



Department of the Navy  
Office of Small Business Programs

# Small Business and Innovation in the Department of the Navy



***August 17, 2017***

*Emily Harman*  
*Director, DON OSBP*

“Small Business...

*The First Option”*



# Department of the Navy Small Business Enterprise Strategic Framework

## VISION

*To influence change and create a culture of small business inclusiveness across the Department of the Navy.*

## MISSION

*The DON Small Business Enterprise fosters acquisition opportunities where small businesses can best support Sailors, Marines, and their families through policy, advocacy, counseling & training.*

### Motto

**“Small Business – The First Option”**

### Strategy

**Foster a DON-wide culture that meets the challenges of tomorrow by leveraging Small Business as a strategic advantage**

### Focus Areas

**Professional Workforce Development**

**Build Partnerships in the Acquisition Process**

**Optimize Communications**

### Values

**Leadership Professionalism**

**Integrity Customer Focus**

**Advocacy Innovation**



# Recent Innovation Charges

Department of the Navy  
Office of Small Business Programs

- **Chief of Naval Operations – The Future Navy (May 2017)**
  - “Future designs must...drive down costs to operate and maintain....”
  - “The Navy must get to work now to both build more ships, and to think forward – innovate – as we go. To remain competitive, we must ... improve faster.”
- **Chief of Naval Research – Naval Research & Development: A Framework for Accelerating (July 2017)**
  - “To win, this Framework:
    - Aligns naval research, development and acquisition to shared priorities
    - Allocates resources to speed priority-aligned results to the warfighter
    - Accelerates capability delivery by streamlining business execution ...
  - Earlier prototyping, experimentation and demonstration in order to decrease risk in cost, schedule and performance
  - “The RDT&E status quo is inadequate to keep pace with technology innovation.”
- **Restructuring DOD AT&L (August 2017, report to Congress)**
  - Once in a generation opportunity to improve how the DOD is organized and operates, install an innovation culture
  - Drive innovation upfront to accelerate and expand the advancement of warfighter capabilities

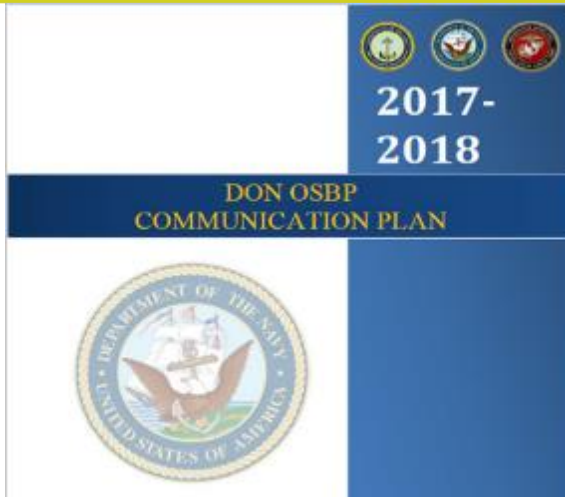
DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited





# We all Must Optimize Communications

# Department of the Navy Office of Small Business Programs



## Small Business Supports the Warfighter Mission at 52nd Sea-Air-Space Expo

Story Number: NNS17040719 Release Date: 4/7/2017 11:50:00 AM

From Department of the Navy Office of Small Business Programs Public Affairs

NATIONAL HARBOR, Md. (NNS) -- The Department of the Navy (DON) Office of Small Business Programs (OSBP) held its annual Small Business Forum and Matchmaking Events at the Gaylord Convention Center in National Harbor, Maryland April 4-5.

"Small businesses will be key contributors as we rebuild and reform our Navy and Marine Corps to meet the demands of the maritime environment, today and in the future. The DON OSBP is committed to fostering a culture that meets these challenges by leveraging Small Business as a strategic advantage," said Emily Harman, director, DON OSBP. "These events help us strengthen and expand our network of partners."

Both events enabled participants interested in doing business with Navy and Marine Corps the opportunity to communicate with small business professionals representing the DON's 10 major buying commands, and to learn how their products, services and technology can support the Navy and Marine Corps mission. Participants also found opportunities to network with each other while gaining a greater understanding of the DON's acquisition process.

The matchmaking event, held April 4, was a series of one-on-one meetings between small businesses and representatives from the DON's 10 buying commands to share information about specific contracting and subcontracting opportunities. In all, 180 matchmaking meetings were held with representatives of 80 small businesses. "For a small company without a big marketing team, this was a great opportunity to network one-on-one and make contacts. Every small company should take advantage of this," said a matchmaking participant.

This year's small business forum, held April 5, featured two panels and focused on creating opportunities for, and removing barriers to, small business participation in the industrial base that supports the warfighter mission of the Navy and Marine Corps. During the Deputy Program Manager Panel, moderated by Assistant Secretary of the Navy for Research, Development and Acquisition Allison Stiller, deputy program managers discussed how they engage with small businesses, and how small businesses can learn about upcoming contracting opportunities to support their programs. During the Contracting Panel, moderated by Deputy Assistant Secretary of the Navy for Acquisition and Procurement Elliott Branch, participants gained insight into the DON's efforts to streamline and simplify the acquisition process and remove barriers to small business participation in the industrial base.

## PEO Ships Works to Promote Small Business Opportunities

By Team Ships Public Affairs | August 07, 2017

WASHINGTON - With more than 20 small business contracts awarded to support foreign military sales and boat and service craft acquisition this fiscal year, the Program Executive Office Ships (PEO Ships) works to enhance shipbuilding opportunities for small businesses, a critical component of the Navy's effort to deliver warfighting capabilities to our Sailors and Marines.

PEO Ships works closely with The Navy's Office of Small Business Programs to support small businesses, a community recognized for its innovative and agile solutions to acquisition needs.

As one of the largest acquisition organizations in the Navy, PEO Ships manages the design and construction of destroyers, amphibious ships, special mission and support ships as well as a wide range of boats and craft for U.S. agencies and foreign military sales. It is currently competing five new contracts as small business set asides. These contracts have a total potential value of over \$1 billion: the PB(X), the landing craft utility (LCU 1700), the towing, salvage and rescue ship (T-ATS), the workboat large, and the harbor tug (YT).

While small business opportunities exist across all of the platforms in PEO Ships, the program office for Support Ships, Boats, and Craft is leading the effort to increase small business participation in acquisition of integrated ship, boat, and craft products and services to U.S. and international maritime forces. This office is committed to building and sustaining a robust industrial base by creating a culture that is supportive of and responsive to small business concerns.

<http://smallbusiness.navy.mil>

<http://www.navysbir.com>

<https://www.facebook.com/NAVYOSBP>

[@DON\\_OSBP](https://twitter.com/DON_OSBP)  
[@NAVYSBIR](https://twitter.com/NAVYSBIR)



US Navy's Harman, Smith on Small Business Collaboration  
**Defense & Aerospace Report**

DISTRIBUTION STATEMENT

A. Approved for public  
release

<http://SmallBusiness.Navy.mil>



**SBIR/STTR**

# EM Railgun Support

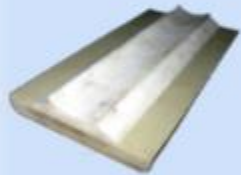
## LAUNCHER



**Harsh  
Environment  
Sensors**

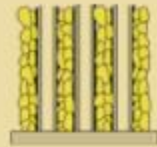


**Conductor Rails**



**High Temp  
Polymer  
Composites**

## PULSED POWER



**Safe High-Voltage  
Cathode  
Materials**



**Flexible Cooled  
Power  
Conductors**

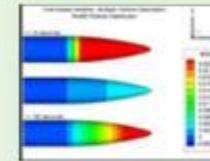


**Intermittent Pulsed  
Power Load  
Support**

## PROJECTILE



**Materials for  
Hypersonic Systems**



**Mission Planning for  
Hypersonic  
Munitions**



**Survivable  
Electronics**

## SBIR-Supported Research

- Coordinated
- Multi-discipline
- Multi-industry

**83 Contributing Projects**

- **53 Phase I**
- **27 Phase II**
- **3 Phase III**

**46 SBIR/STTR Tech Providers**

- **Traditional and non-traditional**

# Fire Scout Industry/Government Team

*Examples of Small Business SBIR/STTR Technology Transition for the MQ 8-B*



## Prime Contractor

- Systems Integrator
- Vehicle Management System
- Flight Test Lead



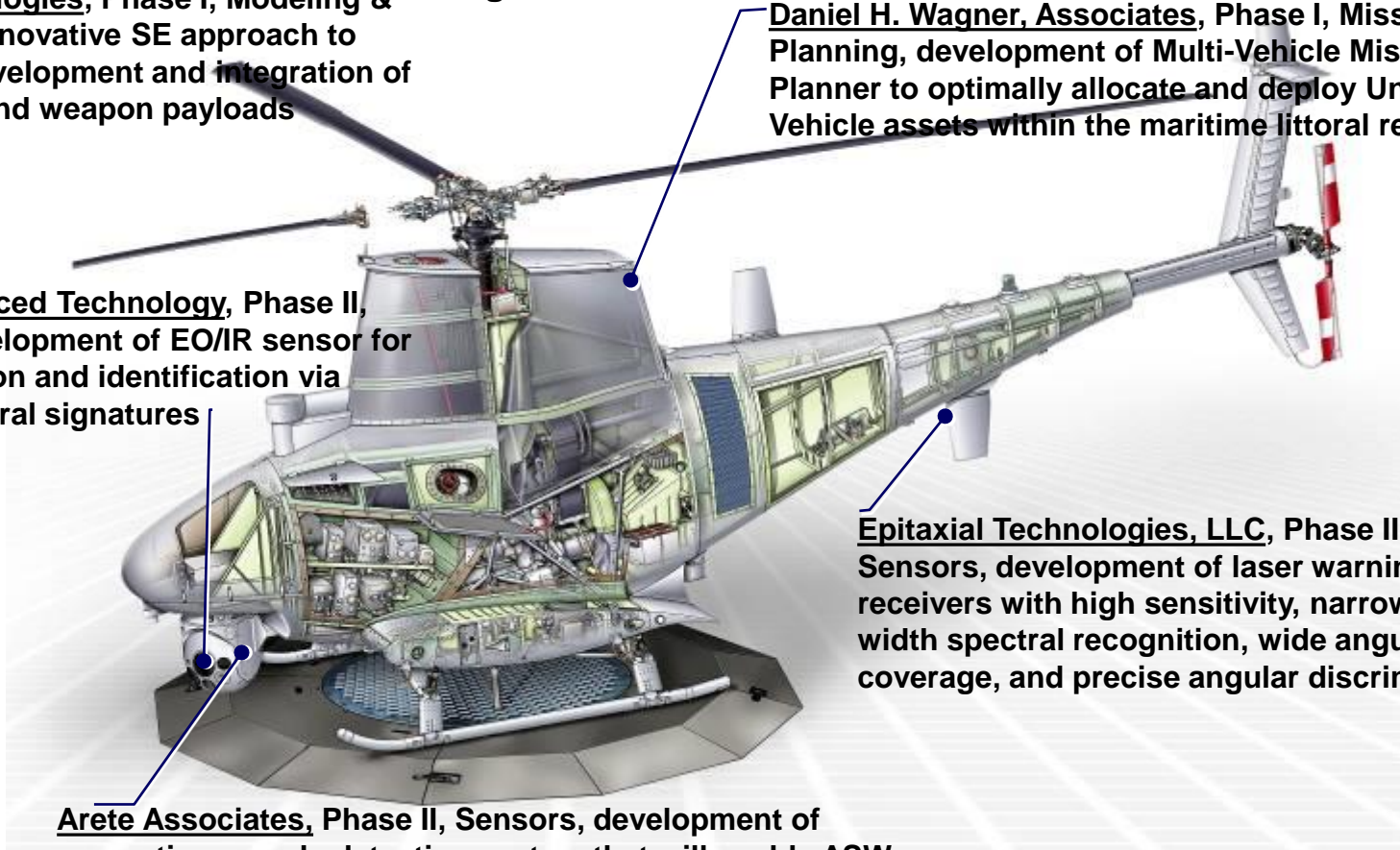
Torch Technologies, Phase I, Modeling & Simulation, innovative SE approach to accelerate development and integration of UAV sensor and weapon payloads

Daniel H. Wagner, Associates, Phase I, Mission Planning, development of Multi-Vehicle Mission Planner to optimally allocate and deploy Unmanned Vehicle assets within the maritime littoral region

Pacific Advanced Technology, Phase II, Sensors, development of EO/IR sensor for target detection and identification via infrared spectral signatures

Epitaxial Technologies, LLC, Phase II, Sensors, development of laser warning receivers with high sensitivity, narrow line-width spectral recognition, wide angular coverage, and precise angular discrimination

Arete Associates, Phase II, Sensors, development of magnetic anomaly detection system that will enable ASW platforms to search, localize, detect, and track submerged targets more effectively



DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited

Approved for Public Release, Distribution Unlimited  
NAVAIR 08-760 Dated 15 August 2008



# PEO LCS SBIR Technologies

## SHIP CREW SUPPORT



Synthetic Training



ASW  
Mission  
Planning



MCM COBRA



MCM Object  
Categorization



MCM  
RMMV  
Effectiveness



## UNMANNED VEHICLE COORDINATION



USV Situational  
Awareness



Ship/UxV Secure Comms

## SHIP SYSTEMS



Autonomous  
Shipboard  
Cleaning



Mission Package  
Handling Systems



# **Rapid Innovation Fund**



# Multi-platform Anti-jam GPS Navigation Antenna (MAGNA)

## Challenge:

Unintentional and intentional Global Positioning System (GPS) satellite signal interferences pose serious risk to the operation of systems relying on Position, Navigation, and Timing (PNT) data products. Further complicating the issue, GPS antennas integrated placed on rotary winged platforms suffer from “rotor blade modulation” effects introduced by the rotating wings. In addition, to mitigating signal interferences it needs to fit in the existing fixed reception pattern antenna (FRPA) footprint to reduce integration cost.

## Naval Benefit:

MAGNA provides US Navy and Joint Services navigation systems with protected GPS Signals. The MAGNA is a small, Size, Weight, and Power-Cost (SWaP-C) GPS Anti-Jam (AJ) system that is resistant to jammers, unintended interferences, and mitigates rotary wing modulation effects. MAGNA’s SWaP-C is far less than the current Advanced Digital Antenna Production (ADAP) system. MAGNA offers the ability to add GPS AJ capability to small platforms such as rotary wing and UASs.

## Accomplishments:

- Delivery of 21 Production Representative Articles (PRAs) in Q3 FY17.
- Delivery of 32 PRAs in FY17 to support SOCOM urgent need.

## Results: (FY17Q3, 21 units, \$1.04M; FY18+: 4,300+ units)

- MAGNA Integrating with PRA on US Army Shadow (RQ-7)
- MAGNA fielding with PRA on AFSOC U-28.
- MAGNA fielding with PRA on Army PM SA-I M3 MAISR

## MAGNA Platform Integration Efforts FY17

### MAGNA-I



### ARMY RQ-7

Group II UAS  
No Iridium  
Planned Platform  
Upgrade



### MAGNA-F



### AFSOC U28

Fixed-wing  
Iridium Required  
SOCOM Urgent  
Need



### M3 MAISR

Fixed-wing  
No Iridium  
JSOC Urgent  
Need



## SPAWAR Systems Command

**Acquisition Sponsor:** PMW/A 170  
(Communications and GPS Navigation Program Office)

**Industry Partner:** Mayflower Communications Company (Bedford, MA)

**Investment:** \$2.25M + \$1.68M Cross Service Funds

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited (from SYSCOM review)



# Mine Roller Wheel Assembly Improvement

## Challenge:

To improve effectiveness and reduce maintenance requirements of the current Marine Corps Mine Roller System (MRS).

## Naval Benefit:

This effort was an Engineering Change Proposal to the current USMC MRS used by all Marine Forces to mitigate the effects of Improvised Explosive Devices (IEDs) by triggering the device prematurely providing standoff to tactical vehicles and their occupants thus increasing survivability of both.

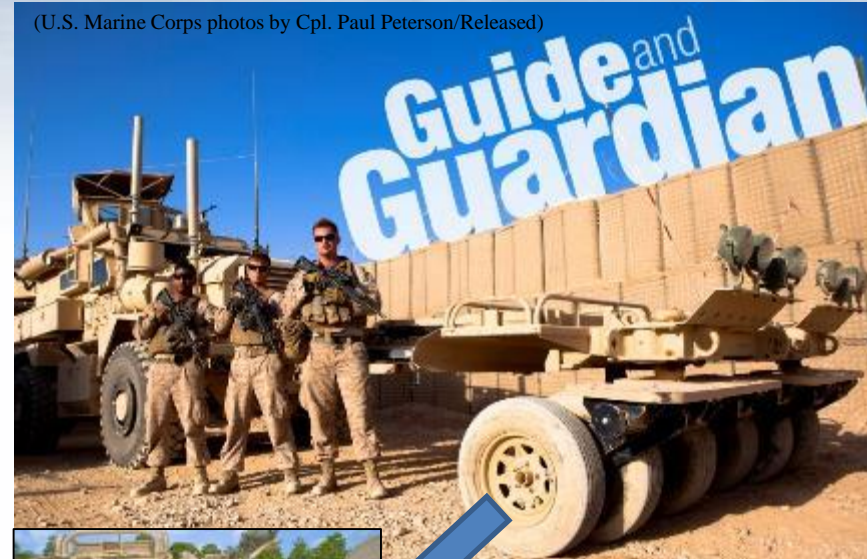
## Accomplishments:

Testing has shown an overall effectiveness increase; especially at higher speeds, and a reduction of maintenance requirements (trail arm replacement and logistical support).

## Results:

Contract was awarded on January 8, 2016 for procurement of up to 1162 wheelbanks which will upgrade up to 581 Mine Rollers. Current program strategy is to procure 400 wheelbanks (200 Mine Rollers) to upgrade all Mine Rollers in active use and some spares. Fielding to Operational Forces to start in 2<sup>nd</sup> quarter fiscal year 2017.

(U.S. Marine Corps photos by Cpl. Paul Peterson/Released)



**Legacy System**



**Improved Wheel Bank Assembly**

**Marine Corps Systems Command**

**Acquisition Sponsor:** PdM Engineer Systems

**Industry Partner:** G.S. Engineering

**Investment:** \$1,798,287.00

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited

R A P I D I N N O V A T I O N F U N D





# Wireless Vibration Recorder (WVR)

## **Challenge:**

To better determine why and when aircraft components fail, specialized software and sensors are required to acquire vibration and acceleration data. Currently, equipping an aircraft with instrumentation and processing the results is very time consuming and costly.

## **Naval Benefit:**

SlamstickX provides a compact and lightweight capability to acquire vibration data quickly and easily on any aircraft, reducing flight test costs and diagnosis time. It will reduce operating costs and improve time on wing by shortening maintenance cycles. Slamstick X will record for 4 hours on internal batteries and can trigger on acceleration and/or time.

## **Accomplishments:**

- Conducted critical design review, EMI & Environmental testing
- Measures up to 100g in three axes, with pressure and temperature

## **Results:**

- \$300K is budgeted to purchase 400 units in the next four years.
- Projected to save NAVAIR \$3-5M over the next four years in flight test savings.
- Mide has already sold 30 units commercially since release in Q4 2014.

**Dimensions - 3.00 in. X 1.2 in. X 0.6 in.**  
**Mass - 40 grams**  
**Installed with 2 sided tape or hardware**  
**Tested to 360g**



**Naval Air Systems Command**

**Acquisition Sponsor: PMA265**

**Industry Partner: Mide Technology (Medford, MA)**

**Investment: \$0.45M**

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited

# **Mentor-Protégé Program**



## Mentor Protégé Agreement Contributions to DoD

### Q.E.D Systems, Inc. & Advanced Integrated Technologies, LLC (AIT)

AIT is a Service Disabled Veteran Owned Small Business specializing in shipboard and submarine maintenance and modernization.

**AIT's other capabilities:** specialized containers, watertight doors, submarine systems, shipboard systems & equipment, chemical cleaning, fabrication, installation, hull, mechanical & electrical

During the life of the Mentor-Protégé Agreement, AIT participated in **5** DoD prime contracts and **123** DoD subcontracts and supported the Naval Sea Systems Command (NAVSEA) with overhaul, maintenance, installation, testing, modification engineering and manufacturing of shipboard equipment and systems on all classes of ships and watercraft. Additional agreement achievements:

- Shipyard Competent Persons Certified
- ISO 9001:2008 Compliant QA Plans
- Deltek Cost Accounting Software Training
- Aerial Work Platform Operator Certified
- OSHA 5410 Standards for Maritime Industry Courses
- Scaffolding Inspector Certification for four AIT employees
- **DoD 2013 Nunn-Perry Award winner!**







## Mentor Protégé Agreement Contributions to DoD

### Raytheon Missile Systems & Sonju Industrial Coatings Inc.

Sonju is a Minority Women Owned Small Business that manufactures missile and firearm components for numerous DoD missile programs and major DoD prime contractors.

**Sonju's other capabilities:** CNC machining, assembly and process finishing, modular machining, CAD/CAM engineering.

Sonju participated in **1,570** DoD subcontracts during the life of the Mentor-Protégé Agreement and supported Naval Air Systems Command (NAVAIR) in the manufacturing of key components in such missile programs as Tomahawk, Griffin and AIM-9X as well as other missile programs that are currently utilized by the United States and it's allies around the world. Additional agreement achievements:

- National Aerospace and Defense Contractors Accreditation Program Certification Non-Destructive Testing
- Inventory Control Capability – Tooling
- Lean Manufacturing principals
- Financial Systems Development
- Business Management
- Business Systems Integration
- **DoD 2014 Nunn-Perry Award winner!**





## Mentor Protégé Agreement Contributions to DoD

### Lockheed Martin MST & Crowley Fabricating & Machining Co. Inc.

Crowley Fabricating & Machining Co. Inc. is a Service Disabled Veteran Owned Small Business that specializes in machining and fabricating utilizing various metals, ceramics, glass, granite and wood.

**Crowley's Other Capabilities** – CNC Machining, CNC Turning, Waterjet Cutting, Laser Cutting, Sheet Metal Fabricating, CNC Press Brake Welding (MIG, TIG, Spot Welding), CMM, Amada CNC Press Brake, Mechanical Assembly

Crowley participated in **8** DoD prime contracts and **599** DoD subcontracts during the life of the agreement and supported the Naval Air Systems Command (NAVAIR) in providing precision aerospace mechanical assemblies used both on the interior and exterior of aircraft. Additional agreement achievements:

- Achieved ISO 9001:2008 Certification Aug 2013
- Achieved AS9100 Certification Dec 2013
- Base Year POP extended to Dec 2013
- Performance Efficiency Phase: JobBOSS™ MRP, ESPRIT™
- Value Stream Mapping
- Business Growth Initiatives
- Achieved AS9100 Re-Certification Dec 2014
- Achieved AS9100 Certification Dec 2015
- Performance Efficiency Phase: MicroEstimating™, PC-DMIS™
- Completed Cyber Security Readiness to new DFAR standards
- **DoD 2015 Nunn-Perry Award winner!**

