How To: Write a Winning SBIR Technical Proposal

Thomas H. Frank, Ph.D

1. Respond to the Program Solicitation Only if You Can Win

   - Respond in your area of interest
   - Personnel capabilities
   - Size and duration of the award
   - Have a time schedule
   - Read a proposal

2. Read the Evaluation Criteria Before You Write

   - Limitations: Research, not development
     HHS, DOD, DOE, or NSF
   - Quality of the research plan
   - Adequacy of the objectives
   - Qualifications of the Principal Investigator and availability of facilities
   - Importance of the proposed research

3. Plan and Write the Phase I Proposed Contents

   - Outline the research plan first
   WHAT you are going to do and HOW you are going to do it
   - Respond to all items
   - Use the format provided

4. Obtain Your Own Independent Proposal Review

   - University or other small business consultant
   - Review, rewrite, and edit the draft

5. The Proposal Is Due On Time

   - Review time
   - Typing and reproduction
   - Delivery

THOMAS H. FRANK, Ph.D
Perinatronics Medical
Systems, Inc.
1488 Jordan Avenue
Crofton, Maryland 21114

COMMON PROPOSAL PROBLEMS

The following are common problems that government agencies find in unsuccessful R&D proposals. They are briefly described here to be of assistance, particularly to those firms which have not been successful in obtaining R&D awards.

• Low Quality Proposals - When reviewers of R&D proposals to government see many proposals from universities, large business and small firms, it becomes apparent that far too many proposals from small business are of poor quality, many unnecessarily so if the small firm were aware of what constitutes a high quality proposal. However, a substantial number of small firms do submit high quality successful proposals so it is not a matter of size or type of organization. Instead it requires a thorough knowledge of the R&D subject, of other research directly relevant to the topic, and a carefully done, well organized and well written proposal. Its length should relate to the amount of funding requested. In general, larger funding requests require more written justification than smaller requests.

The purpose of research proposals is to provide a comprehensive statement that contains sufficient information to persuade those who review and fund the proposal that the proposed work represents a sound approach to the investigation of an important scientific or engineering question. The proposal must be technically worthy of support under the stated criteria. It should be self contained and written with the care and thoroughness accorded papers for journal publication. Each proposal should be reviewed carefully by the applicant and by others highly knowledgeable on the subject to ensure the inclusion of data essential for evaluation. The principal investigator (project manager) must demonstrate his or her knowledge of other R&D in the field, and that the proposed work does not duplicate R&D that may already have been done. A convincing bibiography of directly relevant literature and your familiarity with it can be woven into the proposal.

• Proposal Balance - Many proposals from small business contain much irrelevant material. All information should be directly relevant to the proposed work. Brochures, general information on the company, self-serving puffery should be avoided. Only those curriculum vitae of the key persons working on the project are desired. The majority of the proposal by far should be on a detailed discussion of the problem, the proposal's objectives, the research or work plan (how you will do the work in detail), the technical problems anticipated during the work and how you will handle them, discussions of directly related R&D by you and others both inside and outside your firm, and of the qualifications of key personnel to carry out the work. You must demonstrate a solid knowledge of the problem and your approach to it.

• Not Following Instructions - Surprisingly a large number of small businesses in particular do not follow the detailed instructions contained in an RFP, program solicitation or other guidelines. Proposers who do not