SBIR/Prime Opportunities: A Rapidly Changing Landscape

How Do We Move Forward?

a presentation to

National Small Business Conference

by

John Williams, Director Navy SBIR Program

williajr@onr.navy.mil

June 2005
Navy’s SBIR/STTR Program

- Uses small business to develop innovative R&D that addresses Navy needs

- Facilitate small high tech businesses to transition technologies into Navy/DoD programs

SBIR .... It’s all about Phase III
Congress wants to increase Phase III awards and transitions into Acquisition Programs

- 92 SBIR Law, PL 102-564
  - Emphasized Commercialization (definition “to Government or commercial markets”)

- FY 99 Defense Authorization Act (Sec.818)
  - Emphasized push for Acq. Offices to make Phase III awards and include SBIR in planning process

- Senate Report 106-50 (Sec 803)
  - Requested DOD develop plan to facilitate rapid transition of SBIR projects to Phase III & incorporation into DoD acquisition programs

- 2000 SBIR Law, PL 106-554
  - Emphasized protection of Phase III data rights and push for more Phase III awards

  - Requires USD (AT&L) to report by March 31, 2005 information on recent Phase III awards and actions
Education & Partnering are Key

- Acquisition Office needs to understand and believe in SBIR and be part of planning and decision process.
- Small businesses need help understanding DoD and how to transition technology in the DoD environment.
- Primes are often part of “Tech Insertion” Critical Path, thus need to understand SBIR and plan for.
- Early partnerships:
  - Increase probability of success,
  - Increase speed of tech insertion/transition and
  - Reduce cost of total RDT&E.

Technology transition/insertion requires a lot of work and planning. It must be coordinated!
Navy SBIR Program: Primes Initiative

- **Vision**
  - Develop process, tools and relationships so that Primes are integral part of the DoD SBIR program

- **Process**
  - Build **partnerships** between small businesses, defense contractors, Navy acquisition offices, and SBIR management to enhance technology insertion by leveraging SBIR resources with larger acquisition programs, with focus on transition of SBIR technology to weapons platform
Advanced Ceramics Research’s SBIR/STTR Experience

- Phase I STTR
  - 3rd March 2002
  - Whale watching

- Phase II STTR
  - AINS
  - $2M SL-UAV

- Phase III STTR
  - AINS
  - $25M-IDIQ
  - DARPA Engine
  - Engine development $1.25M
  - Engine development

- NSW Supplemental $5M
  - NSW - $2.3M
  - Army - $1.8M
  - Army - $750k

- OIF - $2M
  - OIF - $1M

- NAVAIR certification
  - 2MEF - $2.5M
  - 2MEF - $2.5M

- Sensors $1M
  - Sensors
  - $25M-IDIQ

- Engine development
  - Engine development

- Advanced Ceramics Research's SBIR/STTR Experience
• Phase III reporting not complete since contracting officers not always aware contract is Phase III

• Total DD 350 FY04 DOD Phase III funding was $456 M, Navy portion was $346 (76%) which came from 114 separate contracts to 81 individual firms
Navy Transition Assistance Program (TAP)

- Funded by Navy SBIR Program Office
- Competitive 10-month program offered to all SBIR/STTR Phase II awardees
- Provides business consultant and training aimed at understanding DOD transition process and developing strategic plan for that transition

Objectives

- Facilitate DoD use of Navy-funded SBIR technology
- Increase speed of commercialization by:
  - Defining Defense Transition Strategy
  - Developing Business Skills
  - Protecting Intellectual Property
  - Identifying Partnering/Strategic Alliance
  - Licensing, Equity, Financing
TAP Concludes with Navy Opportunity Forum
2-4 May 2005 Reston VA

- Not a conference where any who pays can have a booth
- Only SBIR or STTR Phase II or III companies that have completed the Navy TAP present
- Small Businesses present “Business Case” for transitioning the technology to a weapons application, not a technical brief
- All SB’s develop abstract and narrative brief that is posted on the Virtual Acquisition website by 1 February
- Attendees review abstracts and narrative briefs and only attend if those address their technology needs list
The Virtual Acquisition Showcase™ is a companion site to the 05 Navy Opportunity Forum™ to be held at the Hyatt Regency in Reston, VA on May 2nd, 3rd, and 4th, 2005. Our goal in providing you with early access to these materials is to make it easy for you to obtain maximum value from attending the Forum in May.

BROWSING...

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Autonomic Decision Support System provides monitoring, alerting, and action recommendations through a Bayesian Belief Network (BBN). Adaptable to multiple environments, Mil-Spec and COTS. Predictions and probabilities are based on historical and real time data. Interfaces/operates with USMC vehicles through GCCS-MC.

Syscom: ONR
Topic: N01-137
TRL: 7

Quad Chart
Briefing
Capabilities Brochure
Opportunity

Add to My Briefcase
Search for Phase I and II Navy SBIR awards at www.navysbir.com

Search the Navy Database

Disclaimer: The information on this site has been provided by the companies in fulfillment of their R&D contracts with the Government. The information has not been reviewed for content by the Government. Its appearance on this web site does not constitute an endorsement by the Government of the information provided.

Search the Navy Database

Firm: [Input Field]
Firm State: [Dropdown]
Word Search: [Input Field] Vaines
[Checkboxes] Search PH I Awards, Search PH II Awards, Search PH III Awards
[Checkboxes] Search Only List of Firms

Topic Number: [Input Field]
Firm Zip: [Input Field] - [Input Field]
Award End Date: [Dropdown] All

[Checkboxes] Search Summary Reports, Search Success Stories, Search TAP Acquisition Showcase


Sort Order: Sol DESC, Topic ASC
Firm, Solicitation, Topic, Clear Sort

TO TopIC NUMBER N04-009

Firm: VEXTEC Corporation

Sol: 04.1
[Checkboxes] Award PI, Award PII, Award PIII
[Checkboxes] Summary PI, Summary PII First Year
**TOPIC NUMBER N02-169**

**Firm:** MATECH Advanced Materials

**Title:** Innovative Gas Turbine Engine Propulsion

**Abstract:** This Small Business Innovation Research (SBIR) Phase I project seeks to demonstrate an innovative new UV curable preceramic polymer chemistry for the fabrication of high yield and high purity Si3N4 ...

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**TOPIC NUMBER N01-165**

**Firm:** UES, Inc.

**Title:** Corrosion/Erosion Resistant Coatings for Turbine Compression Systems

**Abstract:** Erosion and corrosion of compressor blades and vanes have been critical degraders to the life of the gas turbine engine fleet for naval applications. Similar problems also exist for civilian ...

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**Jump to page:** 1

**Page 1 of 3 (Total Topics: 25)**
# CONTACT INFORMATION

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**Principal Investigator**
Edward Pope  
*Email*: matech@thegrid.net  
*Phone*: (818)991-8500  
*Fax*: (818)991-4134

**Firm**
MATECH Advanced Materials  
3104 Via Colinas, Suite 102  
Westlake Village, California 91362-3901  
[http://www.matech.us](http://www.matech.us)

**Corporate Official**
Edward Pope  
*Email*: matech@thegrid.net  
*Phone*: (818)991-8500  
*Fax*: (818)991-4134

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# AWARD DETAILS

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<td>SINC Ceramic Fibers for the JSF/VAATE Engine</td>
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<td>Abstract</td>
<td>In this proposed NAVAIR/JSF funded Phase II SBIR Program, MATECH will develop SINC structural ceramic fibers for ceramic matrix composites (CMCs) for ultimate use as components in the JSF/VAATE engine. These fibers are predominantly silicon nitride with 10 to 15 percent silicon carbide, mixed at the molecular level. Potential applications include high temperature structural components for aircraft engines. The fibers will be produced through a innovative method that integrates in situ fiber synthesis with a diamond hot isostatic press (HIP) process. The unique combination of these technologies will enable the manufacture of complex, high performance ceramic matrix composites with enhanced mechanical properties. The project is expected to lead to the development of advanced ceramic matrix composites for propulsion systems and other high temperature applications.</td>
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[http://www.matech.us](http://www.matech.us)
UES, INC.

Address 4401 Dayton-Xenia Road
Dayton, OH 45432-1894

URL www.ues.com

POC Dee Dee Donley
(937) 426-6900
ddonley@ues.com

Firm Size 175
Year Founded 1973
Phase I Awards 101
Phase II Awards 27
DUNS 074689217

Last Updated 1/13/2004 8:21:19 AM
Proposals from the offerors listed next to the topic numbers have been selected for further consideration under DoD STTR Program Solicitation 04.

The list is not final and will be updated periodically - Last Update: 10 July, 2004

Please note that prior to receiving an award, a firm must register at the Central Contractor Registration, if they have not already done so.

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<td>Directed Vspor Technologies International, Inc.</td>
<td>Charlottesville, Virginia 22903</td>
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<td>Hawthorne, California 90250</td>
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<td>Advanced Ceramics Research, Inc.</td>
<td>Tucson, Arizona 85706</td>
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High-Temperature Coatings for Turbine Blades and Vanes
Navy STTR FY2004

Sol No.: Navy STTR FY2004
Topic No.: N04-T001
Topic Title: High-Temperature Coatings for Turbine Blades and Vanes
Proposal No.: N045-001-0240
Firm: Directed Vapor Technologies International, Inc.
2 Boar's Head Lane
Charlottesville, Virginia 22903
Contact: Derek Hass
Phone: (434) 977-1405
Web Site: www.directedvapor.com

Abstract:
Advanced thermal barrier coating systems are desired for naval gas turbine engines. These coatings will increase the durability of hot-section engine components to significantly improve the time "on-wing", safety and readiness of these engines. In this work, we will use novel coating synthesis techniques that enable the deposition of advanced bond coat and top coat compositions and microstructures to achieve a comprehensive thermal barrier coating system that provides unprecedented thermal protection and substantially extended thermal cycle lifetimes. Low cost, high throughput processing for the entire TBC system is also envisioned. The proposed Phase I effort will identify TBC systems that are anticipated to meet the performance goals at both current and future engine operating temperatures and demonstrate the feasibility of applying entire TBC systems using our advanced processing techniques. The successful completion of the Phase I work will lead to a follow-on Phase II program focused on down-selecting candidate material(s) and applying the new coating onto bars for burner-rig testing and real aircraft components. Success in this objective will offer the military a pathway toward production implementation of these advanced coatings and the new deposition processing capabilities required for applying coatings of this type onto engine components.

Benefits: This research is anticipated to result in a thermal barrier coating system that provides unprecedented
The Most Comprehensive and Easy to Use
SBIR Information Site

Resources
- SBIR Agency Links
- Solicitation Dates
- SBIR Events Calendar
- State Newsletters
- About SBIR Funding
- Federal Laboratories
- EPSCoR Program
- Other Grant Info
- SBA Policy Directive

Contact Us

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  Includes All Agencies Open SBIR/STTR Topics
- Closed SBIR/STTR Solicitation Topics
  Topics often recycled for future solicitations
- Past SBIR/STTR Awards
  SBIR/STTR Awards Databases
- Federal Laboratory R&D Resources
  Keyword search for federal tech resources

Help & Assistance Services
- Find a Partner
  For an SBIR/STTR or related project
- State & Local Assistance Services
  They're here to help you

News Items
- View Latest SBIR News
  News Updated 3/09/05
- Air Force Restores SBIR Funding
  Ends One Month Funding Freeze
- DOT Opens FY-05 SBIR
  Opens 2/28/05 Closes 5/16/05
- EPA Issues SBIR Presolicitation
  Opens 3/24/05 Closes 5/25/05
- NSF Releases FY-06 SBIR/STTR
  Opens 5/08/05 Closes 6/08/05
- DoD Releases FY 2005 STTR
  Opens 3/15/05 Closes 4/15/05
- SBA Extends Comment Period
  VC and Size Standard Issues
  Meetings/hearings also being planned

National Conferences
- Omaha, NE * March 7 - 10, 2005
  National SBIR Spring 2005 Conference
  Registration On Site
- San Diego, CA * July 11 - 14, 2005

SBIR GATEWAY BEST SOURCE FOR SEARCHING TOPICS
www.zyn.com/sbir

Use Ricks Site
Hurdles for Primes re SBIR Program

- Money
- How to fund Primes’ upfront due diligence
- Getting buy-in up and down the Prime (business case)
- Getting buy-in up and down the Navy
- Ensuring Prime trade space management needs (schedules, requirements) are understood by SBIR firm
- Ensuring that SBIRs perceive risk: what is reasonable? how long will that take? (requires a communication plan between Prime and SBIR)
- Ensuring SBIR access to the right members of the Prime/Navy Project Office team
Navy SBIR Office Future Efforts

- Continually improve and refine TAP
- Increase activity with Primes & non-traditional Primes
- Document metrics across Primes
  - Topics, Phase I proposals & awards, Phase II awards, Phase I/II subcontracts, Phase III awards
- Document and market success stories
- Establish contact lists across primes
- Develop list of supplemental funding sources
- Work with NAS and NDIA re disincentives
Next Steps for You

For Primes
- Review www.navysbir.com site Search Database to identify Phase I and II companies to team with
- Attend Navy Opportunity Forum 5-7 June 2006 Washington Hilton

For Small Business
- Look for SBIR topics
  - Go to www.zyn.com/sbir (every month)
- Work with your Prime connection to jointly submit SBIR proposals
BACKUP SLIDES
Collaborate to Leverage Government’s R&D Investments to Support Raytheon’s Technology Development Rqmts!
RMS’s SBIR/STTR Model

Share Capability & Technology Roadmaps, Raytheon TDs w/ appropriate PEO TDs

Key benefits:
* meaningful dialog at TD level
* better insight into customer reqmts
* support for program evolution

RMS PMs work closely w/ Customer PMs on program evolution

Required Technologies

Missile system/concept

New Program

Program Roadmap

Gaps

RMS SBIR participation
* Project recommendations
* Ph 1 selection
* Ph 2 down select
* Ph 3 awards, RMS->SB

Evolving from reactive to proactive

JPW 3/9/05
RMS 2004 SBIR/ STTR Highlights

- Leveraging $22M in new SBIR funded technology R&D
- Supporting over 60 new small business SBIR awards
  - Seekers, algorithms, airframes, propulsion & lasers
  - Directly supporting small businesses as an IPT member, many under contract to them
- Sponsored SBIR workshops/ forums w/ small businesses
  - Rad hardening workshop held 2Q ’04
  - Tucson Optics Cluster workshop held 3Q ’04
  - Navy SBIR PM speaker at RMS Supplier Partnering Forum 3Q ’04
- Three very successful Phase III programs continue
  - EKV adapter, Vanguard Composites, ~$1M
  - Gun Hardened CAS, multiple programs, Versatron, ~$20M
- Collaborating w/ Raytheon Mentor Protégés to develop coordinated R&D plans & pursue SBIR/ STTRs
Benefits Available to RMS thru SBIR/ STTR

SBIR Provides RMS a Tremendous Opportunity to Leverage Significant Gov’t Technology Investments

Small Business Collaboration to Achieve Customer Success