

## **The SBIR/STTR Advisory Committee, June 19- 20, 2001**

The National Science Foundation (NSF) Advisory Committee for the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Programs was held 19 and 20 June 2001 in Room 120 of the NSF Headquarters facility in Arlington, VA.

### **Advisory Committee members in attendance were:**

**Dr. Chris Busch (Chairman)**  
**Dr. Alden Bean**  
**Dr. Paul McClure**  
**Dr. Ron Cooper (for Maurice Swinton 19 June 2001 only until 2 PM)**  
**Ms. Penny K. Pickett**  
**Dr. Walter Plosila (afternoon of 19 June 2001 only)**  
**Ms. RoseAnn B. Rosenthal**  
**Dr. Jenny Servo**  
**Dr. David B. Spencer**  
**Mr. Milton Stewart**  
**Dr. Jose Zayas-Castro**

### **NSF representatives attending all or part of the meeting included:**

**Ms. Cheryl Albus, SBIR Program Manager**  
**Ms. Jean Bonney, SBIR Program Manager**  
**Mr. Ritchie Coryell, SBIR Program Manager**  
**Dr. Joe Hennessey, Acting Director, SBIR Program**  
**Dr. Jim Hoehn, EPSCoR Program Director**  
**Dr. Elbert Marsh, Deputy Assistant Director, Engineering Directorate**  
**Dr. Kesh Narayanan, Acting Director, DMII Division**  
**Dr. Sara Nerlove, SBIR Program Manager**  
**Ms. Betty Person, Program Specialist**  
**Dr. Jim Rudd, SBIR Program Manager**  
**Dr. Om Sahai, SBIR Program Manager**  
**Mr. George M. Wilson, Legislative Specialist**

## **B. ACTIVITIES SUMMARY**

### **Tuesday, 19 June 2001**

Dr. Joe Hennessey opened the meeting, introduced participants, and reviewed the planned agenda for the meeting. Dr. Elbert Marsh welcomed the Advisory Committee, and gave an overview of NSF. Dr. Hennessey then provided an overview of the NSF SBIR Program.

For most of the day, the report from the SBIR Committee of Visitors (COV) meeting held on 7 and 8 May 2001 was presented. Chris Busch presented the report, and Dr. Hennessey provided NSF responses to concerns cited in the COV report.

Dr. Jim Hoehn (NSF EPSCoR Program Director) attended a portion of the afternoon session, and described the EPSCoR Program and activities. He described the link between the NSF SBIR and EPSCoR Programs whereby EPSCoR funding is provided for some SBIR awards to small businesses in EPSCoR states. He solicited ideas for building on successes achieved to date through this relationship.

### **Wednesday, 20 June 2001**

The Advisory Committee began work on this day to prepare this report. Beginning about mid-morning, the report was presented to NSF representatives. The meeting adjourned at approximately noon.

## **C. RESPONSE TO THE COV REPORT**

Overall, the Committee concurs with the COV report findings. It commends NSF staff on its thoughtful responses and, in most cases, concurs. However, what follows below are the Committees observations and recommendations for further improvement.

## **D. OBSERVATIONS AND RECOMMENDATIONS**

### **1. Commercialization in General**

Existing requirements for Phase 1 commercialization presentation are adequate in light of the Phase 1 objectives. Additional commercialization requirements run the risk of being a deterrent to innovation at this concept stage. However, the present evaluation criteria should be consistently implemented by NSF and weighted by the reviewers. Continued effort is encouraged to improve commercialization plan quality in Phase 2.

The solicitation guidelines for responding to the two criteria should more clearly differentiated to reflect the different objectives for Phase 1 and Phase 2. NSF should reformat these guidelines in future solicitations.

### **2. NSF and State Partnerships**

Given the emerging direction at NSF to encourage partnerships as part of its core mission, and in light of emerging infrastructure at the state levels, it is recommended that a task force be formed during the coming year with representatives of NSF and state outreach organizations. The focus of the task force would be to explore best practices in developing and expanding

commercialization to maximize the opportunity for successful commercialization.

### **3. Phase 2 “Fund with Major Revisions” Category**

This concept is encouraged as means for providing more high quality Phase II proposals. However, it is recommended that “Major” be deleted from the category title. Also, panelists must be informed about how to use this category along with the other categories and, to that end, NSF should develop clear guidelines for each category and implement them consistently. Program managers should oversee revision of proposals in this category at their discretion.

### **4. Expanding Phase IIB**

The committee encourages continuation of the Phase IIB Program.

### **5. Award Portfolio Management**

More active portfolio management by Program Managers is recommended for Phase 2 awards by Program Managers. This may include stage gate management (including funding milestones), site visits to awardees and more substantive project monitoring. It is recognized that this will require additional administrative resources.

### **6. Panelist Formation and Selection**

NSF is encouraged to establish a larger pool of commercial reviewers and panelists. Members of the Advisory Committee are available to help SBIR Program Managers in achieving this objective. In addition, a mechanism for evaluating reviewers should be established. Commercial reviewers for Phase 1 panels are encouraged.

### **7. Panel Format and Management**

It is recommended that SBIR technical and commercial panels be combined, and that the opinions of all panelists be given equal weight as reflected in the voting process. It is recommended that all panel moderators follow the same procedure in conducting the panel to achieve consistent selection outcomes.

### **8. Reviewer Feedback**

NSF should solicit feedback from reviewers on the proposal review and evaluation process to evolve a more efficient and effective process. Small businesses must receive detailed feedback on the evaluation of their proposal, especially for proposals that are declined.

## **9. Networking SBIR Community with Investors**

Increased interactions between the SBIR community, investor groups and state-based organizations is encouraged as a means of identifying new SBIR candidates, and establishing means for commercializing SBIR funded technology. Awardees should be required to report progress developing relationships with investors and other commercialization partners in the course of Phase 2 projects. There should be consequences for not achieving progress on these milestones.

Appropriate promotion of the SBIR Program with the investment community is encouraged.

## **10. Comments on NSF SBIR Website**

NSF is encouraged to post sample Phase 1 and Phase 2 proposals on its website to help orient new SBIR competitors. Online tutorials are encouraged to support, for example, proposal development, commercialization issues, business plans, and accounting and financial management. A sample grant and hyperlinks to useful, existing online information also would be helpful.

## **11. Administrative Issues**

Many of the recommendations above imply increased level of active project management by Program Managers, including site visits. Therefore, NSF must respond to this need with additional resources. Although not an exhaustive list, some suggestions include additional Program Managers, support personnel, paid and unpaid interns programs, travel resources, and discretionary funds.

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## **12. Efficiency Issues**

The committee believes there is significant potential for increased efficiency in the SBIR proposal and project administration process. NSF is encouraged to seek opportunities to capture these efficiencies, particularly in the proposal evaluation and selection process. Specifically, NSF should explore a pre-screening process that brings together Program Managers and selected outside peer reviewers to screen out clearly unacceptable proposals.

## **13. Outputs and Outcomes**

Internally evaluate the outcomes of SBIR funding in advance of National Academy of Sciences independent review and develop a position on: a)

Direct outcomes; b) Indirect outcomes over a relevant period. Insert requirements for Phase 2 awardees to report outcomes for a maximum allowed period of time.

#### **14. Advisory Committee Meeting Format**

The Committee believes that more time for it to meet to consider recommendations would be beneficial in achieving its objectives.

Committee members agreed to meet more than once a year to assess and advise the NSF SBIR Program.

