navy.mil</a></td>
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<tr>
<td>N231-029</td>
<td>IWS</td>
<td>Software Incident Report Capture and Scripting</td>
<td>AI/ML; Autonomy; Cybersecurity</td>
<td>Jonathan Maruska</td>
<td>(401) 832-3698</td>
<td><a href="mailto:jonathan.d.maruska.civ@us.navy.mil">jonathan.d.maruska.civ@us.navy.mil</a></td>
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<tr>
<td>N231-030</td>
<td>IWS</td>
<td>Model Centric Safety Analysis Tool</td>
<td>AI/ML; GWR</td>
<td>Jess Riggle</td>
<td>(540) 653-2107</td>
<td><a href="mailto:jess.e.riggle.civ@us.navy.mil">jess.e.riggle.civ@us.navy.mil</a></td>
</tr>
<tr>
<td>N231-031</td>
<td>IWS</td>
<td>Automated Cavitating Waterjet Cleaning Device</td>
<td>GWR</td>
<td>Scott Kasprzak</td>
<td>(202) 781-4415</td>
<td><a href="mailto:scott.e.kasprzak.civ@us.navy.mil">scott.e.kasprzak.civ@us.navy.mil</a></td>
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<tr>
<td>N231-032</td>
<td>IWS</td>
<td>Launchable Mini Glider for Variable Payloads</td>
<td>Autonomy; GWR</td>
<td>Meg Stout</td>
<td>(202) 781-4233</td>
<td><a href="mailto:margaret.c.stout2.civ@us.navy.mil">margaret.c.stout2.civ@us.navy.mil</a></td>
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<tr>
<td>N231-033</td>
<td>SHIPS</td>
<td>Permanent Radio Frequency Transparent AN/SPY-1 Array Cover</td>
<td>GWR</td>
<td>William Stout</td>
<td>(805) 228-7101</td>
<td><a href="mailto:william.flores37.civ@us.navy.mil">william.flores37.civ@us.navy.mil</a></td>
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<tr>
<td>N231-034</td>
<td>IWS</td>
<td>Open Architecture Telemetry First Level Multiplexer with Array Power Distribution</td>
<td>GWR; Microelectronics</td>
<td>John Faella</td>
<td>(401) 832-6563</td>
<td><a href="mailto:john.a.faella2.civ@us.navy.mil">john.a.faella2.civ@us.navy.mil</a></td>
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<tr>
<td>N231-035</td>
<td>USC</td>
<td>Automatic Target Recognition (ATR) in Complex Underwater Environments</td>
<td>AI/ML; Autonomy</td>
<td>Andy Houck</td>
<td>(619) 226-5354</td>
<td><a href="mailto:andy.a.houck.civ@us.navy.mil">andy.a.houck.civ@us.navy.mil</a></td>
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<tr>
<td>N231-036</td>
<td>USC</td>
<td>Long-Range Acoustic Communications System</td>
<td>Networked C3</td>
<td>Pedro Forero</td>
<td>(619) 553-2670</td>
<td><a href="mailto:pedro.a.forero.civ@us.navy.mil">pedro.a.forero.civ@us.navy.mil</a></td>
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<tr>
<td>N231-037</td>
<td>IWS</td>
<td>Gun Weapons Systems Synthetic Unmanned Aerial Systems Imagery Data Set</td>
<td>AI/ML; Autonomy</td>
<td>Benjamin Goldman</td>
<td>(540) 623-5099</td>
<td><a href="mailto:benjamin.j.goldman.civ@us.navy.mil">benjamin.j.goldman.civ@us.navy.mil</a></td>
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<td>N231-038</td>
<td>USC</td>
<td>Perceptually Lossless Unmanned Underwater Vehicle (UUV) Sensor Data Compression</td>
<td>AI/ML; GWR</td>
<td>Andy Houck</td>
<td>(619) 226-5354</td>
<td><a href="mailto:andy.a.houck.civ@us.navy.mil">andy.a.houck.civ@us.navy.mil</a></td>
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<td>N231-039</td>
<td>SHIPS</td>
<td>Boat &amp; Combatant Craft Electric Drive Propulsion System</td>
<td>GWR; Quantum Science</td>
<td>Christian Rozicer</td>
<td>(202) 781-3829</td>
<td><a href="mailto:christian.e.rozicer.civ@us.navy.mil">christian.e.rozicer.civ@us.navy.mil</a></td>
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<td>N231-040</td>
<td>SHIPS</td>
<td>Rugged High-Temperature Superconductor Wire Bundles for Shipboard Installation</td>
<td>GWR</td>
<td>Peter Ferrara</td>
<td>(215) 897-8057</td>
<td><a href="mailto:peter.j.ferrara.civ@us.navy.mil">peter.j.ferrara.civ@us.navy.mil</a></td>
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<tr>
<td>N231-041</td>
<td>SHIPS</td>
<td>Improved Distance Measurement During Underway Replenishments (UNREPs)</td>
<td>Autonomy; GWR</td>
<td>Charles Boucher</td>
<td>(202) 781-0317</td>
<td><a href="mailto:charles.t.boucher.civ@us.navy.mil">charles.t.boucher.civ@us.navy.mil</a></td>
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<tr>
<td>N231-042</td>
<td>USC</td>
<td>Pressure-Tolerant Electronically-Steered Antennas (ESAs) for Satellite Communications on Unmanned Undersea Vehicles (UUV)</td>
<td>Cybersecurity; Networked C3</td>
<td>Matt Atwood</td>
<td>(401) 832-6010</td>
<td><a href="mailto:matthew.w.atwood2.civ@us.navy.mil">matthew.w.atwood2.civ@us.navy.mil</a></td>
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<tr>
<td>N231-043</td>
<td>SHIPS</td>
<td>Extreme Cold Weather Resistant Gasket Material</td>
<td>GWR</td>
<td>Charles Boucher</td>
<td>(202) 781-0317</td>
<td><a href="mailto:charles.t.boucher.civ@us.navy.mil">charles.t.boucher.civ@us.navy.mil</a></td>
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<td>N231-044</td>
<td>IWS</td>
<td>Expeditionary Virtualized Training Unit for Undersea Warfare Decision Support System (USW-DSS)</td>
<td>GWR</td>
<td>Steven Roodbeen</td>
<td>(401) 832-7190</td>
<td><a href="mailto:steven.a.roodbeen.civ@us.navy.mil">steven.a.roodbeen.civ@us.navy.mil</a></td>
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<tr>
<td>N231-045</td>
<td>IWS</td>
<td>Multi-Spectral, Multi-Sensor Image Fusion AI/ML; GWR</td>
<td>Roger Goetz</td>
<td></td>
<td>(812) 854-3440</td>
<td>roger.n.goetz <a href="mailto:civ@us.navy.mil">civ@us.navy.mil</a></td>
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<tr>
<td>N231-046</td>
<td>SUBS</td>
<td>Revolutionized Undersea Training Target Motors GWR</td>
<td>Robert Phillip</td>
<td></td>
<td>(401) 832-3730</td>
<td><a href="mailto:robert.j.phillip3.civ@us.navy.mil">robert.j.phillip3.civ@us.navy.mil</a></td>
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<td>N231-047</td>
<td>SUBS</td>
<td>Alternative Materials and Fabrication Processes for US Navy Propulsor Shafting</td>
<td>GWR</td>
<td>David Pohlit</td>
<td>(301) 227-8851</td>
<td><a href="mailto:david.j.pohlit.civ@us.navy.mil">david.j.pohlit.civ@us.navy.mil</a></td>
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<td>N231-048</td>
<td>USC</td>
<td>Signal Processing for Underwater Explosion Detection and Localization AI/ML; GWR</td>
<td>Steve Johnson</td>
<td></td>
<td>(202) 781-1403</td>
<td><a href="mailto:steven.a.johnson7.civ@us.navy.mil">steven.a.johnson7.civ@us.navy.mil</a></td>
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<td>N231-049</td>
<td>IWS</td>
<td>Artificial Intelligence/Machine Learning Video Processing and Packaging AI/ML; GWR</td>
<td>Steven Roodbeen</td>
<td></td>
<td>(401) 832-7190</td>
<td><a href="mailto:steven.a.roodbeen.civ@us.navy.mil">steven.a.roodbeen.civ@us.navy.mil</a></td>
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<td>N231-050</td>
<td>SHIPS</td>
<td>Autonomous Crane System for Payload Motion Control AI/ML; GWR</td>
<td>David Liese</td>
<td></td>
<td>(202) 781-2591</td>
<td>david.l.liese@<a href="mailto:civ@us.navy.mil">civ@us.navy.mil</a></td>
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<td>N231-051</td>
<td>HQ</td>
<td>Underwater Diver-Applied Composite Patch Repair for Crack Arresting</td>
<td>GWR</td>
<td>Dustin Shelley</td>
<td>(202) 781-3945</td>
<td><a href="mailto:dustin.a.shelley.mil@us.navy.mil">dustin.a.shelley.mil@us.navy.mil</a></td>
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<tr>
<td>N231-052</td>
<td>HQ</td>
<td>Advanced Reliable Wide-Range Hydrodynamic Hull Appendage GWR</td>
<td>Lawrence Murphy</td>
<td></td>
<td>(703) 505-9409</td>
<td><a href="mailto:lawrence.p.murphy.civ@us.navy.mil">lawrence.p.murphy.civ@us.navy.mil</a></td>
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<td>N231-053</td>
<td>CV</td>
<td>Improved Electromechanical Actuators for Aircraft Carrier Flight Deck Applications GWR</td>
<td>Maboury Gueye</td>
<td></td>
<td>(445) 227-0090</td>
<td><a href="mailto:maboury.gueye.civ@us.navy.mil">maboury.gueye.civ@us.navy.mil</a></td>
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<tr>
<td>N231-054</td>
<td>SUBS</td>
<td>Structural Design Process for High-Cycle Fatigue Performance of Composite Materials GWR</td>
<td>David Pohlit</td>
<td></td>
<td>(301) 227-8851</td>
<td><a href="mailto:david.j.pohlit.civ@us.navy.mil">david.j.pohlit.civ@us.navy.mil</a></td>
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<tr>
<td>N231-055</td>
<td>USC</td>
<td>Centralized Automated Fault Monitoring Autonomy; GWR</td>
<td>Yara Fakhoury</td>
<td></td>
<td>(202) 427-9632</td>
<td><a href="mailto:yara.n.fakhoury.civ@us.navy.mil">yara.n.fakhoury.civ@us.navy.mil</a></td>
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<tr>
<td>N231-056</td>
<td>IWS</td>
<td>Intelligent Capture of Digital Imaging for Systems Engineering, Modeling, and Training AI/ML; GWR</td>
<td>Marcin Malec</td>
<td></td>
<td>(812) 854-8327</td>
<td><a href="mailto:marcin.s.malec.civ@us.navy.mil">marcin.s.malec.civ@us.navy.mil</a></td>
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