Implementation of DOD SBIR Commercialization Pilot Program and Related SBIR/STTR Reforms: Be All You Can Be?

Prof. Max V. Kidalov, J.D., LL.M., Naval Postgraduate School, Monterey, CA
Kevin Hettinger & Mario Gonzalez, Naval Surface Warfare Center, Corona, CA

8th Annual NPS Acquisition Research Symposium
May 12, 2011

Report Documentation Page

Form Approved
OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE **MAY 2011**	2. REPORT TYPE	3. DATES COVERED **00-00-2011 to 00-00-2011**
4. TITLE AND SUBTITLE **Implementation of DOD SBIR Commercialization Pilot Program And Related SBIR/STTR Reforms: Be All You Can Be?**		5a. CONTRACT NUMBER 5b. GRANT NUMBER 5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S)		5d. PROJECT NUMBER 5e. TASK NUMBER 5f. WORK UNIT NUMBER
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **Naval Postgraduate School,Monterey,CA,93943**		8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)		10. SPONSOR/MONITOR'S ACRONYM(S) 11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release; distribution unlimited

13. SUPPLEMENTARY NOTES
Presented at the 8th Annual Acquisition Research Symposium, May 11-12, Monterey, CA

14. ABSTRACT

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT **unclassified**	b. ABSTRACT **unclassified**	c. THIS PAGE **unclassified**	**Same as Report (SAR)**	**47**	

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std Z39-18

Study Contents

- **Part I. Background on SBIR & STTR Programs**
- **Part II. 2006 Reforms of DOD SBIR & STTR:**
  - **National Academies SBIR Phase III Symposium,**
  - **FY06 NDAA § 252 & Congressional Guidance Letter**
  - **The 4 Reforms: Topics Mission Alignment; Commercialization Pilot Program; Testing & Evaluation Authority; Preference for Innovation in Manufacturing**
- **Part III. The Study & The Survey**
  - **Survey Elements & Limitations**
  - **Survey Questions & Answers**
    - **Topics Alignment Q 1-3; DOD SBIR CPP: Q 4-10**
    - **Information on Testing & Evaluation, Manufacturing**
- **Part IV. Conclusions & Recommendations**
  - **Overall Conclusions**
  - **8 Practical Reforms**

Part I

Background
on SBIR & STTR Programs

SBIR & STTR Programs at a Glance

- Legal Authority
  - The Small Business Innovation Development Act of 1982 and the Small Business Technology Transfer Act of 1992
  - Codified in the Small Business Act, Title 15, Section 638 of the U.S. Code and implemented in the SBA's SBIR and STTR Policy Directives (which have the force of law)
- Eligibility:
  - Small U.S.-owned businesses with up to 500 employees
  - For STTR, in partnership with U.S. research institutions (colleges, universities, FFRDCs, and non-profits)
  - SBIR: minimum 2/3 of work at Phase I and 1/2 of work at Phase II must be performed by small firm
  - STTR: minimum 40 percent of work must be performed by small firm and minimum 30 percent of work must be performed by research institution

SBIR & STTR Programs at a Glance

- General three-phased program structure:
  - Phase I: technical, scientific, or commercial concept feasibility for 6 months/up to $150,000 SBIR or for 12 months/up to $100,000 STTR
  - Phase II: project development up to prototype for 2 years up to $1 million SBIR or $750,000 STTR
  - Phase III: any non-SBIR/STTR funded “work that derives from, extends, or logically concludes” prior SBIR/STTR work, “process of developing marketable products or services and producing or delivering products or services (whether by originating party or by others) to the Government or commercial markets”; has a sole source preference authority at prime contract and subcontract levels
  - At DOD, all SBIR/STTR Phase I and II awards are contracts
  - In DOD acquisition system, Phase III awards can be contracts and subcontracts, or other types of funding

Defense R&D and Hi-Tech Procurements at a Glance

- Total DOD Extramural R&D: ~ $490 billion
- SBIR and STTR Phase I & II Competitive Set-Asides: about $1.4 billion across MILDEPS and participating OSD agencies
- DOD SBIR: $1,219 million or 2.5 percent of extramural R&D at agencies with over $100 million of total extramural R&D
- DOD STTR: $137 million or 0.3 percent of extramural R&D at agencies with over $1 billion of total extramural R&D

DOD SBIR/STTR during Sec. 252 passage: Sample Acquisition ROI on R&D Investment

- Total Real SBIR/STTR Phase III: Unknown
- Latest data published on 01/30/09
- Prime contracts would be reported using DD350 (in FPDS?), subcontracts – in eSRS?
- Army SBIR Phases I&II: $243.4 mln, Phase III prime contracts: $40 mln FY06, ROI 16%
- Navy SBIR Phases I&II: $309.7 mln, Phase III prime contracts: $325.4 mln FY06, ROI 105%
- Air Force SBIR Phases I& II: $313 mln, Phase III prime contracts: $74.7 FY06 ROI 24%
  - Contract data source: DOD IG Report 09-048

Defense R&D and Hi-Tech Procurements at a Glance

- Total DOD Extramural Research: ~ $490 billion, SBIR/STTR Phase I & II: ~ $1.4 billion
- DOD SBIR Program's Components: Departments of the Army, Air Force & Navy, and DOD Agencies (MDA, DARPA, CBD, SOCOM, DTRA, NGA, DMEA, now DDR&E)
- DOD STTR Program's Components: Departments of the Army, Air Force & Navy, and DOD Agencies (MDA, DARPA, now DDR&E)
- DDR&E not subject of survey

Part II

2006 Reforms of DOD SBIR & STTR:

- National Academies SBIR Phase III Symposium,
- FY06 NDAA § 252 & Congressional Guidance Letter
- The 4 Reforms: Topics Mission Alignment; Commercialization Pilot Program; Testing & Evaluation Authority; Preference for Innovation in Manufacturing

DOD SBIR Phase III Challenges

- Challenge 1: SBIR/STTR set-asides are treated as a "tax" on major defense acquisition programs; therefore, SBIR/STTR topics are not aligned with DOD mission needs or acquisition program priorities
- Challenge 2: Insertion/transition of SBIR/STTR technologies into DOD acquisition programs is poor because: (1) small firms have difficulty "pushing" technologies into the procurement process, and (2) DOD program managers/executive offices and major prime contractors are discouraged by lack of planning, resources, motivation, and training
- Challenge 3: SBIR/STTR technologies may be insufficiently tested & evaluated
- Challenge 4: SBIR/STTR firms must develop and prove sufficient manufacturing capacity

National Academies' 2005 Symposium

- National Academies' National Research Council was mandated by Congressional legislation to study SBIR
- Research lead by Dr. Charles Wessner and Dr. Jacques Gansler
- 14 Jun 2005: National Academies hosted "SBIR and the Phase III Challenge of Commercialization" Symposium
- As response to SBIR Phase III challenges, Symposium proceedings recommended incentives in the following areas: topics mission alignment, reliability testing & evaluation, small firm capacity, budget integration, training for DOD acquisition and PM personnel, partnering with acquisition programs, motivating large primes to subcontract to small firms

Congressional Solutions to DOD SBIR/ST Phase III Challenges in FY06 NDAA Section 252

- Reform 1: DOD SBIR/STTR Topics Alignment with DOD Research Plans and Defense Acquisition Program Manager Inputs
- Reform 2. DOD SBIR Commercialization Pilot Program to "accelerate the transition of technologies, products, and services developed under the SBIR into Phase III, including the acquisition process"
- Reform 3: Authority to use SBIR/STTR Phase II and Phase III funds for Testing & Evaluation
- Reform 4: Codification of Executive Order 13329, *Encouraging Innovation in Manufacturing*, which directed "high priority" to manufacturing-related R&D

Reform 1: DOD SBIR/STTR Topics Alignment

- (1) Alignment with DOD Research Plans
  - Joint Warfighting Science & Technology lan
  - DOD Defense Technology Area Plan
  - DOD Basic Research Plan
- (2) Alignment with Defense Acquisition Program Manager & Program Executive Officer Inputs
  - Policies and procedures for input collection
- (3) Quadrennial Strategic Review of Topics
  - Designed to parallel the Quadrennial Defense Review to ensure alignment with mission needs

Reform 2: DOD SBIR Commercialization Pilot Program

- SECDEF and each MILDEP Secretary "authorized" to create CPPs subject to statutory funding conditions
- CPPs are self-funding (1 percent of total DOD SBIR spending, or about $12 million total)
  - Spending control is decentralized
  - Each Military Department administers its own CPP authority
  - During the survey period, each OSD agency has done the same
- CPP Funding Availability (not including otherwise available funds for similar assistance programs):
  - Army: $2.65 mln; Navy: $3.32 mln; Air Force: $3.31 mln
  - OSD agencies: MDA: $1.1 mln; DARPA: $0.7 mln; $1 mln other DOD agencies (no CPPs during survey period)

Reform 2: DOD SBIR Commercialization Pilot Program

- CPP design concept and related funding conditions:
  - **(1) CPP was designed to create a "pull" from the DOD acquisition community for promising SBIR programs and technologies;** this "pull" was meant to alter the current model where small firms struggle to overcome bureaucratic barriers and "¸ ush" into the ac ¸uisition ¸ rocess SBIR technologies perceived as unneeded or immature by PMs;
  - Therefore, to be <u>eligible for CPP assistance</u>, Congress rovided that an SBIR roject "shall":
  - <u>(i) be certified in writing by the Secretary that its successful transition "is expected to meet high priority military re uirements" of relevant de artment</u> and
  - <u>(ii) only after such certification, further be "identified" by the Secretary that it has the "potential for rapid transitioning to Phase III and into the ac uisition rocess"</u>

Reform 2: DOD SBIR Commercialization Pilot Program

- CPP design concept and related funding conditions:
  - **(2) CPP was designed to primarily rely on "incentives",** defined in the Congressional Guidance Letter as:
  - (i) educational and business development assistance to SBIR firms focused on Federal and dual-use markets;
  - (ii) outreach and advocacy with large prime contractors and defense acquisition and program management offices;
  - (iii) contract incentive clauses and bonuses for large primes
  - (iv) mentor-protégé arrangements for SBIR firms
  - (v) dedication of specific acquisition dollars for integration of SBIR technologies into defense acquisition programs
  - (vi) contract clauses and regulatory provisions nfirming SBIR data rights in Phase III prime contracts & subcontracts
  - (vii) performance incentives to acquisition and program mana ement workforce for execution of ra id commercialization through Federal contracts & subcontracts

Reform 2: DOD SBIR Commercialization Pilot Program

- CPP design concept and related funding conditions:
  - **(3) CPP was designed to reform, expedite, and professionalize SBIR Phase III contracting and subcontracting, and related administrative functions:**
  - In addition to incentives, CPP funds may be used for administrative expenses. However, CPP funds can't be used to make Phase III awards
  - **(4) CPP was intended to spur an inter-agency, inter-services rivalry for better, more effective Phase III transition process**
  - "In dispersing responsibility for the CPP" between the 4 secretaries, "Congress intended to create a competition among the various defense agencies and the Armed Services for a more effective SBIR commercialization approach." Source: Congressional Guidance Letter

Reform 2: DOD SBIR Commercialization Pilot Program

- CPP design concept and related funding conditions:
  - **(5) CPP was meant to be accountable for results:**
  - SECDEF is to file an annual evaluative reports detailing:
  - (i) accounting of the funds;
  - (ii) specific incentives and activities undertaken by DOD acquisition PMs/PEOs and major prime contractors;
  - (iii) descriptions of results achieved, including number of companies achieved and technologies transitioned;
  - (iv) dollars awarded towards SBIR technologies (per direction in Congressional Guidance Letter)

Reform 3: Authority to use SBIR/STTR Phases II & III for Testing & Evaluation

- Provided that "the term 'commercial application' shall not be construed to exclude testing and evaluation of products, services, or technologies for use in technical and weapons systems, and, further, awards for testing and evaluation of products, services, or technologies for use in technical or weapons system may be made in either" Phase II or Phase III
- Per Congressional Guidance Letters, DOD and each MILDEP are directed to include Testing & Evaluation work as part of DOD SBIR/STTR commercialization activity by acquisition program managers and program executive officers

Reform 4: Codification of E.O.13329, *Encouraging Innovation in Manufacturing*

- SBA and SBIR/STTR Participating Agencies are directed to “provide for and fully implement the tenets” of E.O. 13329
- EO 13329 directs agencies to provide “high priority” to manufacturing-related R&D
- Per Congressional Guidance Letter, high-tech manufacturing was to be emphasized in the Quadrennial Strategic Review of DOD SBIR/STTR topics and the DOD SBIR CPP

Congressional Guidance Letter to USD AT&L Krieg from Small Business Committees (16 May 2006)

- **INFORMATION REQUESTED W/IN 1 MONTH**
- (1) How did the DoD implement the new requirement in Section 252˛a˝ for research focus of its SBIR and STTR ¸ ro˘rams?
- (2) How did the DoD and each MILDEP plan to involve acquisition program managers and program executive offices in SBIR/STTR to¸ ic selection and mana˘ement to ensure that SBIR/STTR is integrated into the DoD's mission and its acquisition framework, as contemplated in Section 252(a), SBIR CPP, and Section 252(c), inclusion of testing and evaluation works as part of SBIR/STTR commercialization activity?
- (3) How did the DoD and each MILDEP's acquisition program managers and program executive officers plan for post-SBIR/STTR funding, through the Program Objective Memoranda and other vehicles, to utilize SBIR/STTR technology resources in their acquisition process, as stated in Section 252(a), SBIR Commercialization Pilot Program?

Congressional Guidance Letter to USD AT&L Krieg from Small Business Committees (16 May 2006)

- (4) How did the DoD and each MILDEP plan and implement the SBIR CPP, and specifically what processes did these military Services and defense agencies develop and implement to ensure identification of optimal SBIR/STTR Phase I–II projects for accelerated transition through this pilot program?
- (5) What acquisition incentives and activities did the DoD and each MILDEP deploy to accelerate the transition of SBIR/STTR technologies into the acquisition process though the CPP?
- (6) What specific reporting requirements did the DoD and each MILDEP impose on acquisition program managers, program executive officers, and prime contractors as part of the annual evaluative report to Congress, as outlined in Section 252(a)?
- (7) How did the DoD and each MILDEP implement Executive Order No. 13329, Encouraging Innovation In Manufacturing, codified into law as part of Section 252(b)?
- **ALSO, LETTER EXPLAINED TERMS IN SEC. 252**

Part III
The Study & The Survey

– **Survey Elements & Limitations**

– **Survey Questions**

- **Topics Alignment Q 1-3**
- **DOD SBIR CPP: Q 4-10**
- **Information on Testing & Evaluation**

The Survey & Study:

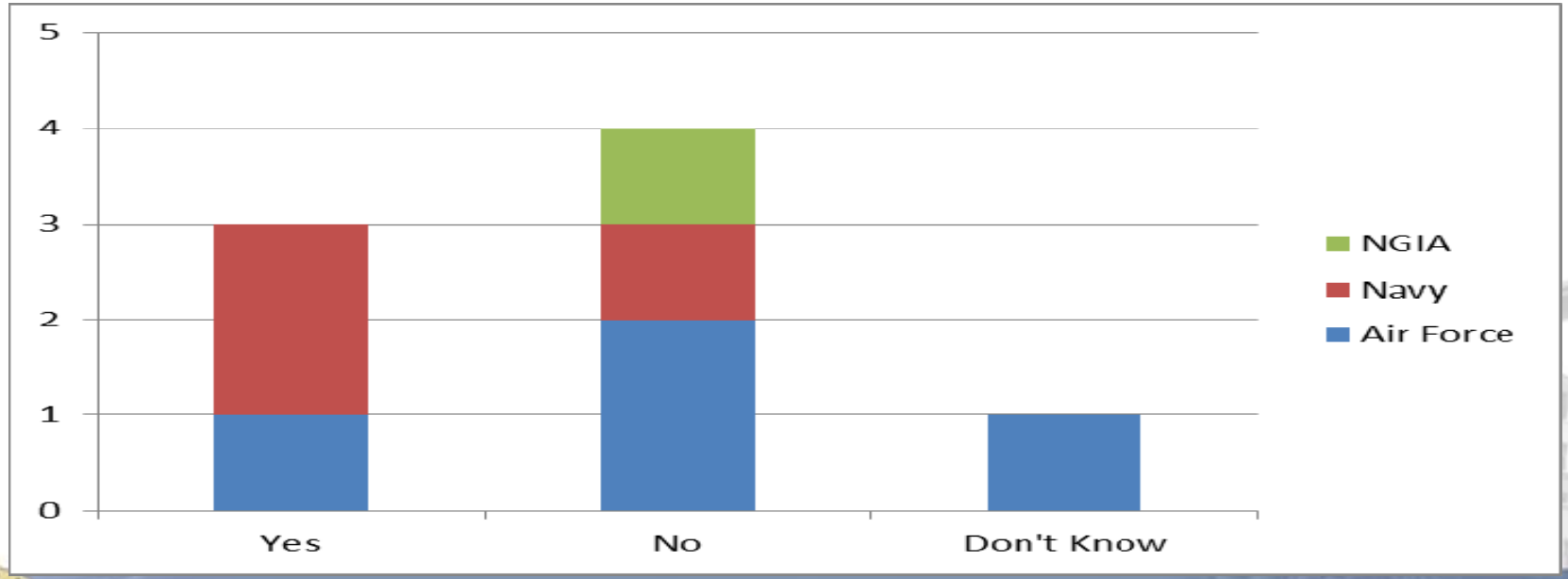
- Last DOD CPP Reports released for FY06 and FY07
- Survey distributed to 102 SBIR/STTR managers (including one DON and one DOA contractors)
- Response: 19 attempts, 8 responses
- 3 organizations
- No responses to Reforms 3 and 4
- On reform 4, DOD website posts MILDEP plans
- For DOA, public information was used to supplement survey response data for meaningful comparison
- DOD IG and GAO reports on SBIR also used

The Survey & Study

- Only Air Force, Navy, and NGA participated
- Additional research is a must. That said, survey and entire study are representative:
  - participating agencies cover close to 60 percent of DOD SBIR and STTR Phase I and II annual spend and
  - to the extent possible, survey response gaps or missing answers were supplemented by publicly available information, published reports, websites, statements, and conference presentations
  - no respondents answered the entire survey; this was partly by design of the survey
- Respondents addresse nl, R f rm 1 ,T , i Alignment) and Reform 2 (CPP); no responses were received on Reform 3 (enhanced Testing & Evaluation authority) or Reform 4 (EO 13329)

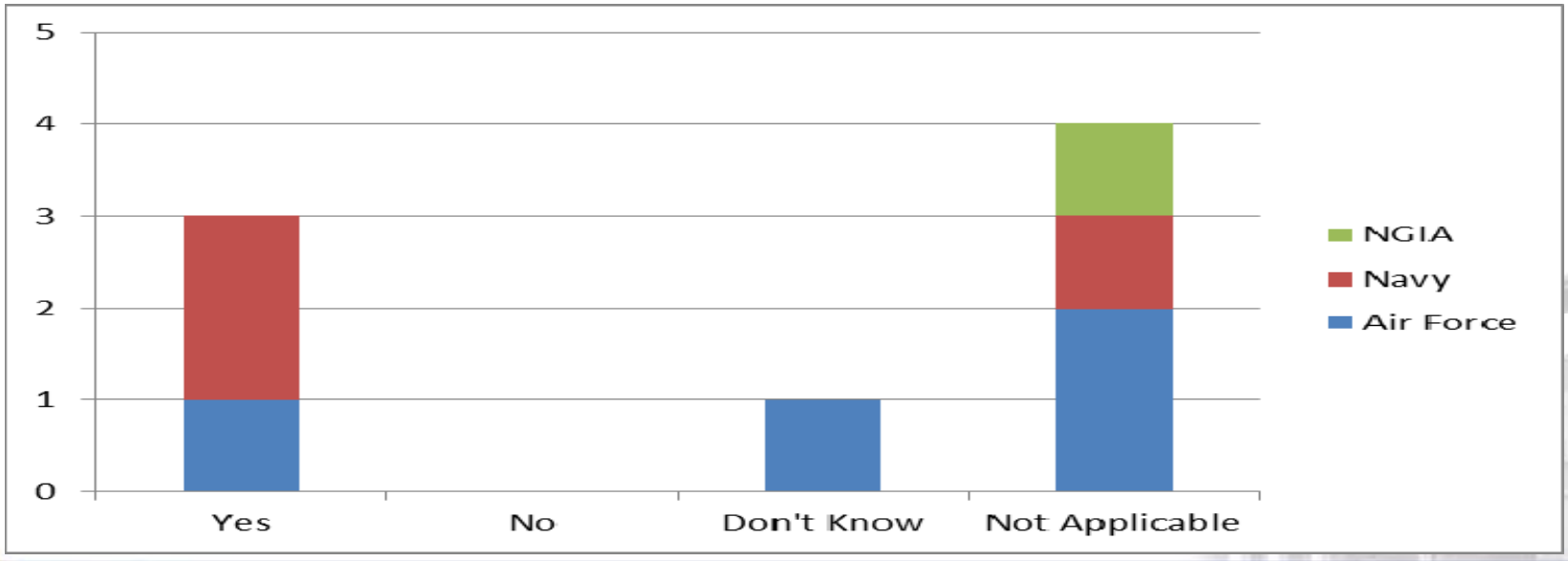
Reform 1, Topics Mission Alignment, Q 1: Public policies/procedures to align topics with JWS&TP, DTAP & DBRP?

- Yes: 37.5 % (DAF, DON); no: 50% (DAF, DON, NGIA), don't know: 12.5 % (DAF); no info found (DOA)
- Analysis: agencies don't know or ignore, because: labs generate topics at DOA and DAF (except space); program offices at DON, but DON SBIR is administered by ONR (per GAO/DOD IG)



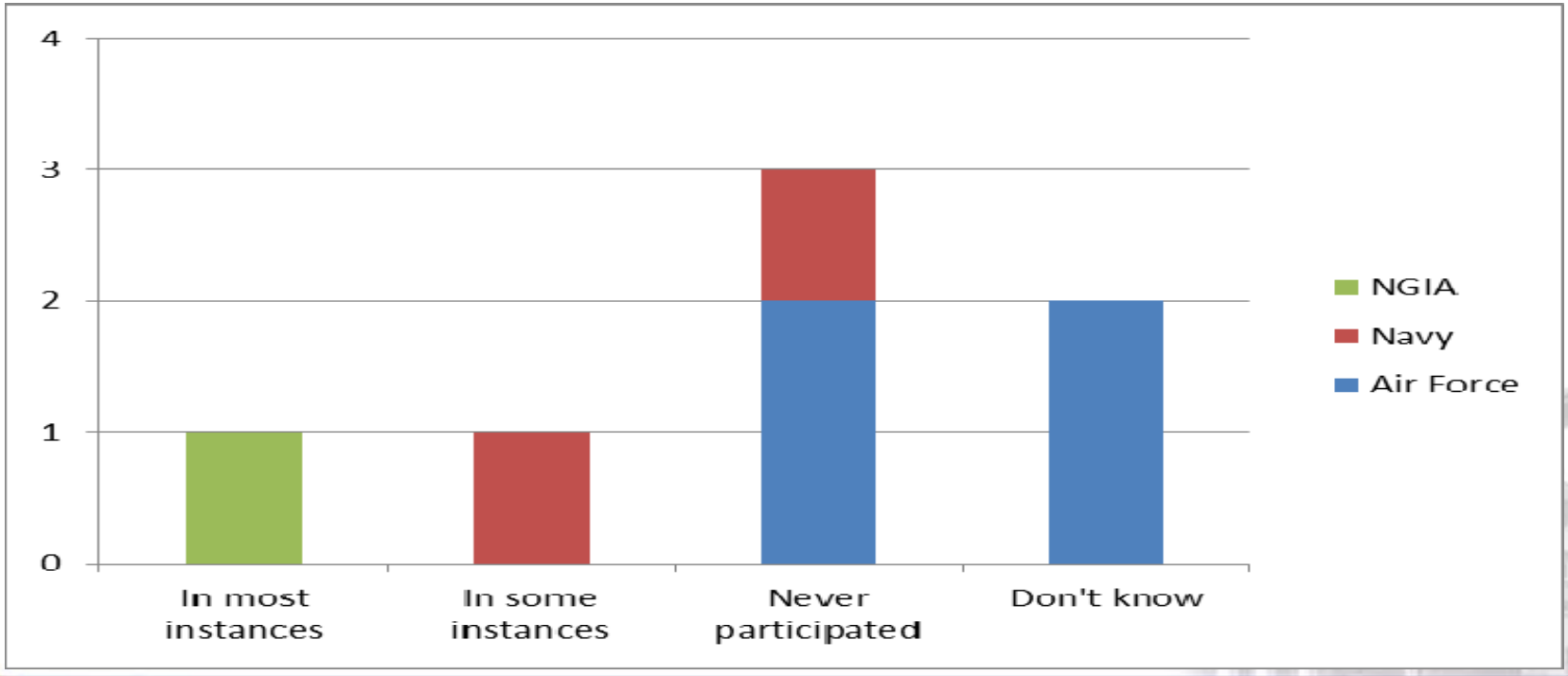
Reform 1, Topics Mission Alignment, Q 2: Public policies/procedures for PM/PEO input on topics?

- Yes: 37.5% (DON, DAF); n/a: 50% (NGIA, DON, DAF); don't know: 12.5 (DAF); DOA: "majority" of topics generated in RL (per DOD IG)
- Analysis: potentially ignoring 2006 USD AT&L Krieg memo requiring 50% acquisition topic sponsorship and Nat'l Academies recommendations



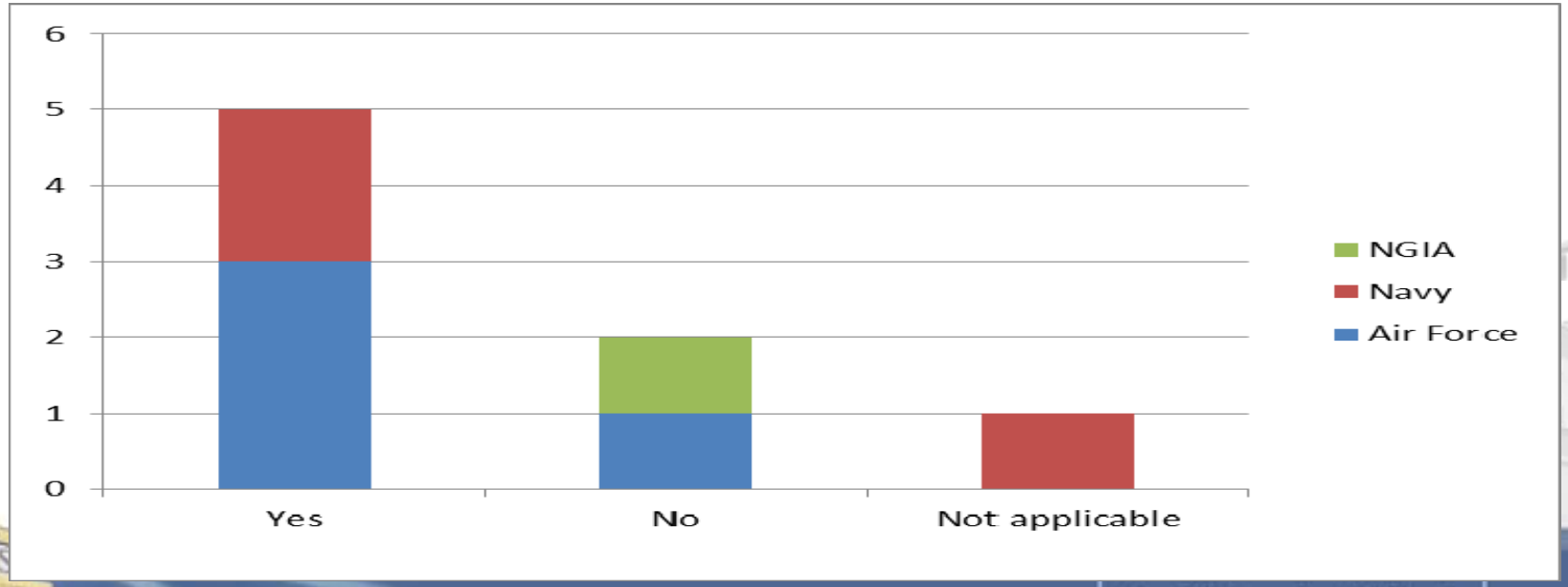
Reform 1, Topics Mission Alignment, Q 3: Participation in Quadrennial Strategic Review of topics alignment?

- 25 % for most instances (NGIA) and some instances (DON); 75% for never (DON, DAF) and don't know (DAF); no info found (DOA or OSD agencies)
- Analysis: positive responses doubtful, as no public info on QSR



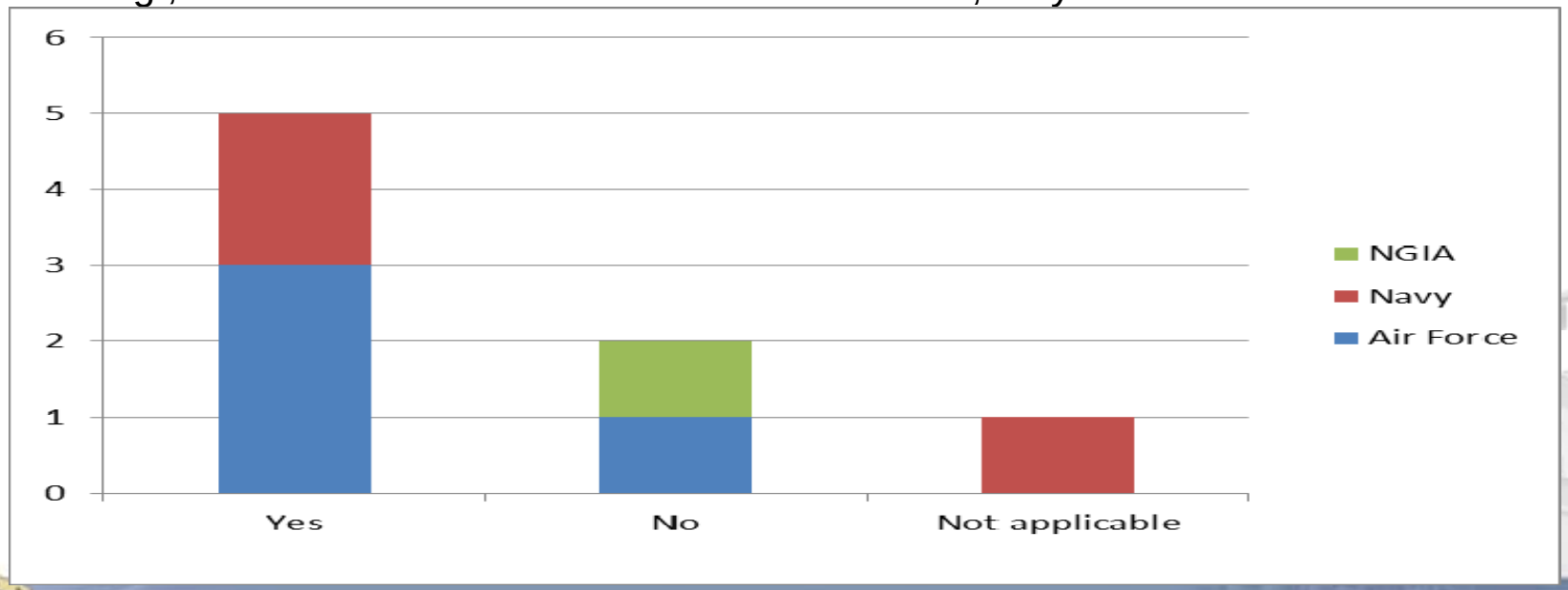
Reform 2, DOD SBIR CPP, Q 4: CPP Created?

- Yes: 62.5% (DON, DAF); no: 25% (NGIA, DAF); n/a (DON); Yes per OSD CPP FY07 report: DOA, MDA, JSTO-CBD
- Analysis: Confusion likely due to complementary programs/acronyms. Key issue: are other programs' features/conditions the same as CPP legislation?
- Confusion example: Navy ONR materials state it has SBIR Phase II.5 (or Phase II Enhancement) Program, which includes Transition Assistance Program (TAP). Navy SBIR Office, *Report on the Navy SBIR Program: Best Practices, Roadblocks, and Recommendations for Technology Transition* (2008) states: "One could argue that the Navy's SBIR program already meets the intent of the CPP legislation and we should continue business as usual."
- Analysis: No Phase III in DOA, DAF, DARPA SBIR policies (DOD IG 09-048)



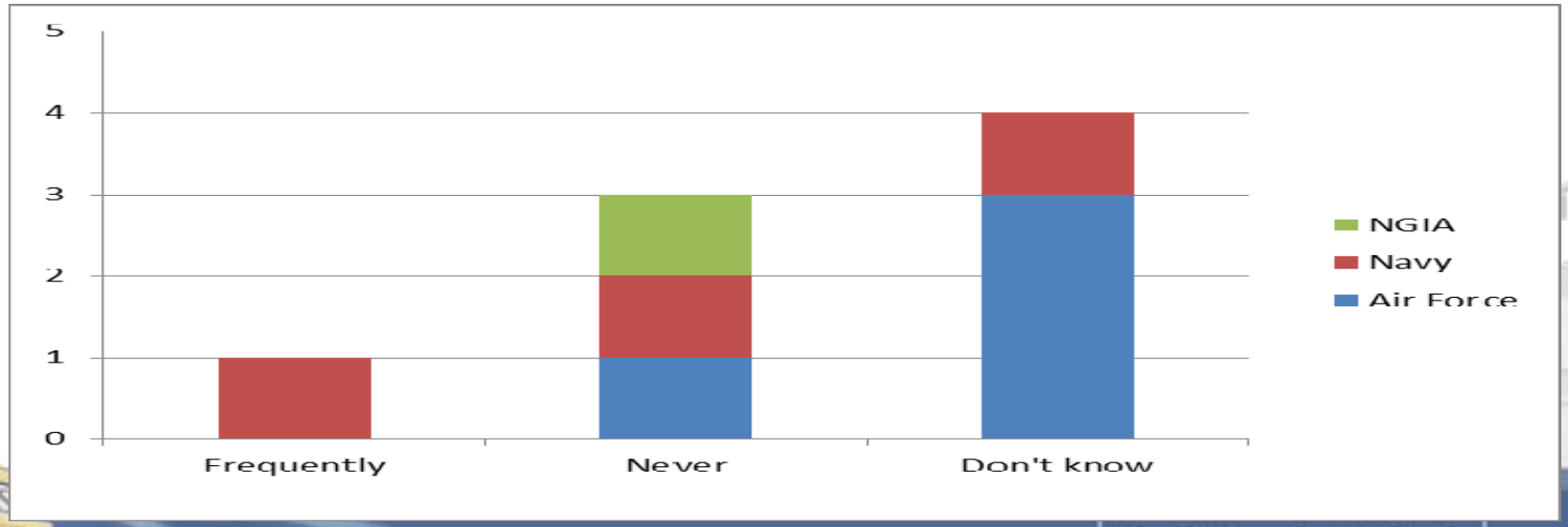
Reform 3, DOD SBIR CPP, Q 5: Formal process to ID SBIR projects' potential for rapid transition to Phase III/acquisition process?

- Yes: 62.5% (DON, DAF); no: 25% (NGIA, DAF); n/a: 12.5% (DON)
- Key issue: are other programs' featuresAnalysis: (1) confusion with terms of existin ro rams likel due to com lementar ro rams/acron ms; 2 no Phase III in DOA, DAF, DARPA SBIR policies (DOD IG 09-048); (3) delegation of eligibility/selection criteria to "advisory" contractors' discretion (see slides below).
- /conditions the same as CPP legislation?
- E.g., ONR TAP offered to all Phase II SBIR firms; they must hire ONR's



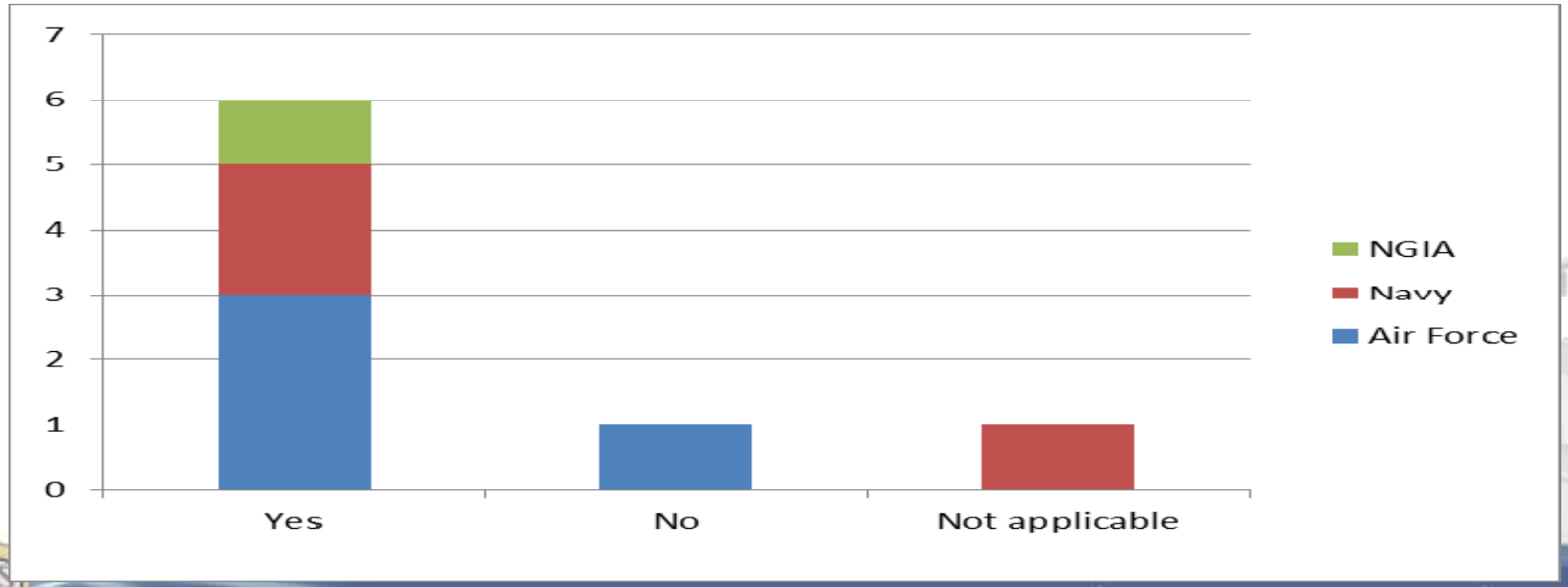
Reform 3, DOD SBIR CPP, Q 6: Require Secretarial Certification of "High Priority Military Requirement" for CPP Eligibility?

- Never: 37.5% (DON, DAF, NGIA-no CPP); don't know: 50% (DON, same response claiming no CPP, DAF); frequently: 12.5% (DON)
- Analysis: (1) confusion with terms of existing programs likely due to complementary programs/acronyms; (2) no Phase III in DOA, DAF, DARPA SBIR ¸ olicies (DOD IG 09-048); (3) delegation of eligibility/selection criteria to "advisory" contractors' discretion (see slides below).
- **This is a condition on access to CPP assistance and use of CPP funds!** NOTE: Section 252 language: "No [SBIR] research program may be identified under paragraph (2) [the potential for rapid transitioning to Phase III and into the acquisition process] unless the Secretary of the military department concerned certifies in writing that the successful transition . . . is expected to meet high priority military requirements of such military department."



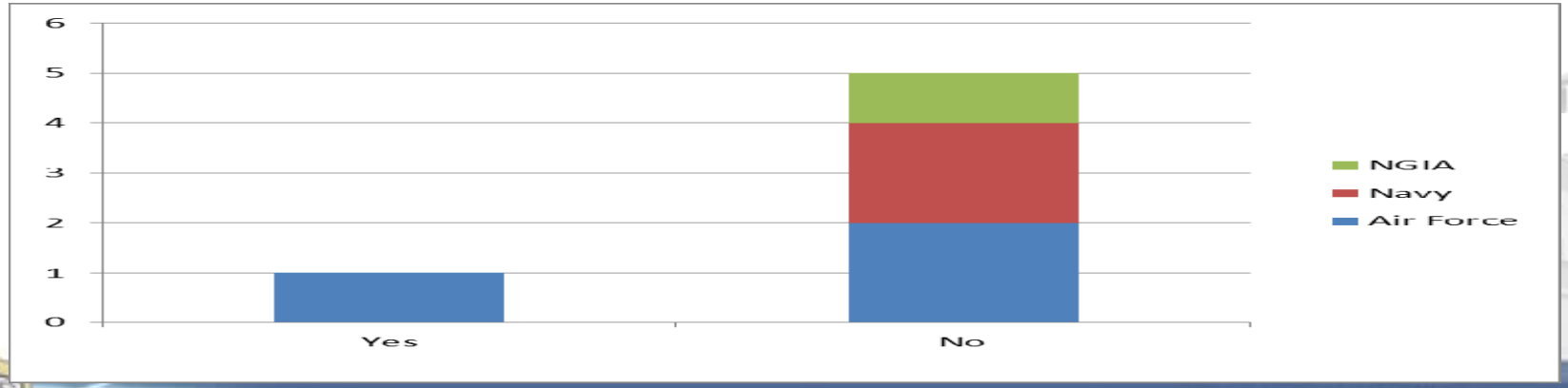
Reform 3, DOD SBIR CPP, Q 7: Formal process/procedures for PM/PEO input as part of CPP?

- Yes: 75% (DAF, DON, NGIA – no CPP); no: 12.5% (DAF); n/a: 12.5% (DO.,
- DARPA is a special case, looks for "radical innovations"; DOA argues OD policy treats SBIR as R&D and not procurement; "majority" of DAF and DOA topics generated by labs, not acquisition community (DOD IG 09-048)
- DAF: limited "pull" of SBIR into Phase III due to lack of requirements validated by acquisition programs (GAO-11-21)
- Analysis: (1) confusion with terms of existing programs likely due to complementary programs/acronyms; (2) no Phase III in DOA, DAF, DARPA SBIR policies (DOD IG 09-048); (3) delegation of eligibility/selection criteria to "advisory" contractors' discretion (see slides below).



Reform 3, DOD SBIR CPP, Q 8: Any Influence of SBIR Support Contractors on CPP Selection Decisions?

- Yes: 16.7% (DAF); no: 83.3% (DON, DAF, NGIA - no CPP)
- Analysis: negative responses are not credible. Public info shows MILDEPS hired "advisory"/support contractors, and those contractors make or influence responsibility-type, eligibility-type, or competitive range-type determinations for CPP participation/assistance and resulting Phase III acquisitions. This creates potential organizational conflicts of interest, esp. for venture capitalist and "advisory" vendors pre-selected by agencies under 15 USC 638(q).
- Relevant standards: FAR 7.5 (inherently governmental functions include determination of agency policy, participation on source selection boards, determining supplies or services to be acquired, and approving requirements definition, incentive plans, and evaluation criteria); FAR 15.3 (CO determines competitive range); FAR Subpart 19.6 (no small firm can be excluded from award unless SBA determines responsibility-type issues under the Certificate of Competency Program); FAR Subpart 9.5 (avoid actual or potential OCIs).



Reform 3, DOD SBIR CPP, Q 8: Any Influence of SBIR Support Contractors on CPP Selection Decisions? ARMY

- http://www.milcomvp.com/cpp/index.shtml:
- MILCOM Venture Partners (MILCOM) was selected as the Army's contractor to help manage the CPP, and will:

  1) review current SBIR Phase II projects and recommend approximately 25 projects for participation in CPP;

  2) provide assistance intended to accelerate technology transition and commercialization to the projects selected for CPP participation; and

  3) recommend the amount of additional funding each participating SBIR Phase II project will be allocated from the $15 million CPP fund. In making recommendations for participation in CPP, the following characteristics will be given significant consideration by MILCOM:

  1. The Phase II technology meets a high priority Army requirement;

  2. The technology can be rapidly transitioned to Army acquisition and/or a commercial product; and,

  3. Transition to military or commercial products will provide a significant financial return on the investment made in the technology by the SBIR Program, in the form of non-SBIR investment in such technology and product revenue.

Reform 3, DOD SBIR CPP, Q 8: Any Influence of SBIR Support Contractors on CPP Selection Decisions? NAVY

- http://www.navysbir.com/Navy_CPP-09.pdf: Willcor is under contract to the Navy to assist companies with the use of Technology Risk Identification & Mitigation Software (TRIMS) for SBIR, a web based tool for risk assessment management, the performance of independent assessments, and assistance in developing risk mitigation strategies and plans. Both Willcor and Dawnbreaker are under contract with the Navy to provide assistance to SBIR firms in planning their transition strategies. Both Willcor and Dawnbreaker are under contract to assist firms with identifying issues, preparing manufacturing plans, and conducting Manufacturing and Production Readiness assessments. Technology Readiness Assessments are used to assist firms in determining the development status of their technology (TRL) as well as conformance to requirements. Willcor is under contract to the Navy to provide these assessments.
- Dawnbreaker is "to provide Program and Technology Transition Management Support to the NAVAIR SBIR Program Office to implement a CPP which assists the NAVAIR Program Executive Officers (PEOs) and NAVAIR Acquisition Program Management Offices (PMAs) in identifying SBIR topics that meet the needs of the war-fighter, have the potential for rapid transition and to execute their transition from Phase II to Phase III and insertion into a Program of Record." (http://www.dawnbreaker.com/defense/navair-cpp.php)
- Dawnbreaker is to provide "the services of a business acceleration manager, a market researcher, and others to accelerate the transition of their technology. This is accomplished through the application of a proven process and deliverables, developed collaboratively by the small business and the Navy TAP team" (http://www.dawnbreaker.com/defense/navy-tap.php).

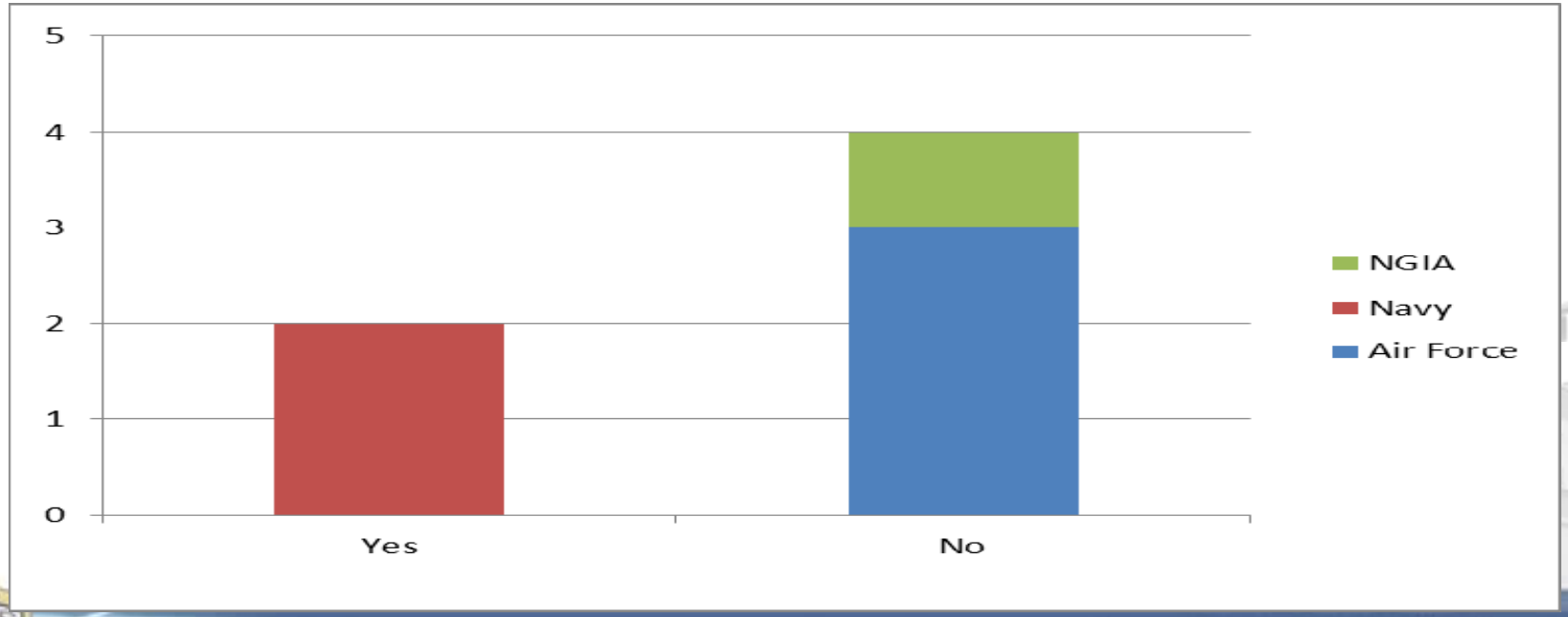
Reform 3, DOD SBIR CPP, Q 8: Any Influence of SBIR Support Contractors on CPP Selection Decisions? AIR FORCE

- The Air Force has contracted with MacAulay-Brown, Inc. (MacB) to provide a lead role, variously described as that of SBIR/STTR program manager (http://www.beyondphaseii.com/2009/presentations/Wednesday/01_CPP_Service_Briefings/c_Services_Briefings-Flake_(Air_Force).pdf), or, more recently, as SBIR/STTR project lead (http://www.afsbirsttr.com/Poc/Pocs.aspx).
- The role of MacAulay-Brown was described in their press release at the time of the contract award:
- "The Government-MacB Team will focus on improving the process of identifying and developing topics that address urgent warfighter needs and transition successful results to acquisition programs while strengthening awareness, involvement and advocacy of key S&T customers/stakeholders." (http://www.macb.com/about-us/company-news.php)

Reform 3, DOD SBIR CPP, Q 9: Acquisition Incentives and Activities Developed/Deployed as Part of CPP?

- Yes: 33.3% (DON); no: 66.7% (DAF, NGIA-no CPP)

- Analysis: positive responses not reliable, as DON treats hiring advisory contractors as “acquisition incentives and activities”. See next 2 sides.



Reform 3, DOD SBIR CPP, Q 10: Types of Incentives Deployed as Part of CPP (DON Only)

Answer Options	Always	Frequently	At least half of the time	Less than half of the time	Never	Response Count	Utilization
a. Educational and business development assistance to SBIR firms focused on commercialization in Federal and dual-use markets	1	1	0	0	0	2	Most utilized
b. Outreach and advocacy with large prime contractors as well as defense acquisition and program management officials.	1	1	0	0	0	2	Most utilized
c. Contract incentive clauses and bonuses to large prime contractors that integrate SBIR and/or STTR technologies	0	0	0	1	0	1	Least utilized
d. Mentor-protégé arrangements for the benefit of SBIR and/or STTR firms	0	0	1	1	0	2	Some utilization

Reform 3, DOD SBIR CPP, Q 10: Types of Incentives Deployed as Part of CPP (DON Only)

Answer Options	Always	Frequently	At least half of the time	Less than half of the time	Never	Response Count	Utilization
e. Dedication of specific acquisition dollars for integration of SBIR and/or STTR technologies into major defense systems	0	0	1	1	0	2	Some utilization
f. Contract clauses or regulatory provisions expressly confirming SBIR data rights protections at Phase III at the prime contracting and subcontracting levels	1	0	1	0	0	2	Most utilized
g. Performance incentives to acquisition and program management personnel for developing and execution rapid commercialization of SBIR technologies through government contracts and subcontracts	0	1	0	1	0	2	Some utilization

Part IV

Conclusions & Recommendations

–Overall Conclusions

–8 Practical Reforms

Overall Conclusions:

M RE RE EAR H I NEEDED . . .

- Reform 1: DOD SBIR/STTR Topics Alignment with DOD Research Plans and Defense Acquisition Program Manager Inputs
  - Overall, not implemented
- Reform 2: DOD SBIR Commercialization Pilot Program
  - Overall, implemented with some important successes (e.g., more SBIR advocacy w/in DOD, more biz education help for SBIR firms)
  - CPP Failures: (1) failed to change culture; Congressional Guidance on incentives and activities
- Reform 3: Authority to use SBIR/STTR Phase II and Phase III funds for Testing & Evaluation
  - Overall, implementation unknown/unclear
- Reform 4: Codification of Executive Order 13329, Encouraging Innovation in Manufacturing
  - Overall, MILDEPs implemented initially, but follow-through unknown/unclear

The Interlocutory Contractor-Centric CPP Model: Inspired by *Office Space*?

- **BOB PORTER:** Well, then I gotta ask, then why can't the customers just take the specifications directly to the software people, huh? **TOM SMYKOWSKI:** Well, uh, uh, uh, because, uh, engineers are not good at dealing with customers. . . .
- **BOB SLYDELL:** Well, what would you say you do here? **TOM SMYKOWSKI:** Well, look, I already told you. I deal with the #$%damn customers so the engineers don't have to!! I have people skills!! I am good at dealing with people!!! Can't you understand that?!? WHAT THE HELL IS WRONG WITH YOU PEOPLE?!!!!!!!

8 Practical Recommendations for Meaningful DOD SBIR CPP Reform

- (1) Create a “One-Stop Shop” Process for Assisting SBIR/STTR Firms with Technology Transition (Including D, T&E) and Procurement (could be MILDEP-specific)
  - Study confirms continued confusion over transition assistance measures, forcing small firms to expend time and energy navigating bureaucracy and discouraging PMs from planning for transition.
  - One-stop shop would streamline transition for small firms, help PMs put assistance packages and technology roadmaps to help priority technologies, and reduce need for CPP “advisor” contractors.
- (2) Mandate Link of Most SBIR/STTR Topics to DOD Acquisitions (the rest to R&D)
  - Raise MILDEP Acquisition Community Sponsorship of SBIR/STTR Topics From at Least 50 Percent to at Least 75 Percent,
  - Formally Seek Prime Contractors’ Recommendations of Topics for MILDEP Community Sponsorship, and
  - Publicly Designate Existence of Acquisition or R&D Communities’ Sponsorship in SBIR/STTR Solicitation

8 Practical Recommendations for Meaningful DOD SBIR CPP Reform

- (3) Confirm Overall Authority of MILDEP Offices of Small Business Programs (OSPs), Small Business Specialists, and Small Business Technical Advisers Over SBIR/STTR Transition Assistance & Incentives
  - OSBPs have legal authority and responsibility over all programs to expand small business access to prime contracts and subcontracts (including incentives to major primes) under 15 U.S.C. §644(k), FAR 19.201, and DFARS/PGI 219.201.
  - Study shows that MILDEP CPPs, as designed by the R&D community, retained "transition advisor" contractors that duplicate existing OSBP workforce, appear to perform inherently governmental functions (IGFs) such as source selection, competitive range, and responsibility determinations; and operate with likely organizational conflicts of interest (OCIs), esp. venture capital contractors.
  - Putting OSBPs in charge of CPPs would streamline transition assistance, reduce redundant contractors, free up funds for T&E and contractual incentives, and avoid IGFs/OCIs.

8 Practical Recommendations for Meaningful DOD SBIR CPP Reform

- (4) Realign CPP to Facilitate "Pull" of Link of Most SBIR/STTR Topics to the Acquisition Process and Programs through Secretarial Instructions Clearly Defining "High Priority Military Requirements" Certification Process and "Potential for Rapid Transitioning" Criteria
  - Study suggests that current CPP designs omit the Secretarial certification requirement and delegate t... competitive range and responsibility determinations of "transition potential" to contractors.
  - Current CPP designs follows status quo acquisition culture
  - Current CPP designs add confusion/barriers for small businesses
- (5) Publish Results of Quadrennial Strategic Review of SBIR/STTR Topics Alignment with DOD Research Plans and DOD Ac uisition Pro ram Mana er/Pro ram Executive Officer Inputs (subject to appropriate security restrictions)
  - Study suggests agencies fails to conduct topic alignment reviews
  - To ic ali nment reviews should hel DOD et better return on SBIR/STTR investments

8 Practical Recommendations for Meaningful DOD SBIR CPP Reform

- (6) Expand CPP to the STTR Program and Enable Access to DOD Educational Institutions (e.g. the Naval Postgraduate School (NPS)) and other MILDEP Testing & Evaluation Facilities (e.g. the Naval Warfare Centers Enterprise (NWCE))
  - Small Business Act should be amended to: provide for eligibility of military postsecondary educational institutions to participate in STTR on the same terms as FFRDCs, and to confirm access of CPP firms to T&E at military postsecondary educational institutions and T&E facilities
- (7) Expressly Describe Authorized Acquisition/Contractual Incentives and Other Types of Incentives in CPP Legislation
  - Study suggests Congressional Guidance Letter was ignored
- (8) Establish Strong and Clear Policies Concerning Technical Assistance Vendors' Doing Business with, and Investment in, SBIR/STTR Firms, Organizational Conflicts of Interest (OCIs), and Performance of Inherently Governmental Functions (IGFs)
  - CPP must comply with the FAR and the Small Business Act

Final Thoughts on Section 252 DOD SBIR Reforms

"A politician needs the ability to foretell what is going to happen tomorrow, next week, next month, and next year. And to have the ability afterwards to explain why it didn't happen."

– Sir Winston Churchill