



# DoD SBIR/STTR

NDIA  
Overview  
Sept 24, 2015 | Springfield, VA

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Steve Sullivan, *Acting Program Administrator*

## Panelists

Steve Sullivan, Office of Small Business Programs

Bob Smith, Navy

David Sikora, Air Force

Elissa Sobolewski, Department of Homeland Security

“SBIR allowed us to pursue several innovative programs that would not have been possible. SBIR helped develop the CDMA technology and application integrated circuit that brings 2/3 of their revenue.”

*Dr. Irwin Mark Jacobs, Cofounder of Qualcomm*



### Founded in 1985

- First SBIR Award: 1987 with 35 employees
- Total SBIR Funding: \$1.5M from 1987-1990

### 2015

- Annual Revenue: \$11 billion
- Employees: 18,000
- Patents: 13,000

### Effects of SBIR funding

- Resulted in 2/3 of Qualcomm's current revenue
- Led to OmniTRACS – a trucking service to track progress of drivers using digital satellite systems
- Sold over 118,000 units and is the largest in its market

### Small Business Innovation Research (SBIR) Small Business Technology Transfer (STTR)

- Congressionally-mandated programs. SBIR started in **1982**; STTR started in **1992**
- Funded as a set-aside assessment of extramural R&D budget; SBIR for Agencies with **>\$100M RDT&E** budget; STTR for Agencies with **> \$1B RDT&E** budget
- Encourage participation by minorities and disadvantaged persons in technological innovation
- SBA programmatic authority over federal SBIR & STTR programs (Program Policy Directives)

### Eligibility Requirements

#### SBIR

- Organized for-profit U.S. business, located in the U.S.
- At least 51% U.S.- owned by individuals and independently operated
- 500 or fewer employees
- Principal Investigator's (PI) primary employment with small business during project

#### STTR

- Formal Cooperative R&D Effort with a U.S. Research Institution
- Minimum 40% by small business, 30% by U.S. research institution
- Small business is Prime, PI can be from SBC or research Institution
- Intellectual Property Agreement

## Contracting Agencies

- Agency establishes plans, protocols, requirements
- Highly focused topics
- Procurement mechanism
- More fiscal requirements
- Invoiced on Progress
- DoD, DHS, NASA, EPA, DOT

## Granting Agencies

- Investigator initiates approach
- Less-specified topics
- Assistance mechanism
- More flexibility
- Allows upfront payment
- NSF, DoE, USDA

Contracting and Granting Agencies: HHS/NIH, DOC, ED

## 3 Phased Program



### Phase I: Feasibility Study

- Award Guideline: \$150K
- Duration: 6 months (SBIR)  
12 months (STTR)

### Phase II: Full Research, R&D to Prototype

- Award Guideline: \$1M
- Duration: 24 months

### Phase III: Commercialization

- Non-SBIR/STTR funds
- Derives from, extends, or completes prior SBIR/STTR work



# Federal Agencies

## SBIR + STTR Programs



Department of  
Defense (DoD)



Department of  
Health and  
Human Services  
(HHS)



Department of  
Energy (DoE)



National  
Aeronautics and  
Space  
Administration  
(NASA)



National Science  
Foundation (NSF)

## SBIR Program only:



Department of  
Agriculture  
(USDA)



Department of  
Education (DoEd)



Department of  
Transportation (DoT)



Environmental  
Protection  
Agency (EPA)



Department of  
Homeland Security  
(DHS)



Department of  
Commerce  
(DoC)

# DoD Components



Army



Navy



Air Force



Missile Defense Agency (MDA)



Defense Threat Reduction Agency (DTRA)



Defense Microelectronics Activity (DMEA)



Defense Advanced Research Projects Agency (DARPA)



Defense Health Program (DHP)



Chemical and Biological Defense (CBD)



Special Operations Command (SOCOM)



Defense Logistics Agency (DLA)



National Geospatial Intelligence Agency (NGA)



## What's Unique About DoD



- Focused on the **warfighter**
- **Largest** SBIR program in the Federal Government
- DoD is both an **investor** and a **customer**
- Sole-sourcing allowed for follow-on awards
- Issues contracts not grants
- Retain data rights for 5 years
- Does not allow majority-owned by multiple Venture Capital Operating Companies (VCOCs), equity, or hedge funds to participate

## DoD By the Numbers

600+

Topics per year

33%

Of awardees have fewer than 10 employees

1,500

Phase I awards per year

950

Phase II awards per year

25%

First time awardees

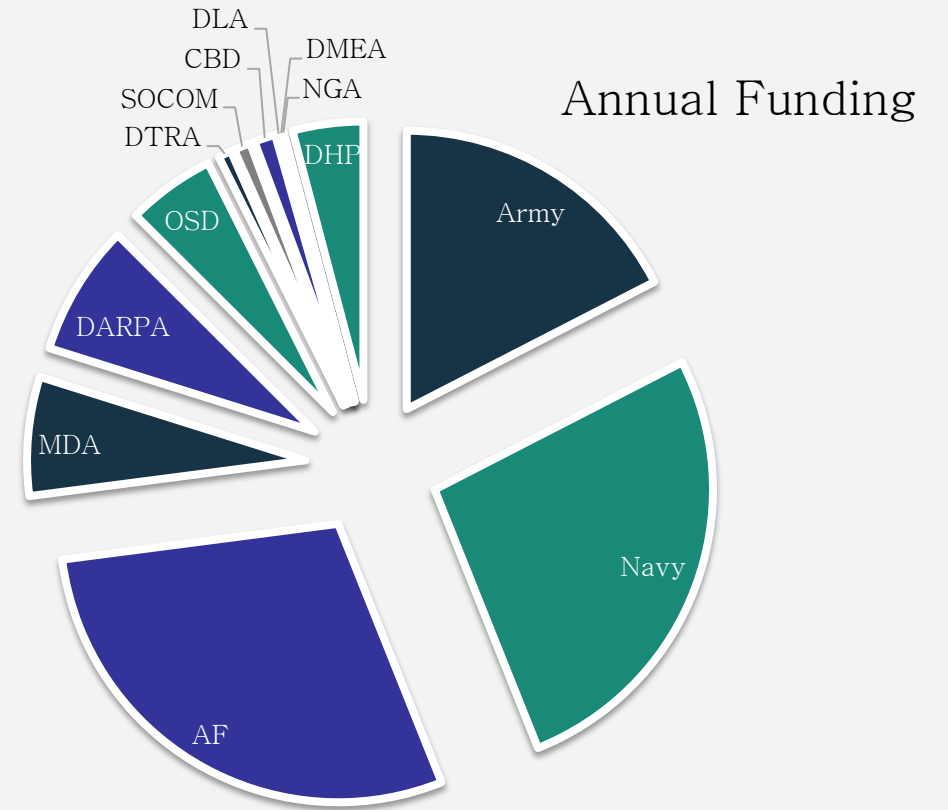
\$31B

In commercialized products & services

# DoD SBIR/STTR Budget

DoD Budget FY15 SBIR: \$940M STTR: \$130M

- SBIR is 3.0% of RDT&E in FY16 (Oct 1)
- STTR is .45% of RDT&E in FY16 (Oct 1)
- DoD is >50% of Federal SBIR Budget



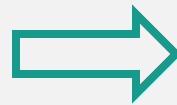
(\$M)	Army	Navy	AF	MDA	DARPA	OSD	DTRA	SOCOM	CBD	DLA	DMEA	NGA	DHP
SBIR	\$150	\$254	\$284	\$79	\$75	\$1.5	\$8.4	\$12.6	\$13	\$5	\$1.7	\$0	\$50
STTR	\$21	\$35	\$39	\$11	\$10	\$0.2	\$1.2	\$1.75	\$1.8	\$0.7			\$0.7

Figures are in millions

# Getting Started

Each year, the services and defense agencies within the DoD issue **three** SBIR solicitations and **three** STTR solicitations.

1. Solicitation Schedule
2. Find a Topic
3. Register Your Firm
4. Start a Proposal



**Small Business Innovation Research  
Small Business Technology Transfer**

Solicitations SITIS Archives FAQs Help About

### Welcome to the DoD SBIR/STTR Small Business Portal

We've revamped the DoD SBIR/STTR Web site to create a more navigable user experience with additional resources, better tools, and a fresh new look.

**How to get started**

1. Register your new account by clicking 'Sign Up'
2. To link your new account with an existing firm select 'Join a Firm' from 'My Portal' and enter the required firm password
3. To create a new firm select "Create a Firm" to complete your registration
4. Access small business resources and tools required to submit a SBIR/STTR Proposal

Need assistance? Call the Help Desk M-F between 9:00 am - 6:00 pm ET at 1-800-348-0787 or email [sbirhelp@bytedubed.com](mailto:sbirhelp@bytedubed.com) anytime. You can also visit the [FAQs](#) sections to learn more.

Login Sign Up

**Subscribe to our Listserv**  
Stay informed on new events and upcoming organization updates. Don't miss a thing!

Email address

#### CURRENT SOLICITATIONS

<b>SBIR</b> 15.3	<ul style="list-style-type: none"><li>• SBIR Pre-release Begins August 27, 2015</li><li>• Solicitation Opens September 28, 2015</li><li>• Solicitation Closes October 28, 2015 at 6:00 a.m. ET</li></ul>
<b>STTR</b> 15.C	<ul style="list-style-type: none"><li>• STTR Pre-release Begins August 27, 2015</li><li>• Solicitation Opens September 28, 2015</li><li>• Solicitation Closes October 28, 2015 at 6:00 a.m. ET</li></ul>

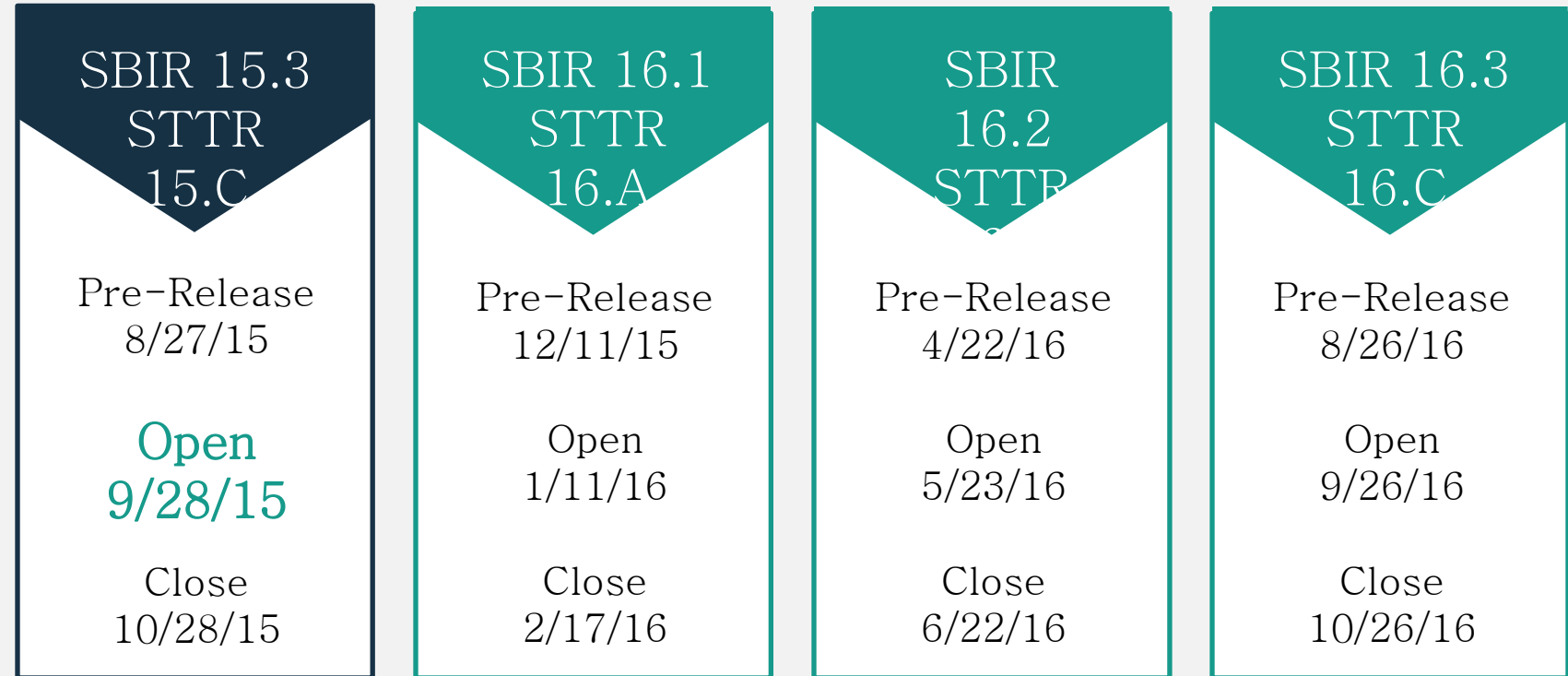
Resources SITIS What's New

<https://sbir.defensebusiness.org>

# Solicitation Cycle

A DoD Agency-wide announcement includes:

- DoD Instructions
- Service/Component Unique Instructions
- Topics





# Finding a Topic

- Click 'Solicitation' on the top menu to view instructions for each component.
- Instructions provide proposal submission and eligibility guidelines
- SBIR/STTR topics for each Component

**SBIR / STTR Web Portal** Home **Solicitations** SITIS Archives FAQs Help About Login

**DoD Solicitation Instructions:** SBIR 15.3 STTR 15.C  
Click on the PDF to view the DoD Solicitation Instructions. For a list of modifications to the solicitation instructions, please click [here](#).

**SBIR 15.3 Instructions**  
[WORD] [PDF] [HTML]

**Component Solicitation Instructions:** SBIR 15.3 STTR 15.C  
Click on the PDF to view the solicitation instructions. For a list of modifications to the solicitation instructions, please click [here](#).

**ARMY** **Air Force Direct to Phase II** **NAVY** **DARPA** **DARPA Direct to Phase II** **MDA**

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**OSD**  
[WORD] [PDF] [HTML]

**Important Dates**

**Pre-Release Date**  
Thursday, August 27, 2015

**Solicitation Open**  
Monday, September 28, 2015

**Solicitation Close**  
Wednesday, October 28, 2015 at 6:00 AM ET.

**Topic Search**

Solicitation: 15.3 Keyword: Enter a keyword Topic Number: Enter a topic number Component: All Search

Topic #	Program	Component	Title	SITIS
A15-101	SBIR	ARMY	Fast Charging Rate and High Energy Power Systems for High Shock Survivability	
A15-102	SBIR	ARMY	CFD Runtime Acceleration on New Chip Architecture	
A15-103	SBIR	ARMY	Rotorcraft Elastic Fuselage Coupling with CFD	
A15-104	SBIR	ARMY	Development of Additive Manufacturing for Aerospace Gear Applications	
A15-105	SBIR	ARMY	Innovative Matrix Systems for Carbon Fiber Reinforced Composite Tactical Rocket Motor Applications	
A15-106	SBIR	ARMY	Hybrid Thermoplastic Matrix Fabrication Methods for Missile Structures	
A15-107	SBIR	ARMY	Novel Materials for Kinetic Energy Penetrators	
			Innovative Technologies for Detection and	

# Select a Topic

- Selecting a topic provides you the information you need to submit a proposal.
- You can ask a question for clarification and you can view the questions and answers from other small business via the SITIS system.



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[Back to Search Results](#)

**Component: AIR FORCE**  
**Topic #:** AF153-002  
**Title:** Handheld Dismount Kit for Persistent, Precision Navigation in GPS-challenged Environments for Military Operations  
**Technology Areas:**  
**ITAR:** The technology within this topic is restricted under the International Traffic in Arms Regulation (ITAR), which controls the export and import of defense-related material and services. Offerors must disclose any proposed use of foreign nationals, their country of origin, and what tasks each would accomplish in the statement of work in accordance with section 5.4.c.(8) of the solicitation.

**OBJECTIVE:**  
Build and demonstrate a handheld navigation system that is less than 5 lbs, capable of constraining position error growth, and reports estimated position accuracy in GPS-challenged environments.

**DESCRIPTION:**  
Accuracy, reliability, persistence, and integrity of Position Navigation and Timing (PNT) information from GPS and other Global Navigation Satellite Systems (GNSS) is under constant threat from asymmetrical jamming and spoofing attacks, rendering operations in anti-access/area-denial (A2AD) or "contested" environments increasingly difficult. A surge of R&D initiatives has given scientists and engineers a variety of tools and techniques that can be used to increase the resiliency of our navigation systems. These include, but are not limited to: GPS anti-Jam/anti-Spoof mechanisms; augmentations with GNSS, exploitation of signals of opportunity (SoOP) such as telecommunication towers or eLoran; vision aided navigation; advancements in MEMS-based navigation sensors; and many more. Navigation system concepts which are designed for GPS-"challenged" environments often have to compromise between performance, robustness, and SWaP-C (Size, Weight, Power and Cost). This topic seeks to leverage the aforementioned innovations as well as other novel ideas to design, build, and field a man-portable navigation system to be used by ground-based forces to navigate to a target in a GPS-contested environment. The following vignette depicts the robustness and performance required. A tactical vehicle navigates to a drop-off point. Military forces dismount and approach a target of interest on foot, traversing several kilometers over many (up to 12) hours on foot. The operation requires development of a system that is robust to weather and in environments with limited

**SITIS Questions and Answers**  
**Ask a Question**

**Q1. How do I get access to the reference documents listed at the bottom of the Solicitation? Thanks**  
**A1. The publications listed in the solicitation can be found here.**  
<http://ion.org/publications/abstract.cfm?articleID=11679>  
<http://ion.org/publications/abstract.cfm?articleID=102628>  
<http://ion.org/publications/abstract.cfm?articleID=8413>

**Additional Information**

# Register Your Firm

Start a proposal in 2 easy steps:

1. Register as a user by clicking log in from the home page or on the top right of the menu bar
2. Log in and you will be taken to My Portal. Now join or create a firm



SBIR / STTR Web Portal

Home Solicitations SITIS Archives FAQs Help About **Login**

## USER REGISTRATION

**First Name**

**Last Name**

**Email**

**Phone Number**  -  -  Ex.

**Password**   
Password must be greater than 8 characters. It must contain at least one upper case letter, one number and one special character (!,@,#,\$,%,&,\*?\_~.-).

**Confirm Password**

**Register**

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To start a proposal, you must first join or create a firm.

WELCOME

Start New SBIR Phase I Proposal

Start New STTR Phase I Proposal

Start New Direct to Phase II Proposal

Start New Phase II Proposal

View Topics

Access SITIS

Join a Firm

Create a Firm

Proposals

Date	Number / Type	Title	Status	Options
No Proposals Yet				

My Information [Edit](#) [Change My Password](#)

Name

Email:

Phone:

# Register Your Firm

## Joining a Firm

The screenshot shows the SBIR / STTR Web Portal navigation bar with links for Home, My Portal, Solicitations, SITIS, Archives, FAQs, Help, About, and Logout. Below the navigation bar is a section titled "SEARCH FOR A FIRM". This section contains three search options: "Search by CAGE Code", "Search by DUNS Number", and "Search by Federal Tax ID". Each option includes a text input field with a placeholder and a blue "Search" button.

Search by CAGE Code, DUNS Number or Federal Tax ID

## Registering a New Firm

The screenshot shows the SBIR / STTR Web Portal navigation bar. Below it is a section titled "NEW FIRM". A yellow caution box contains the text: "Caution: Knowingly and willfully making any false, fictitious, or fraudulent statements or representations is a criminal offense punishable by a fine of up to \$10,000, up to five years in prison, or both." Below the caution box is a note: "\* denotes a required field". The registration form includes the following fields: "Firm Name:\*" (text input), "Firm Website:" (text input), "Address 1:\*" (text input), "Address 2:" (text input), "City:\*" (text input), and "State:\*" (dropdown menu).

Submit your firm's contact information, point of contact and firm historical questions



# Start Your Proposal

- The following are required at time of submission of your proposal:

- Federal Tax ID
- SBA SBC ID

The following are required at time of award:

- DUNS Number
- CAGE Code
- NAICS Code(s)

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**WELCOME**

Start New SBIR Phase I Proposal

Start New STTR Phase I Proposal

Start New Direct to Phase II Proposal

Start New Phase II Proposal

View Topics

Access SITIS

Company Commercialization Report

My Firm

**Proposals**

Show 10 entries

Search:

Date	Number / Type	Title	Status	Options
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## Questions? Contact us!



1-800-348-0787



[sbirhelp@bytecubed.com](mailto:sbirhelp@bytecubed.com)

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