



Navy SBIR/STTR Program
2004 R&D Partnership Conference
Navy Transition Assistance Program
(TAP)

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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



How to Reach Goal

“Transition SBIR’s to the Fleet”

- ∇ Three Pronged Approach
 - ∇ Ensure that Navy Acquisition Program Offices play major role in SBIR/STTR programs
 - ∇ Help SBIR/STTR firms develop understanding of, and focus on, technology transition/insertion
 - ∇ Increase involvement of Prime contractors in SBIR/STTR programs

It's all about Partnering

- ∇ Acquisition Office needs to be part of planning and decision process, and have ownership
- ∇ Small businesses need help understanding DoD and what is required in transition process
- ∇ Primes are almost always part of Critical Path for tech insertion, thus need to be involved early
- ∇ 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!

Congress Wants to See
More Phase III Transitions
into Weapons Platforms
and with Primes

They Think the DOD
should do much Better

Congress wants DOD to improve Commercialization and Involvement of Primes and Acquisition Offices

- Congress has put out several pieces of Legislation
 - 92 SBIR Law, PL 102-564 Emphasized Commercialization
 - Section 818 of FY 1999 Defense Authorization Act, Emphasized push for Acq. Offices to make Phase III awards and include SBIR in planning process
 - Section 812 of FY 2000 Defense Authorization Act (Challenge Program)
 - “Increase business innovation in Defense Acquisition Programs”
 - 2000 SBIR Law, PL 106-554, Emphasized protection of Phase III data rights and push for more Phase III awards
 - National Defense Authorization Act for FY 2005, Report 108-491, May 2004. Requires USD (AT&L) to report by March 31, 2005 information on recent Phase III awards and actions

Navy Initiated Transition Assistance Program (TAP) in 2000

TAP is aimed at address Congressional and DOD concerns on “Commercializing” or Transitioning SBIR and STTR technologies

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's 10 Month Program



Deliverables

Assist firms to:

- Confirm Navy customer's needs
- Enhance strategies for transitioning to Phase III
- Provide pertinent market research

Develop:

- Technical Briefing for Electronic Catalog
- Phase III Transition Plan
- Business Plan (if appropriate)

Present at Navy Opportunity Forum:

- Opportunities to present to > 700 high-level decision makers from:
 - DoD primes
 - DoD program managers
 - Venture capital firms
 - Fortune 500 firms

Present

Concept of Navy Opportunity Forum

- 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

Goal of Forum

- Create an environment where key members of DOD Acquisition Offices and Prime Contractors can efficiently review technologies from over a hundred actively funded SBIR & STTR projects in an effort to accelerate the transition of those technologies that are beneficial to their programs

Forum and TAP continue to be a Growing Success

Attendance has grown 50% year over year. May 04 Forum had over 730 Attendees, majority of which were high ranking DOD Acquisition and Prime Technology Managers

TAP Program Evolution

	Navy 01-02 CAP	Navy 02-03 CAP	Navy 03-04 TAP	Navy 04-05 TAP
Provide names/contact info	At Kick-off	No	No	No
TPOC Discussion	Unprepared	Yes	Yes	Yes
Phase III Transition Plans	Not uniform	Yes	Yes	Yes
Capabilities Brochure	No	No	No	Yes
Quad Chart	No	No	Yes	Yes
Narrative Briefing	Yes	Yes	Yes	Yes
Market research	Business	Transition Information Packet	Transition Information Packet	Transition Information Packet
Defense Track	Spring/Fall	Fall	Fall	Fall
Defense/Business Track	Fall	Fall	Spring	Fall - Spring
Emphasis	Business Planning	Defense + Strategic Planning	Defense + Strategic Planning	Defense + Marketing/ Strategic Planning
Kick-off	August	July	July	July
Presentations	Only business	Business + Defense	Defense	Defense
Forum Location	Sheraton - Tysons Corner	Hyatt Reston	Hyatt Reston	Hyatt Reston
ACW Participation	Business Only/ Washington D.C.	Business + Defense/ Washington D.C.	Business + Defense/ Washington D.C. & San Diego	Business + Defense/ Washington D.C. & San Diego
IDIQ Participation	No	Yes	Yes	Yes
Customized Track	No	No	Yes	Yes
Length of Defense Track	12 weeks	12 weeks	20 weeks	20 weeks
Command Relationships	No	No	Yes	Yes
Prime Initiatives	No	No	Yes	Yes

We Perform 6, 12 and 18 month Surveys

	# of Firms	% Reporting for 6 month report	% Reporting for 12 month report
Navy '02 TAP	61	93%	80% (18 mth)
Navy '03 TAP	54	94%	76%

	<u># of Projects</u>	<u># of Projects Receiving Funding</u>	
		<u>0-6 months</u>	<u>0 - 12 months*</u>
Navy '02 CAP	61	49%	61%
Navy '03 CAP	54	33%	46%

* Navy '02 CAP is 0 - 18 months

	<u># of Projects</u>	<u>Average Funding/Sales per Reporting Project</u>	
		<u>0-6 months</u>	<u>0 - 12 months*</u>
Navy '02 CAP	61	\$ 2,068,831	\$ 2,581,437
Navy '03 CAP	54	\$ 7,373,519	\$ 6,108,964

* Navy '02 CAP is 0 - 18 months

Qualitative TAP '04 Results

Data 2000-2004 Navy Opportunity Forums

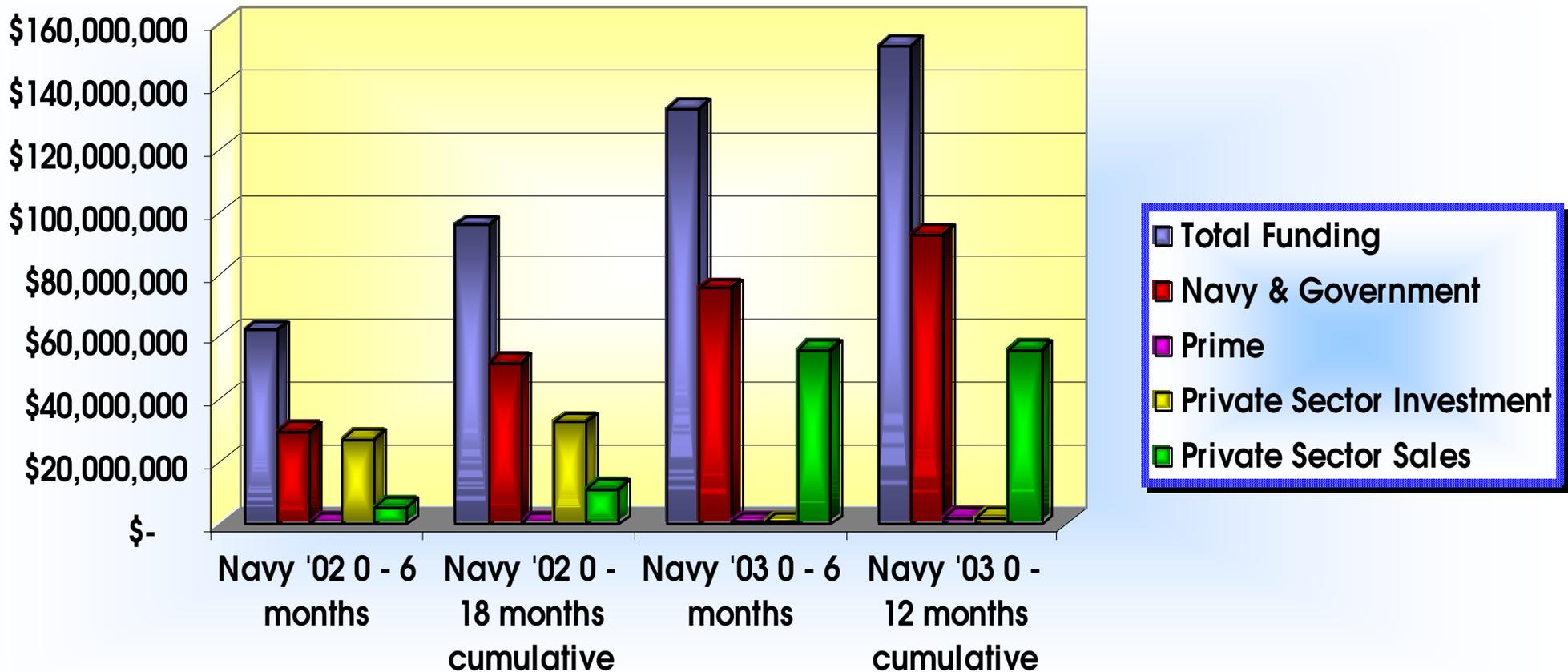
Metric	Year					Trend
	2000	2001	2002	2003	2004	
Navy SBIR Presenting Projects	13	38	61	54	95	Up
Navy SBIR Presenting Companies	13	37	56	51	81	Up
Total Confidentiality Agreements	29	35	35	26	33	Up
Total Site Visits	26	60	115	*	86**	Up

* Data Incomplete

** Data reflects only early results

~ 50% of the companies presenting at the Navy Opportunity Forum '04 have participated in other CAP programs

Quantitative TAP Results - Phase III Dollars



NAVY SBIR *Primes Initiative*

Need Statement

Navy SBIR/STTR-funded technologies are a key resource for tech insertion in all Fleet programs. The TAP identifies transition opportunities ... but Prime contractors aren't fully aware of the SBIR resource, and they encounter many risks in the tech insertion process with SBIR technologies.

Vision

Primes, Acquisition Offices and SBIR firms will work as a team in the development and transition of SBIR funded technologies and at the same time build long term strategic partnerships. Funding sources will be leveraged so that risk is reduced to appropriate level and technology can transition without funding gaps.

Mission Statement

The Navy SBIR *Primes Initiative* builds partnerships with Navy contractors to enhance new technology insertion in key programs by leveraging SBIR/STTR resources, in accord with best business practices of our partners.

NAVY SBIR *Primes Initiative*

2003 Milestones

- Enhanced outreach to Primes for '03 Opportunity Forum
- Set up 13 Side Bar meetings with Primes to educate them on SBIR and gain understanding of how Prime, PEO and SBIR program can work as team
- Common feedback from Primes
 - See value in partnering early with SB's under SBIR projects and being involved in demonstration/integration technology into DOD platforms
 - Want improved access to information on Navy SBIR firms
 - Want to influence SBIR topics

Actions SBIR Program Office Took Based on 03 Prime Initiative

- Established POC's at major primes offices
- Held multiple site visits with Primes and helped them to identify strong sb potential partners
- Improved Search Database
- Identified opportunities to cost share demonstrations and integrations with SBIR, Prime and Acquisition Resources
- Two trial *Primes Initiative* programs launched:
Lockheed MS2 Ship Systems, Raytheon IDS
- One trial *Partnering Workshop* launched with DD(X) focus: *PEO Ships-PMS 500, Northrop Grumman Ship Systems, Raytheon*
- Transitions Newsletter published which profiles Prime/Navy/SBIR accomplishments

Navy SBIR Website and Search Database

www.navysbir.com

[Return to Navy SBIR](#)

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.

Firm: <input type="text"/>	Topic Number: <input type="text"/>
Firm State: <input type="text"/>	Firm Zip: <input type="text"/> - <input type="text"/>
Word Search: <input type="text" value="Vanes"/>	Award End Date: <input type="text" value="All"/>
<input checked="" type="checkbox"/> Search PH I Awards	<input checked="" type="checkbox"/> Search Summary Reports
<input checked="" type="checkbox"/> Search PH II Awards	<input checked="" type="checkbox"/> Search Success Stories
<input checked="" type="checkbox"/> Search PH III Awards	<input checked="" type="checkbox"/> Search TAP Acquisition Showcase
<input type="checkbox"/> Show Only List of Firms	Need Help? Word Search , Sort Order

Sort Order: Sol DESC, Topic ASC
[Firm](#) [Solicitation](#) [Topic](#) [Clear Sort](#)

➔ TOPIC NUMBER N04-009

Sol: 04.1

[Award PI](#), [Award PII](#), [Award PIII](#)

[Summary PI](#)

[Summary PII First Year](#)

Firm: VEXTEC Corporation

[TOPIC NUMBER N02-169](#)

Sol: 02.2

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 ...

- [Award PI](#), [Award PII](#), [Award PIII](#)
- [Summary PI](#)
- [Summary PII First Year](#)
- [Summary PII Complete](#)
- [Success Story](#)
- [TAP Acquisition Showcase](#)
- [Firm Information](#)

[TOPIC NUMBER N01-165](#)

Sol: 01.2

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 ...

- [Award PI](#), [Award PII](#), [Award PIII](#)
- [Summary PI](#)
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- [Success Story](#)
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➔ CONTACT INFORMATION

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Fax: (818)991-4134

Corporate Official

Edward Pope

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Phone: (818)991-8500

Fax: (818)991-4134

Firm

MATECH Advanced Materials

31304 Via Colinas, Suite 102

Westlake Village, California 91362-3901

<http://www.matech.us>

➔ AWARD DETAILS

Contract # N68335-04C-0104

Topic N02-169

Solicitation 02.2

SYSCOM NAVAIR

Award Amount 749964.00

Phase II

Program Navy SBIR

Start / End Date 04/29/2004 - 04/29/2006

FY Reported 2004

Title SiNC Ceramic Fibers for the JSF/VAATE Engine

Abstract 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

[Return to Navy SBIR](#)

Firm Information

→ 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

Upcoming Improvements

- Incorporate a hierarchical list of terms
- Improve Help Menus
- Implement a "Show Similar" link next to each award allowing the user to generate a search list of items that have similar characteristics
- Implement a "Show All Awards" link next to each firm
- Allow users to create custom defined "agents" (predefined search patterns) so they can receive email notification on awards of interest
- Track users as they access the site, offering them matches based on recent searches

NAVY 04 STTR PHASE I PROPOSALS SELECTED FOR FURTHER CONSIDERATION

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.

Office of Naval Research (ONR) Mr. John R. Williams, (703) 696-0342 - williajr@onr.navy.mil			
	TOPIC	SELECTEE	ADDRESS
Details	N04-T001	Directed Vapor Technologies International, Inc.	Charlottesville, Virginia 22903
Details	N04-T001	Inframmat Corporation	Farmington, Connecticut 06032
Details	N04-T001	Thor Technologies, Inc.	Albuquerque, New Mexico 87107
Details	N04-T001	UES, Inc.	Dayton, Ohio 45432
Details	N04-T002	Polatomic, Inc.	Richardson, Texas 75081
Details	N04-T002	Southwest Sciences, Inc.	Santa Fe, New Mexico 87505
Details	N04-T002	Tristan Technologies, Inc.	San Diego, California 92121
Details	N04-T003	ALPHATECH, Inc.	Burlington, Massachusetts 01803
Details	N04-T003	Intelligent Automation, Inc.	Rockville, Maryland 20855
Details	N04-T003	Neptune Sciences, Inc.	Slidell, Louisiana 70461
Details	N04-T003	Scientific Systems Company, Inc	Woburn, Massachusetts 01801
Details	N04-T003	Systems Technology, Inc.	Hawthorne, California 90250
Details	N04-T004	Advanced Ceramics Research, Inc.	Tucson, Arizona 85706

out SBIR/STTR

Submission

at's New

Solicitation

Search Database

Contacts & Links

Success Stories

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Why TAP Program

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TRANSITIONS

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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

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Raytheon IDS Story

- After 03 Forum IDS DD(X) team asked for assistance to hold Emerging Technology Forums
- Provided TAP companies along with pull of all active Phase II companies for full search of potential partners
- IDS developed STAR program and organized effort to scrub companies and invite strong SB's in concentrated areas for site visit
- Held 3 Forums in 03 with over 30 SB's and 300 IDS attendees
- Developed defined process flow for handling SBIR program and established full time SBIR Staff. Involved in topic development and teaming
- Spreading program across all Raytheon
- Held all day workshop at end of 04 Forum with reps from all Raytheon divisions

Raytheon SBIR Company Interactions

Material Sciences Corp.

Amron Technology

Foster Miller

Fortis Technologies

Daniel H. Wagner Inc.

Material Systems Inc.

Adept Systems

Architecture Technology

Nomadics

Promia Incorporated

Alphatech

Modus Operandi

Cyberwolf Technologies / Symantec

Solipsys

Cybernet Systems Corp

Specialty Devices

EBS

Real-Time Innovations

Engineering Matters

Ormet Corporation

Gallium Software Inc.

Toyon Research Corp

CHI Systems Inc.

Austin Info Systems Inc.

Technical Solutions Inc.

Stottler Henke Associates Inc.

Netbotz

Actuality Systems

Technology Systems, Inc

21st Century Systems

Impact Technology

GMA Industries

Harris Acoustic Products

Lockheed Martin Marine Systems and Sensors - Marine Systems SBIR Collaboration

Technology Mining Process (1 of 2)

- Scout Candidate SBIR Firms at Navy Opportunity Forum
- Interview and Select Interested SBIR Firms
- Build More Formal Relationships with SBIR Firms
 - Non-Disclosure Agreements (NDAs)
 - Memorandum of Understanding (MOUs)
- Jointly Visit Customers to Determine
 - Product Discriminators Within Major Programs
 - Areas of Further Investigation Within SBIR Venues

Lockheed Martin Marine Systems and Sensors - Marine Systems

SBIR Collaboration

Technology Mining Process (2 of 2)

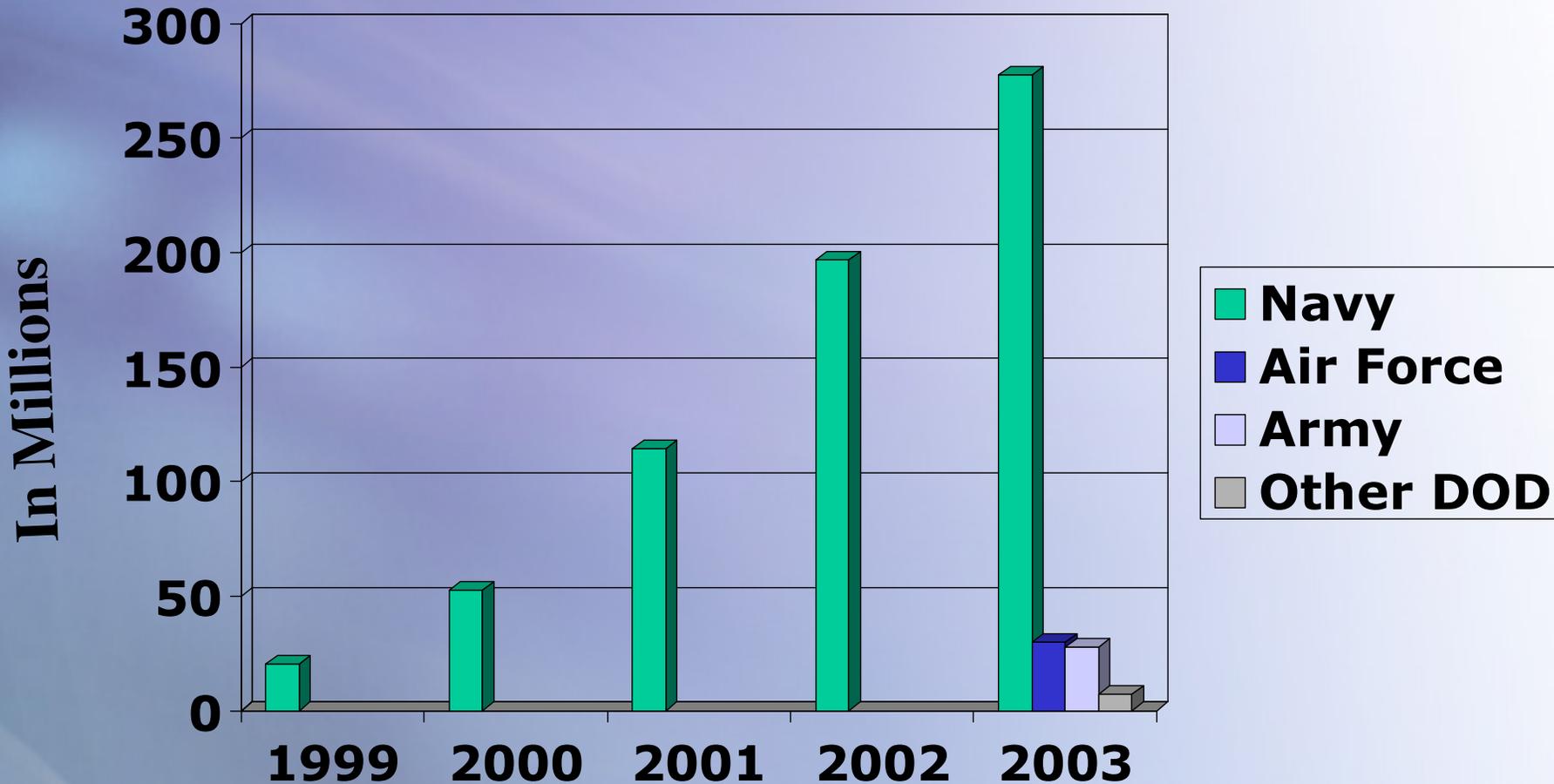
- Collaboration within LM IR&D technology culture -LM
PI's use IR&D to support SBIR technology -SBIR firm
provides or further develops innovation -LM provides
system integration, supporting technology
- Demonstrate combined technology at customer or LM-
funded venue.
- Jointly market demonstrated success in context of major
program requirements.
- Execute formal partnership agreement when opportunity
emerges.

Lockheed Martin Marine Systems and Sensors - Marine Systems
SBIR Collaboration

Conclusions

- SBIR collaboration remains very attractive
- Initial explorations have created synergies
- Technology mining fits IR&D framework with careful management of IR&D / CRAD relationships
- Levels of required support have been surprisingly high
- Our LM MS2-MS Standard Process is evolving

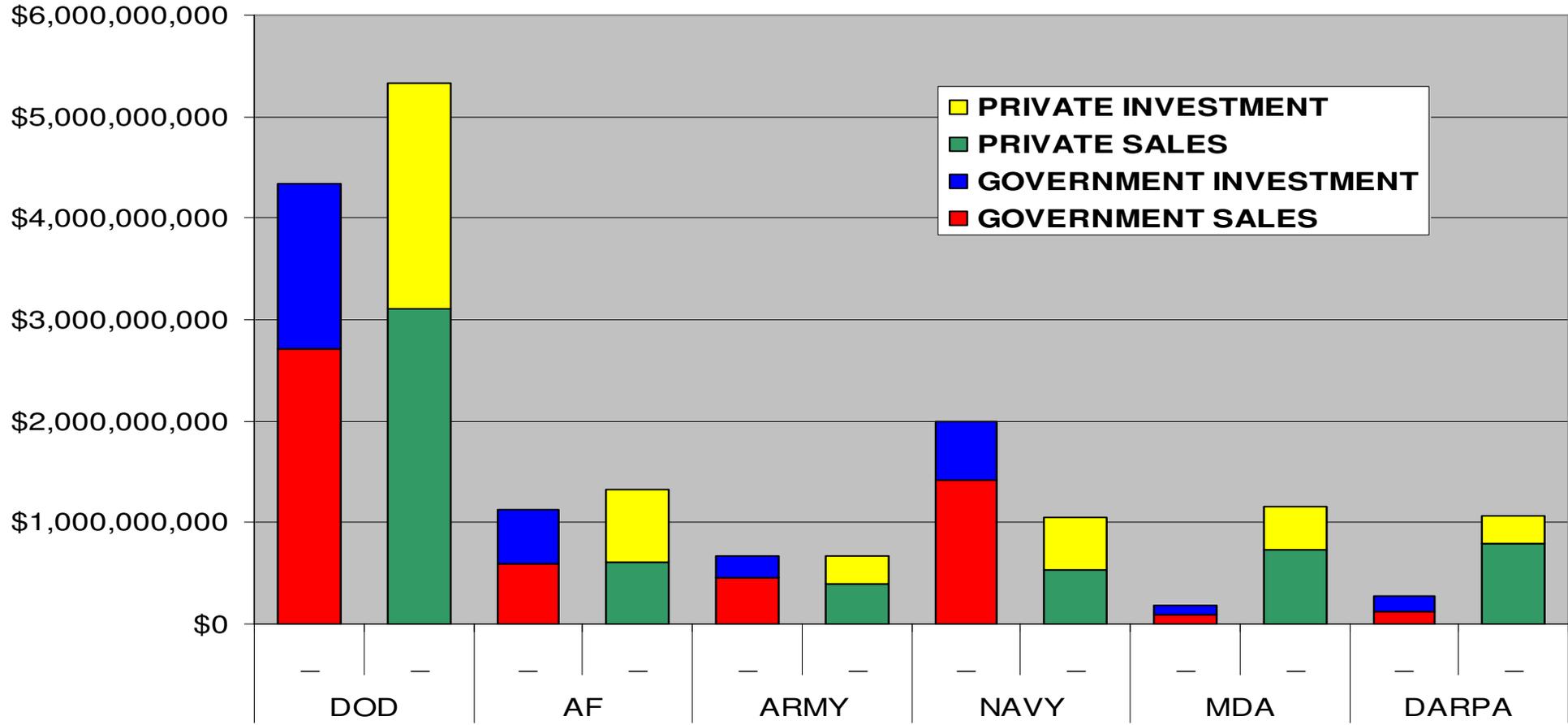
SBIR DOD Phase III Contracts Funding from OSD DD-350 Reports



- Only obtained DD-350 report for other services for FY 03
- Total FY03 DOD Phase III funding was \$342 M, Navy was \$277.5
- In 03 Navy received 22% of SBIR funding but obtained 81% of Phase III dollars

Navy Funding for Government Sales and Investment Increased \$500M from May 03 to April 04 Report

GOVERNMENT VS PRIVATE SECTOR COMMERCIALIZATION FROM DOD SBIR



Source: DoD commercialization database as of April 2004, sales from 1984-2002

Hurdles For Primes in Working with SBIR/STTR Program

- Money
- How to fund Primes upfront Due Diligence
- Getting buy in up and down the Prime
- Getting buy in up and down the Navy
- Ensuring schedules and critical requirements are understood by SB
- Establishing perception to small businesses of what is reasonable and how long that can take (often requires better communication between prime and SB)
- Having access to the right members of the Prime and Navy Project Office team

Next Steps

- Continually improve and refine TAP
- Increase activity with non-traditional primes
- Document Metrics across primes
 - Phase I proposal, Phase I awards, Phase II awards, Phase III awards
- Document and Market Success Stories
- Establish Contact lists across primes....possible for access to small businesses
- Work with National Academy of Sciences and NDIA to address issue of disincentives
- Be able to show success and quantifiable results of TAP and Primes Initiative at next Opportunity Forum