

**NAVY
SBIR FY04.4 PROPOSAL SUBMISSION**

The responsibility for the implementation, administration and management of the Navy SBIR program is with the Office of Naval Research (ONR). The Navy SBIR Program Manager is Mr. Vincent D. Schaper, (703) 696-8528. The Deputy SBIR Program Manager is Mr. John Williams, (703) 696-0342. For technical questions about the topic, contact the Topic Authors listed under each topic on the website before **15 September 2004**. For general inquiries or problems with the electronic submission, contact the DoD Help Desk at 1-866-724-7457 (8AM to 5PM EST).

The Navy's SBIR program is a mission-oriented program that integrates the needs and requirements of the Navy's Fleet through R&D topics that have dual-use potential, but primarily address the needs of the Navy. Information on the Navy SBIR Program can be found on the Navy SBIR website at <http://www.onr.navy.mil/sbir>. Additional information pertaining to the Department of the Navy's mission can be obtained by viewing the website at <http://www.navy.mil>.

PHASE I PROPOSAL SUBMISSION (NEW Phase I and Phase I Option Amounts for NAVAIR topics only!)

Read the DoD Program Solicitation at www.dodsbir.net/solicitation for detailed instructions on proposal format and program requirements. When you prepare your proposal, keep in mind that Phase I should address the feasibility of a solution to the topic. The Phase I option should address the transition into the Phase II effort. Phase I options are typically only funded after the decision to fund the Phase II has been made. Phase I proposals, including the option, have a 25-page limit (see section 3.4). The Navy will evaluate and select Phase I proposals using scientific review criteria based upon technical merit and other criteria as discussed in section 4.0 of the program solicitation. Due to limited funding, the Navy reserves the right to limit awards under any topic and only proposals considered to be of superior quality will be funded. The Navy typically provides a firm fixed price contract or awards a small purchase agreement as a Phase I award

For NAVAIR topic N04-266, the base amount should not exceed \$80,000 and 6 months with an option not exceeding \$70,000 and 6 months.

All proposal submissions to the Navy SBIR Program must be submitted electronically. It is mandatory that the **entire** technical proposal, DoD Proposal Cover Sheet, Cost Proposal, and the Company Commercialization Report are submitted electronically through the DoD SBIR Submission website at <http://www.dodsbir.net/submission>. If you have any questions or problems with the electronic submission contact the DoD SBIR Helpdesk at 1-866-724-7457 (8AM to 5PM EST).

Complete electronic submission includes the submission of the Cover Sheets, Cost Proposal, Company Commercialization Report, the **ENTIRE** technical proposal and any appendices via the DoD Submission site. The DoD proposal submission site <http://www.dodsbir.net/submission> will lead you through the process for submitting your technical proposal and all of the sections electronically. Each of these documents are submitted separately through the website. Your proposal must be submitted via the submission site on or before the **6:00 a.m. EST, 15 October 2004** deadline. A hardcopy will NOT be required. A signature by hand or electronically is not required at the time of submission.

Acceptable Formats for Online Submission: All technical proposal files will be converted to Portable Document Format (PDF) for evaluation purposes – do not lock/protect your pdf file. The Technical Proposal should include all graphics and attachments, but not include Cover Sheets. You are required to include your company name, proposal number and topic number as a page header in your technical proposal document. Cost sheets can be included in the technical proposal or submitted separately through the Cost Proposal form available through the Submission website. Technical Proposals should conform to the limitations on margins and number of pages specified in the DoD Program Solicitation. However, your on-line Cost Proposal form will only count as one page and your Cover Sheets will only count as two, no matter how they print out after being converted. Most proposals will be printed out on black and white printers so make sure all graphics are distinguishable in black and white. It is strongly encouraged that you perform a virus check on your file before you upload. If a virus is detected, the file will be deleted. To verify that your proposal has been received, click on the "Check Upload" icon to view your proposal. Typically, your proposal will be virus checked and converted within the hour. However, if your proposal does not appear after

an hour, please contact the DoD Help Desk. It is recommended that you submit early, as computer traffic gets heavy nearer the solicitation closing and slows down the system.

Within one week of the Solicitation closing, you will receive notification via e-mail that your proposal has been received and processed for evaluation by the Navy. Please make sure that your e-mail address is entered correctly on your proposal coversheet or you will not receive a notification.

PHASE I ELECTRONIC FINAL REPORT

All Phase I award winners must electronically submit a Phase I summary report through the Navy SBIR website at the end of their Phase I contract. The Phase I Summary Report is a non-proprietary summary of Phase I results. It should not exceed 700 words and should include potential applications and benefits. It should require minimal work from the contractor because most of this information is required in the final report. The summary of the final report will be submitted through the Navy SBIR/STTR website at: <http://www.onr.navy.mil/sbir>, click on "Submission", then click on "Submit a Phase I or II Summary Report".

ADDITIONAL NOTES

The Small Business Administration (SBA) has made a determination that will permit the Naval Academy, the Navy Post Graduate School and the other military academies to participate as subcontractors in the SBIR/STTR program, since they are institutions of higher learning.

The Navy will allow firms to include with their proposals, success stories that have been submitted through the Navy SBIR website at <http://www.onr.navy.mil/sbir>. A Navy success story is any follow-on funding that a firm has received based on technology developed from a Navy SBIR or STTR Phase II award. The success stories should be included as appendices to the proposal. These pages will not be counted towards the 25-page limit. The success story information will be used as part of the evaluation of the third criteria, Commercial Potential (listed in Section 4.2 of this solicitation) which includes the Company's Commercialization Report and the strategy described to commercialize the technology discussed in the proposal. The Navy is very interested in companies that transition SBIR efforts directly into Navy and DoD programs and/or weapon systems. If a firm has never received a Navy SBIR Phase II it will not count against them. Phase III efforts should also be reported to the Navy SBIR program office noted above.

NAVY FAST TRACK DATES AND REQUIREMENTS

The Fast Track application must be received by the Navy 150 days from the Phase I award start date. Your Phase II Proposal must be submitted within 180 days of the Phase I award start date. Any Fast Track applications or proposals not meeting these dates may be declined. All Fast Track applications and required information must be sent to the Navy SBIR Program Manager at the address listed above, to the designated Contracting Officer's Technical Monitor (the Technical Point of Contact (TPOC)) for the contract, and the appropriate Navy Activity SBIR Program Manager listed in Table 1 of this Introduction. The information required by the Navy, is the same as the information required under the DoD Fast Track described in section 4.5 of this solicitation.

PHASE II PROPOSAL SUBMISSION (NEW Phase II and Phase II Option Amounts!)

Phase II is the demonstration of the technology that was found feasible in Phase I. Only those Phase I awardees which achieved success in Phase I, as determined by the Navy Activity point of contact (POC) measuring the results achieved against the criteria contained in section 4.3, will be invited to submit a Phase II proposal by that Activity's proper point of contact, listed in Table 1. During or at the end of the Phase I effort awardees will be notified to participate for evaluation of their proposal for a Phase II award. Evaluation criteria for the invitation will be based on the success to which the company has accomplished for the particular topic as evaluated by the monitoring activity/command. If you have been invited to submit a Phase II proposal to the Navy, obtain a copy of the Phase II instructions from the Navy SBIR website or request the instructions from the Navy Activity POC listed in Table 1. The Navy will also offer a "Fast Track" into Phase II to those companies that successfully obtain third party cash partnership funds ("Fast Track" is described in Section 4.5 of the program solicitation). The Navy typically provides

a cost plus fixed fee contract or an Other Transition Agreement (OTA) as a Phase II award. The type of award is at the discretion of the contracting officer.

Since the inflation rate over the past twelve years approximates 33%, at the discretion of the Navy Activity, the Navy has increased the amount of phase II funding offered up to \$1 million. Specific guidelines on the new base and option amounts will be explained in your invitation letter from the requesting activity. Upon receiving an invitation, submission of a Phase II proposal should consist of three elements: 1) A base effort, which is the demonstration phase of the SBIR project; 2) A 2 to 5 page Transition/Marketing plan (formerly called a “commercialization plan”) describing how, to whom and at what stage you will market and transition your technology to the government, government prime contractor, and/or private sector; and 3) At least one Phase II Option which would be a fully costed and well defined section describing a test and evaluation plan or further R&D. Phase II efforts are typically two (2) years and Phase II options are typically an additional six (6) months. **Each of the Navy Activities have different award amounts and schedules; you are required to visit the website cited in the invitation letter to get specific guidance for that Navy Activity before submitting your Phase II proposal.**

Phase II proposals together with the Phase II Option are limited to 40 pages (unless otherwise directed by the TPOC or contract officer). All Phase II proposals must have a complete electronic submission. Complete electronic submission includes the submission of the Cover Sheets, Cost Proposal, Company Commercialization Report, the **ENTIRE** technical proposal and any appendices via the DoD Submission site. The DoD proposal submission site <http://www.dodsbir.net/submission> will lead you through the process for submitting your technical proposal and all of the sections electronically. Each of these documents is submitted separately through the website. Your proposal must be submitted via the submission site on or before the Navy Activity specified deadline.

All Phase II award winners must attend a one-day Transition Assistance Program (TAP) meeting typically held in the July to August time frame in the Washington D.C. area during the second year of the Phase II effort. If you receive a Phase II award, you will be contacted with more information regarding this program or you can visit <http://www.dawnbreaker.com/navytip>. It is recommended to budget at least one trip to Washington in your Phase II cost proposal.

As with the Phase I award, Phase II award winners must electronically submit a Phase II summary report through the Navy SBIR website at the end of their Phase II. The Phase II Summary Report is a non-proprietary summary of Phase II results. It should not exceed 700 words and should include potential applications and benefits. It should require minimal work from the contractor because most of this information is required in the final report.

Effective in Fiscal Year 2000, a Navy Activity will not issue a Navy SBIR Phase II award to a company when the elapsed time between the completion of the Phase I award and the actual Phase II award date is eight (8) months or greater; unless the process and the award has been formally reviewed and approved by the Navy SBIR Program Office. Also, any SBIR Phase I contract that has been extended by a no cost extension beyond one (1) year will be ineligible for a Navy SBIR Phase II award using SBIR funds.

PHASE II ENHANCEMENT

The Navy has adopted a New Phase II Enhancement Plan to encourage transition of Navy SBIR funded technology to the Fleet. Since the Law (PL102-564) permits Phase III awards during Phase II work, the Navy will provide a 1 to 4 match of Phase II to Phase III funds that the company obtains from an acquisition program. Up to \$250,000 in additional SBIR funds for \$1,000,000 match of acquisition program funding, can be provided as long as the Phase III is awarded and funded during the Phase II. If you have questions, please contact the Navy Activity POC.

PHASE III

Public Law 106-554 provided for protection of SBIR data rights under SBIR Phase III awards. A Phase III SBIR award is any contract or grant where the technology is the same as, derived from, or evolved from a Phase I or a Phase II SBIR/STTR contract and awarded to the company which was awarded the Phase I/II SBIR. This covers any contract/grant issued as a follow-on Phase III SBIR award or any contract/grant award issued as a result of a competitive process where the awardee was an SBIR firm that developed the technology as a result of a Phase I or Phase II SBIR. The Navy **will** give SBIR Phase III status to any award that falls within the above-mentioned

description. The government's prime contractors and/or their subcontractors will follow the same guidelines as above and ensure that companies operating on behalf of the Navy protect data rights of the SBIR company.

TABLE 1: NAVY ACTIVITY SBIR PROGRAM MANAGERS POINTS OF CONTACT (POC) FOR TOPICS

<u>Topic Numbers</u>	<u>Point of Contact</u>	<u>Activity</u>	<u>Email</u>
N04-266	Mrs. Carol Van Wyk	NAVAIR	carol.vanwyk@navy.mil

For general program and administrative questions, please contact the Program Managers above; do not contact them for technical questions. For technical questions, please contact the topic authors during the pre-solicitation period from 2 August 2004 through 14 September 2004. These topic authors are listed on the Navy website under "Solicitation" or the DoD website. Beginning 15 September, you must use the SITIS system listed in section 1.5c of the program solicitation to receive answers to technical questions.

PHASE I PROPOSAL SUBMISSION CHECKLIST:

All of the following criteria must be met or your proposal will be REJECTED.

___1. Make sure you have added a header with company name, proposal number and topic number to each page of your technical proposal.

___2. Your technical proposal has been uploaded and the DoD Proposal Cover Sheet, the DoD Company Commercialization Report, and the Cost Proposal have been submitted electronically through the DoD submission site by 6:00 a.m. EST 15 October 2004.

___3. After uploading your file and it is saved on the DoD submission site as a PDF file, review it to ensure that it appears correctly.

___4. For NAVAIR topic N04-266, the base effort does not exceed \$80,000 and 6 months and the option does not exceed \$70,000 and 6 months . The costs for the base and option are clearly separate, and identified on the Proposal Cover Sheet, in the cost proposal, and in the work plan section of the proposal.

Navy 04.4 Topic Index

N04-266 Novel Variable Speed Drogue Refueling (VSD)

Navy 04.4 Topic Descriptions

N04-266 TITLE: Novel Variable Speed Drogue Refueling (VSD)

TECHNOLOGY AREAS: Air Platform, Ground/Sea Vehicles, Materials/Processes, Space Platforms

ACQUISITION PROGRAM: PMA-207, C-130 Program Office

OBJECTIVE: Enable combatant commanders the capability to use airborne tanker aircraft in multi-scenario missions without having to land. A variable speed drogue that can handle a speed range from 105 to 250 KNOTS has long been desired and is a formal requirement in the KC-130J Initial Capability Document and in the KC130J Tactical Aerial Refueler Operational Requirements Letter.

DESCRIPTION: Variable speed drogues have been desired and established as a viable capability requirement for over 10 years. The drogue will in some form be similar to the current para-drogue assemblies that are used – namely that the variable speed drogue system should use the current coupling (MA-3-1 or MA-4) as the basis from which it builds. Primarily the variable speed technology will be focused on the basket portion of the system.

PHASE I: Develop a system design for a variable speed drogue that can operate without any user input or physical change of components (as is currently done) in a speed range of 105-250 knots.

PHASE II: Develop a flight worthy concept demonstrator and provide to NAVAIRSYSCOM for flight test the variable speed drogue.

PHASE III: Develop, as required, user-friendly packages for use by maintainers and aircrew including any necessary information required for maintaining or operating the system.

REFERENCES: Marine Corps developed Requirements Letter for the KC-130J Tactical Aerial Refueler (for testing purposes only), dated 27 February 2001 and further clarified, where noted, by Commanding General (CG), Marine Corps Combat Development Center letter dated 19 November 2001 approved by the Assistant Commandant of the Marine Corps (ACMC), 21 March 2002.

KEYWORDS: Variable Speed Para-drogue, Aerial Refueling