

Small Business Industry Days

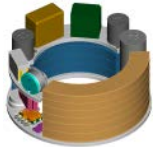


MDA SBIR/STTR Overview

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Director, Advanced Research
Advanced Technology
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MDA SBIR/STTR At A Glance



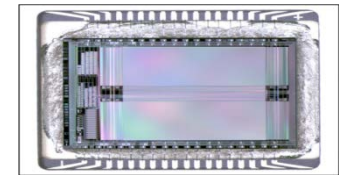
Seeker

Technology

- 4th Largest Program in Department of Defense
- Mission Focused
- Technology Insertion to Ballistic Missile Defense System (BMDS) is Critical
- Seeking a Broad Range of Technologies
- Participate in XX.2 SBIR, A and B STTR Solicitations



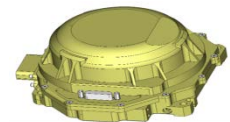
Low Temperature Battery



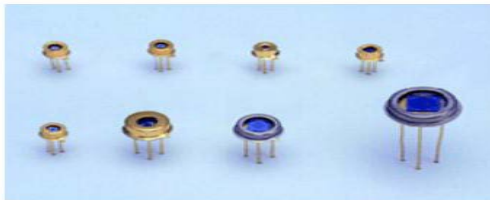
Ruggedized Electronics



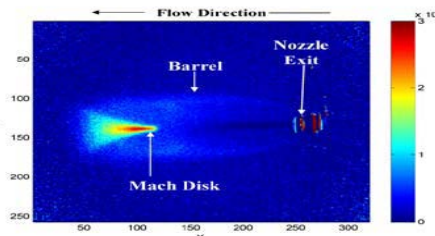
Lightweight Composite



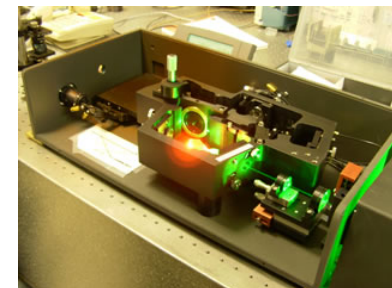
Inertial Measurement Unit



Ultra Sensitive Detector
Focal Plane Arrays



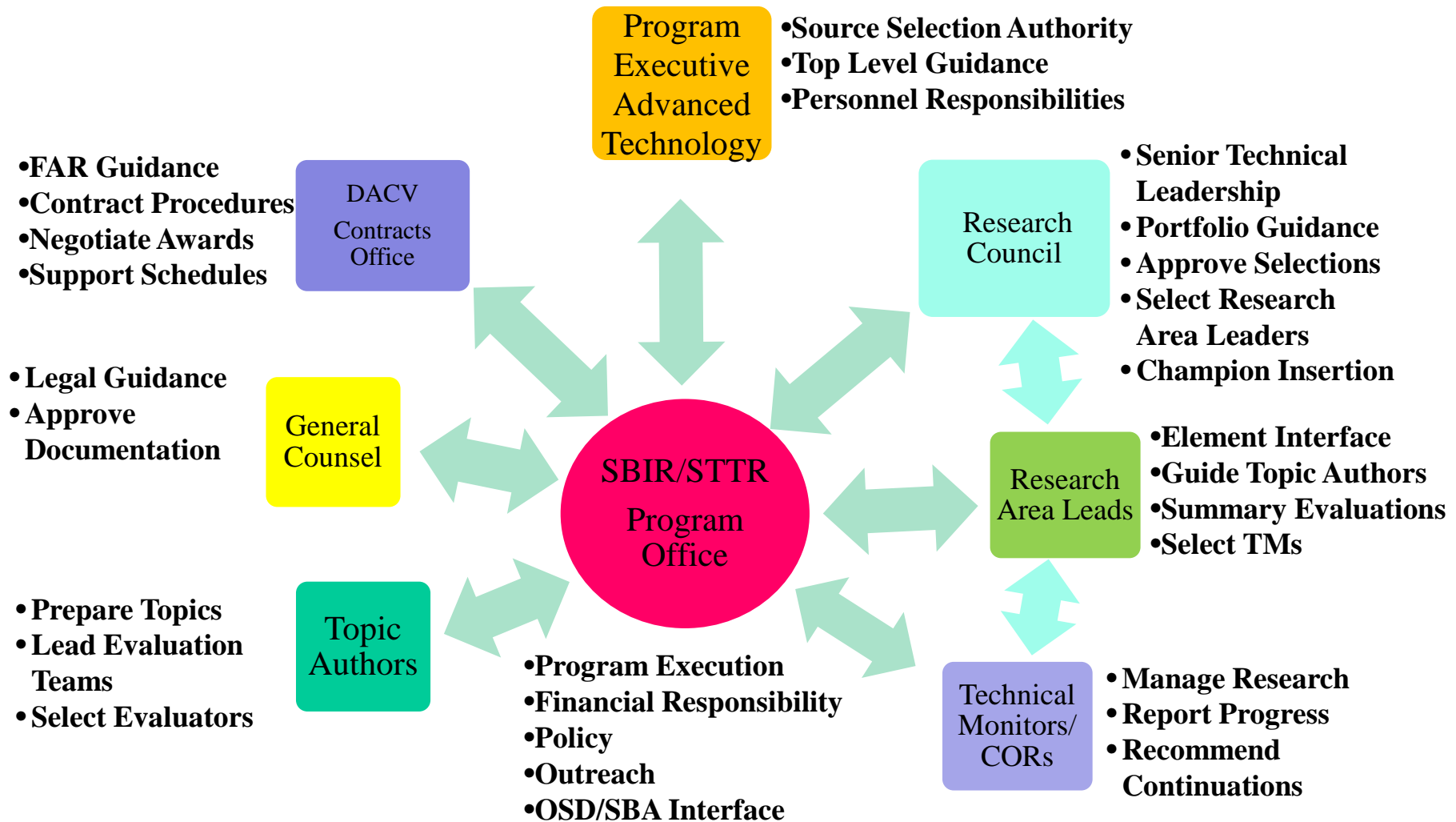
Low-Thrust
Plume Signature
Modeling



High Energy Laser



MDA SBIR/STTR Program Team





MDA Elements

- ◆ **AB – Aegis BMD**
 - Aegis Modernization
 - Aegis Ashore
 - Sea-based Terminal
- ◆ **CR – C4ISR**
 - C2BMC
 - Precision Tracking Space
 - Sensors
- ◆ **DE – Engineering**
 - Chief Engineer
 - Systems Engineer
 - Modeling and Simulations
- ◆ **DP – Programs and Integration**
 - GMD
 - THAAD
 - Targets and Countermeasures
- ◆ **DT – Test**
 - Operational Support
- ◆ **DV – Advanced Technology**
 - SM-3 Block IIB
 - Directed Energy
 - Advanced Remote Sensor Technology
 - Advanced Research
- ◆ **QS – Quality/ Safety & Mission Assurance**



FY12 Topics by Element



AB

- Novel Planning Algorithms for Hybrid Land & Sea Platform Sensor Coordination
- Radar Waveforms to Discern Remote Object Attributes
- 3G & 4G Communication System Interference Remediation Techniques



CR

- Intercept Debris Identification and Characterization Strategies
- Graphic Process Units (GPUs) for Computational Intensive Algorithms
- Asset Pairing for Battle Management
- RF-IR Data Fusion for Track and Data Correlation
- Resource Optimization

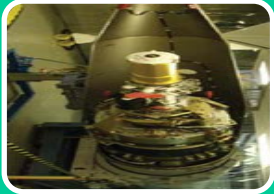


DE

- Ultra-low Power X-Ray Sensor for Protection of MDA Critical Technologies
- Techniques for Performing Warhead Characterization
- Innovative Tests and Techniques for Modeling Detonation Probability and Debris Characterization of HE Submunition Warheads Sympathetic detonations
- Modeling Reflection in EO/IR Signature Predictions
- Fast-Running Physics-Based Models for Intercept Debris Aeroheating and Aerothermal Demise

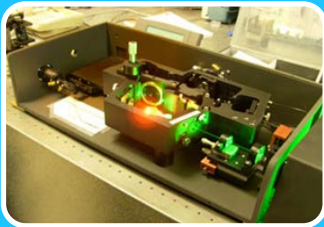


FY12 Topics by Element (cont.)



DP

- Hypergolic Leak Detection
- Compression of Target Vehicle Telemetry
- Antenna Design for Plasma Environment
- RF Material Property Characterization
- Correlation of Phenomenology Viewed in Multiple Segments of the Spectrum



DV

- Methods of recharging batteries in flight using waste heat from rocket motors
- High power miniature communication electronics for kill vehicles including fractal antennas
- Energy management systems for solid phase rocket fuels- ie. fluidized beds of powdered propellants
- Miniature extendable nozzles or actuating nozzles for improved ISP or thrust control of DACS thrusters
- Line-narrowed diode pump array sources for DPAL systems
- Optics and coatings for high energy laser applications
- Tier III candidate laser modeling and simulation tool
- Instruments, techniques, and methods to characterize atmospheric conditions relevant to high energy laser propagation in the upper troposphere and stratosphere



QS

- Composite structures with integrated electrical connections and/or embedded antennas.
- DNA authentication for Electronic/Electrical Components
- Thermal Isolation of Nozzle Exit Cone Insulators
- Improve Detection of Counterfeit Parts by using EMI/RF Emission Signatures System and Thermal Characterization Cycles



Phase I

- **MDA intends for the Phase I effort to determine the merit and technical feasibility of the concept. *Typically ITAR restricted, but Unclassified.***
- **Phase I proposals may be submitted for an amount not to exceed \$100,000 with a \$50,000 option.**
- **Maximum page limit of TWENTY (20) pages – does not include cost proposal or company commercialization report.**
- **If the offeror proposes to use foreign nationals – personnel and level of involvement MUST be identified.**
- **Previous SBIR and STTR topics, including the most recent SBIR 11.2 and STTR 11A topics, are available on the DoD SBIR/STTR website (<http://www.dodsbir.net>).**
- **Prior MDA awards may be found at <https://www.dodsbir.net/Awards>.**



Phase I - Pre-Solicitation: Tips

- **The pre-solicitation period for the 12.2 SBIR solicitation opens 24 April 2012 and ends on 23 May 2012. For the 12B STTR solicitation, the dates are 26 July 2012 and 26 August 2012, respectively.**
- **During the pre-release period, you may talk directly with the Topic Authors to ask technical questions about the topics. Contact information is provided within each solicitation topic.**
- **For reasons of competitive fairness, direct communication between proposers and topic authors is not allowed when DoD begins accepting proposals (on 24 May-SBIR or 27 August-STTR).**
- **Proposers may still submit written questions about solicitation topics through the DoD SBIR/STTR Interactive Topic Information System (SITIS). All questions and answers are posted electronically for general viewing) at <http://www.dodsbir.com/Sitis/Default.asp>.**
- **All proposers are advised to monitor SITIS during the solicitation period.**



Phase II

- **Phase II Proposal Submission is by Invitation only:** A Phase II proposal can be submitted only by a Phase I awardee and only in response to an invitation by MDA.
- **Invitations** are generally issued at or near the Phase I contract completion, with the Phase II proposals generally due one month later.
- **Phase II proposals** may be submitted for an amount normally not to exceed \$1,000,000. MDA may consider making Phase II Invitations at higher levels depending on BMDS relevance and program needs.



Technology Transition Initiatives

The purpose is to encourage transition of SBIR and STTR projects into Ballistic Missile Defense Systems (BMDS).

- **Phase II Transition**

- MDA's Phase II Transition Program provides matching SBIR and STTR funds to expand an existing Phase II contract which attracts non-SBIR/STTR investment funds.
- Allows an existing Phase II SBIR or STTR contract to be extended for up to one year to perform additional research and development.

- **Phase II Enhancement**

- Extends an existing Phase II contract
- Requires Strong BMDS endorsement with insertion plan
- Does not require matching funds



MDA – Technology Applications Program

- **Leverages the expertise of technology and business experts to accelerate the maturation and commercialization of technology.**
- **Provides individualized business assistance through regional workshops funded by MDA.**
- **Services offered to MDA SBIR/STTR awardees.**
- **More information is available at <http://www.mdatechnology.net>.**

The screenshot shows the homepage of the MDA Technology Applications Program. The header features the TA Program logo and the text "Missile Defense Agency Technology Applications Program" with the tagline "Helping researchers commercialize their MDA-funded technologies". Navigation links include Home, Publications, Business Assistance, and Sign Up for Free Services. A search bar is present with a "Go" button. The main content is organized into several sections: "PUBLICATIONS" with a featured article on "Management Communications and Control, Inc." and an "Autocoding Toolset"; "BUSINESS ASSISTANCE" with a link to "Free Commercialization Services for MDA-Funded Companies" and a list of services including workshops and reviews; "ADDITIONAL RESOURCES" with links to various guides and programs; "QUARTERLY NEWSLETTER" with a featured issue titled "TechUpdate" and "Spheres of Influence"; and "SPOTLIGHT" featuring a "Special Report" on "MDA Technology Transfer The Spirit of Innovation 2008". An "ABOUT US" section includes links for multimedia presentations, services, and contact information.



Suggested Resources

MISSILE DEFENSE AGENCY
U.S. DEPARTMENT OF DEFENSE

MAKING BALLISTIC MISSILE DEFENSE A REALITY

SBIR/STTR
Small Business Innovation Research and Small Business Technology Transfer Programs

NEWS OUTREACH MDA RESOURCES RELATED LINKS SBIR STTR

MDA SBIR Industry Day 2008 - Presentations: MDA SBIR/STTR Industry Day recently took place on August 6-7 at the Gaylord National Hotel in National Harbor, MD. The Industry Day focused on enhancing the SBIR and STTR Process for MDA and the Small Business Community. [Presentations from the conference](#) are currently available for download.

Missile Defense Agency SBIR and STTR Programs

The Missile Defense Agency (MDA) Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs issue solicitations once per year. MDA participates within the Department of Defense (DoD) 3 and .B solicitation, which is issued simultaneously in the August timeframe. MDA makes SBIR/STTR Phase I awards up to \$100k and the nominal Phase II award amount is \$1.0M. Previous SBIR and STTR topics, including the most recent SBIR 08.3 and STTR 08.B topics, are available on the [DoD SBIR/STTR website](#).

The goal of the MDA SBIR/STTR Program is to prioritize projects at the Ballistic Missile Defense System (BMDS) level, address BMDS gaps or foster new BMDS capabilities and to increase award amounts on projects based upon increased relevance to the BMDS.

The MDA SBIR program also issues one Phase II Transition (P2T) solicitation per year. The purpose of the P2T program is to encourage the transition of SBIR projects into the BMDS. Only firms with active DoD SBIR Phase II contracts are eligible to participate in the P2T program. Learn more about the P2T program in the [SBIR Phase II Transition section](#) of the website.

DoD Listserv

Since October 2002, all DoD SBIR and STTR solicitations in accordance with the Government Paperwork Elimination Act (GPEA) solicitations and events, then subscribe to their listserv at [www.dodsbir.net](#)

5th Annual MDA SBIR/STTR Industry Day

The 2009 Missile Defense Agency Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Industry Day will be held in Long Beach, CA on August 11-12, 2009. Industry Day will focus on enhancing the SBIR and STTR process for MDA and the Small Business Community.

Small Businesses will have the opportunity to sign up for one-on-one sessions with key MDA technical representatives and prime DoD contractors. This will be a great opportunity during the DoD pre-solicitation period (July 27, 2009). For reasons of competitive fairness, direct communication between potential bidders and topic authors will not be allowed after August 24th - the last day of the SBIR and STTR pre-solicitation period. Additional details on Industry Day and registration information will be available in the coming months.

MISSILE DEFENSE AGENCY
U.S. DEPARTMENT OF DEFENSE

HOME ABOUT US BMD BASICS NEWS / RESOURCES CAREERS DOING BUSINESS

Dec. 5, 2008 - A ground-based interceptor is shown shortly after liftoff from Vandenberg Air Force Base, Calif.

Quick Links

- 2009 MDA Math Challenge Week
- Proposed European Assets
- 2009 BMDS Booklet (pdf)
- Budget Information
- Technology Transfer
- Environmental Information
- MDA Safety and Quality Information
- RSS Feeds

Latest News

16 APR 09 [SECOND SUCCESSFUL ROCKET MOTOR TEST OF NEW TARGET](#) (pdf)
The two-stage launch vehicle, or LV-2, is MDA's newest target system and will be used as an intermediate-range target in a flight test later this year.

13 APR 09 [KINETIC ENERGY INTERCEPTOR PREPARES FOR FLIGHT TESTING WITH SIMULATED LAUNCH COUNTDOWN](#) (pdf)
A simulated launch countdown was executed as a risk reduction effort in preparation for the first flight test of the high-acceleration vehicle.

DEPARTMENT OF DEFENSE
Resource Center
Small Business Innovation Research
[www.dodsbir.net](#)

SEARCH

- AWARDS**
DoD SBIR & STTR Awards
- TOPICS**
Current DoD SBIR & STTR Topics
- SITIS**
Interactive Topic Info System

INTEREST

- ABOUT SBIR/STTR
- CURRENT SOLICITATION
- SELECTION LISTINGS
- CONFERENCES
- DESK REFERENCE
- MAJOR ACQUISITION LIAISONS
- SUCCESS STORIES
- FIRMS IN THE NEWS
- SBIR ANNUAL REPORT
- STTR ANNUAL REPORT
- FAST TRACK/PHASE II ENHANCEMENT
- COMMERCIALIZATION PILOT PROGRAM

HELP

- HELPDESK**
Answers Questions About DoD SBIR & STTR
- WEBSITE**
Main Website for More Information
- LISTSERV**
Subscribe to Receive Program Notices and Updates
- CONTINUOUS LEARNING**
A library of SBIR Program Resources

SUBMISSION
DoD SBIR/STTR Proposal Submission

MISSILE DEFENSE AGENCY HOSTS MATH CHALLENGE WEEK

MDA will provide speakers along with engineers and scientists who have volunteered to educate students in math, science and engineering as it directly relates to the Agency's mission.

MISSILE DEFENSE AGENCY PRESENTS RONALD W. FAGAN AWARD TO GENERAL LARRY D. ELCH

General Welch received the award for his commitment and dedication associated with defending the U.S. against ballistic missile attack.

NAVY COMPLETES AIR AND BALLISTIC MISSILE



Web Sites

www.mda.mil

- **Designed for security . . .To impart the official word**
- **Missile Defense News, Images, Videos, Fact Sheets**
- **BMDS Overview, BMD Basics**

www.mdasbir.com

- **MDA SBIR/STTR Information**
- **Past awards**
- **“How To” tutorials for submitting proposals**

www.mdatechnology.net

(Designed with flexibility . . . To keep the world updated and current)

- **Google indexing of 300+ individual articles**
- **Company News links visitors to press releases**
- **Real-time uploads of technology info and fact sheets**



MDA SBIR/STTR Leadership

Mr. Richard Matlock
Program Executive for
Advanced Technology

Dr. David Burns
Director, Science and Technology

Mr. Judd Carpenter
Chief Engineer, MDA

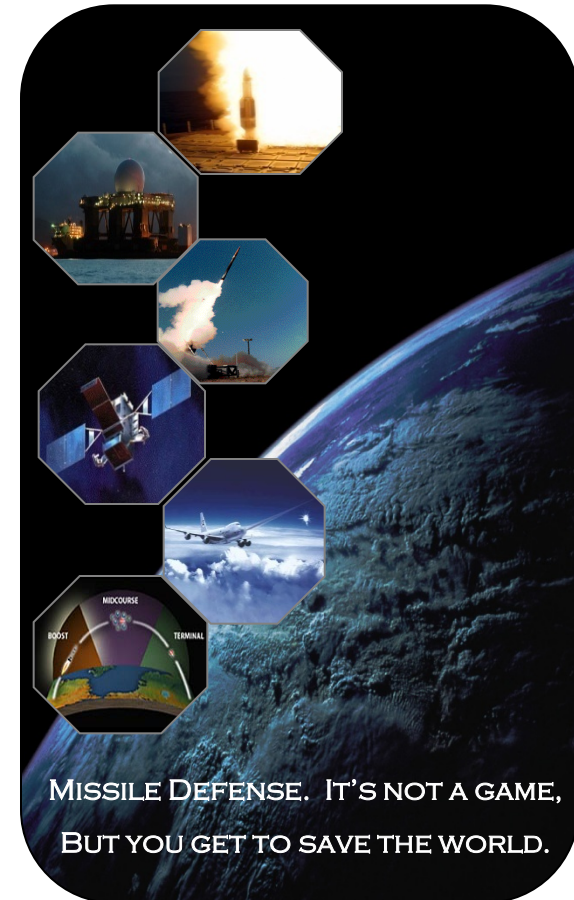
Dr. Douglas Deason
Director, Advanced Research

Mr. Craig Burow
Chief Engineer, Advanced Research

Dr. Pete Mills
Systems Engineer, Advanced Research

Ms. Sloan Armstrong
SBIR/STTR Acquisition Lead

Mr. Duane Keller
Lead SBIR Contracting Officer



MDA SBIR/STTR Info

256-955-2020

SBIRSTTR@mda.mil



Summary

- **Our mission is to pursue game-changing concepts/technologies to outpace threat**
- **Our internal processes have changed to become more insertion-focused**