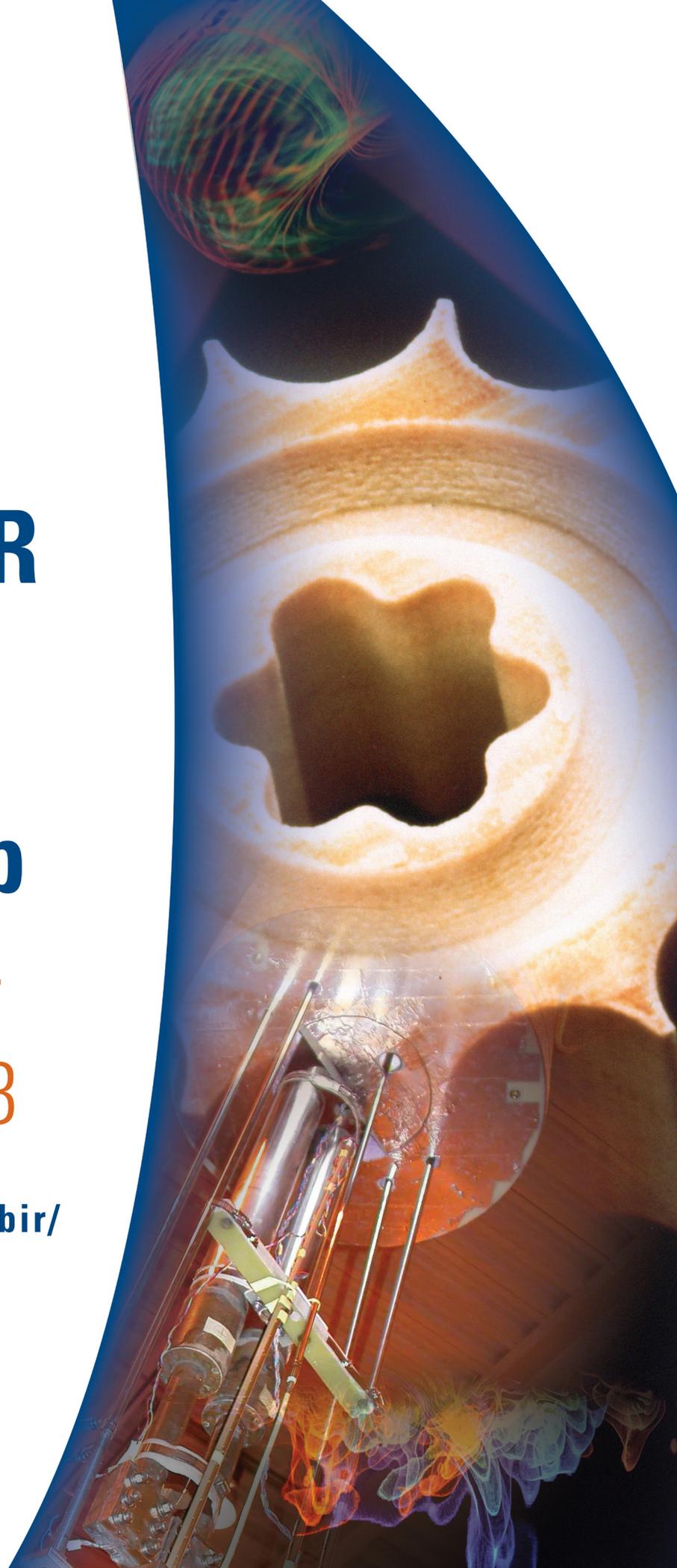




SBIR/STTR Phase I Grantee Workshop

September
24-25, 2008

<http://www.nsf.gov/eng/sbir/>



SBIR/STTR Phase I Grantees Workshop

Holiday Inn Arlington ♦ 4610 North Fairfax Drive ♦ Arlington, VA 22203

Wednesday, September 24

7:00 am – 5:00 pm	Registration Desk Open Please visit the registration desk to check in & pick up your workshop materials	Lobby area
7:00 am – 8:00 am	Light continental breakfast buffet available	Foyer
8:00 am – 10:00 am	Patents: An Introduction for Research Scientists, Engineers and Technologists E. Jennings Taylor, Ph.D., CTO & IP Director, Faraday Technologies	Ballroom
10:00 am – 10:15 am	Coffee Break	Foyer
10:15 am – 12:00 pm	Patents Workshop, cont.	Ballroom
12:00 pm – 1:00 pm	Lunch Break Lunches available for purchase or on your own	Foyer
1:00 pm – 1:15 pm	Welcoming Remarks Michael M. Reischman, Deputy Assistant Director, Directorate for Engineering	Ballroom
1:15 pm – 1:30 pm	Introduction to IIP and SBIR/STTR Kesh Narayanan, Division Director, Industrial Innovation & Partnerships	Ballroom
1:30 pm – 2:00 pm	OLPA Overview Josh Chamot, Public Affairs Specialist, Legislative & Public Affairs	Ballroom
2:00 pm – 2:15 pm	Upcoming STTR Solicitation Cheryl Albus, Program Director, SBIR/STTR	Ballroom
2:15 pm – 2:30 pm	Phase I Reporting & Getting Paid Amanda Morris, Program Manager, SBIR/STTR Support Contract	Ballroom
2:30 pm – 2:45 pm	Phase IB Supplement & Review Process Joseph Hennessey, Senior Advisor, Industrial Innovation & Partnerships	Ballroom
2:45 pm – 3:00 pm	Coffee Break	Foyer
3:00 pm – 4:00 pm	Phase II Proposal Preparation Murali Nair, Program Director, SBIR/STTR	Ballroom
4:00 pm – 5:00 pm	Commercialization & Phase II Commercialization Results Errol Arkilic, Program Director, SBIR/STTR	Ballroom
5:00 pm – 6:00 pm	NSF SBIR/STTR Phase II Commercial Review Panel Panel discussion and Q&A with folks who provide SBIR/STTR commercial reviews	Ballroom
6:00 pm – 7:30 pm	Welcome & Networking Reception	Sidetrack Lounge

SBIR/STTR Phase I Grantees Workshop

Holiday Inn Arlington ♦ 4610 North Fairfax Drive ♦ Arlington, VA 22203

Thursday, September 25

7:00 am – 8:00 am	Light continental breakfast buffet available	Foyer
8:00 am – 8:30 am	Audit & Investigation Monte Fisher, Senior Counsel, Office of Inspector General	Ballroom
8:30 am – 9:00 am	Budget Submission Guidance & Requirements Juan Figueroa, Program Director, SBIR/STTR	Ballroom
9:00 am – 10:00 am	Financial & Budget Reviews Carrie Davison, Cost Analyst, Division of Institution & Award Support	Ballroom
10:00 am – 10:30 am	What Do I Do Now? Kimberly Crabb, SBIR/STTR Grant & Agreement Specialist	Ballroom
10:30 am – 10:50 am	Coffee Break	Foyer
10:50 am – 12:15 pm	Biotechnology Breakout Session – RED DOT	Ballston Room
10:50 am – 12:15 pm	Components & Systems (Electronics) Breakout Session – BLUE DOT	Clarendon Room
10:50 am – 12:15 pm	Software & Services Breakout Session – YELLOW DOT	Arlington Room
12:15 pm – 1:00 pm	Lunch Break <i>After lunch on your own, walk to NSF for afternoon meetings. Please arrive 15 minutes prior to your scheduled meetings (shuttles also available from Holiday Inn).</i>	See next page for map
1:00 pm – 6:00 pm	NSF One-on-One Meetings	See booklet
1:00 pm – 6:00 pm	Dawnbreaker One-on-One Meetings	See booklet
1:00 pm – 3:00 pm	Development Capital Networks Phase I Grantee Group Meetings DCN grantees are required to attend only one meeting	Room 110
3:30 pm – 5:30 pm	Development Capital Networks Phase I Grantee Group Meetings DCN grantees are required to attend only one meeting	Room 110

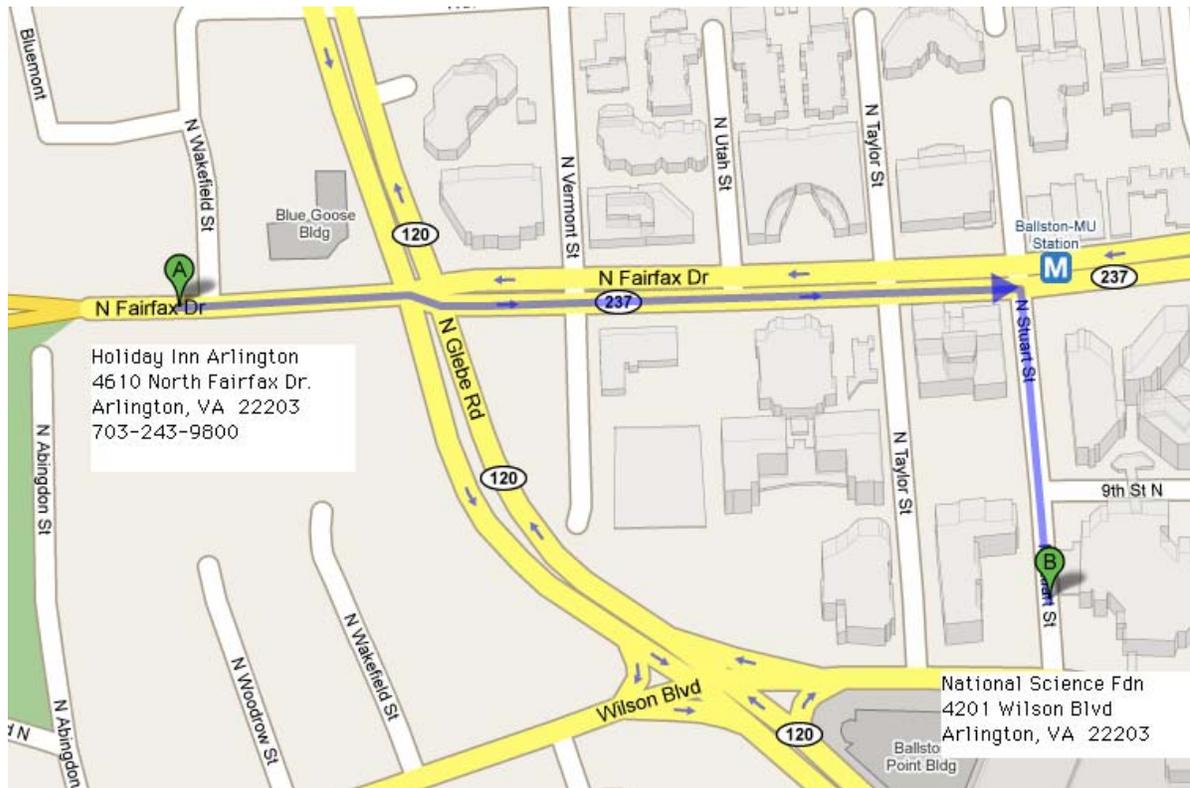
Workshop Concludes

One-on-One Meetings at the National Science Foundation

The National Science Foundation is a ten minute walk from the Holiday Inn.

Please arrive at the NSF approximately 15 minutes prior to your scheduled meeting.

You must provide your picture ID at the Information Desk in the lobby to receive a visitor's badge and be granted access to the building.



Please check the schedules at the end of this booklet for meeting room locations.



Welcome & Introduction to Industrial Innovation & Partnerships (IIP)

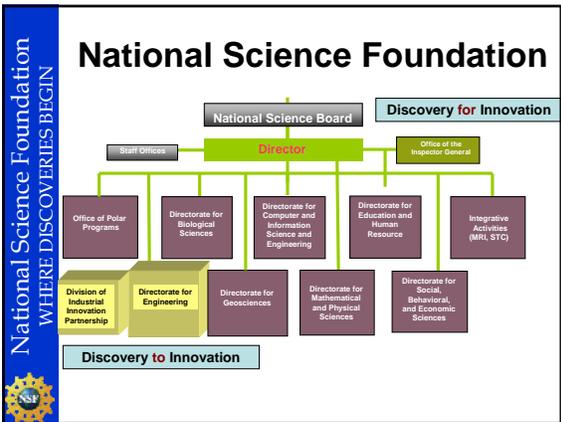
Kesh Narayanan

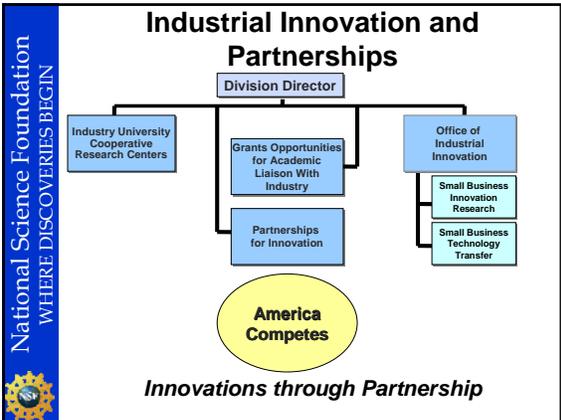
Division Director

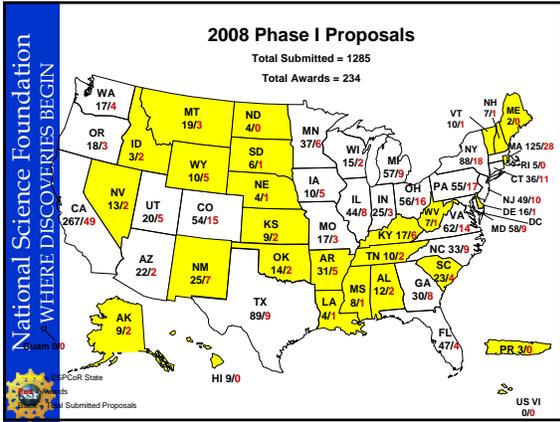
Industrial Innovation & Partnerships

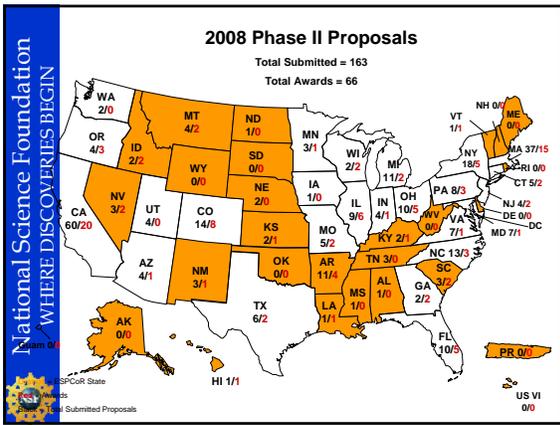
Welcome & Introduction to Industrial Innovation & Partnerships (IIP)

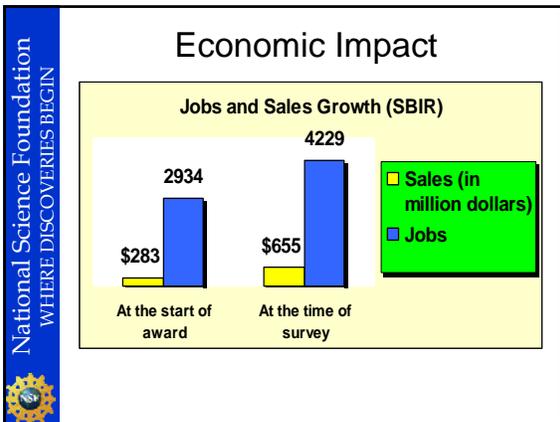
Kesh Narayanan
 Division Director
 Industrial Innovation & Partnerships













What is News? Communicating with – and through – the news media

Josh Chamot

NSF Media Officer for
Engineering Directorate

What is News? Communicating with – and through – the news media

Josh Chamot
NSF Media Officer for
Engineering Directorate

Three key points . . .

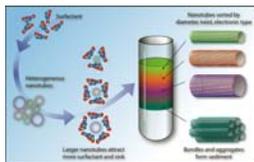
1. Know your audience
2. Outreach expands your audience
3. Interaction is not a crisis (you are not alone)



Three key points . . .

Know your audience

- Audience includes reporters, Hill staff, the taxpaying public who funded your work, etc.
- The better you understand your audience, the more likely they will understand you
- The more you respect your audience, the more they will respect you (and vice versa)



Three key points . . .

Outreach expands your audience

- A larger audience equates to greater support for your research and the benefits of your work



Three key points . . .

Outreach expands your audience

- An interview is a human interaction, the same rules apply: be confident, honest, respectful and open and the experience will go far better than if you are nervous, guarded, disrespectful and defensive



Three key points . . .

Outreach expands your audience

- An interviewer is coming to you for information; always try to provide them with something



Three key points . . .

Outreach expands your audience

- *When a news story quotes you or your colleague, the reporter—and more likely the editor—may unintentionally misrepresent the facts . . . ironically, the "cure" is to have more interviews with more reporters*



Three key points . . .

You are not alone

- *Work with NSF*
- *Work with your university media office*



Three key points . . .

You are not alone

- *Work with your colleagues to help them understand that the future of your research depends on effective public communication*



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Conversations with "The Media"

National Science Foundation
WHERE DISCOVERIES BEGIN

So how much smarter are you, really?

"Modal Mineralogy of the H-group Chondrites: Progressive Effects of Metamorphism"

The modal mineralogy of ordinary chondrites is notoriously difficult to determine through optical point counts, and most researchers have relied upon CIPW normative mineralogy calculations to establish mineralogic trends. Our research uses electron microprobe point counts (up to 528,000 per thin section) to compare CIPW norms with ordinary chondrite modes. From this information, we will compare modal petrologic trends with normative trends.



DO NOT USE JARGON

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The media will respond to news stories that originate from a variety of sources:

- Events with immediate societal impact (ex., the "cold fusion" announcement)
- Perceived, actual, and manufactured trends
- Publication in major journals (ex., *Science* and *Nature*)
- Stories with human interest, such as those involving public figures or "overcoming adversity" – although these are hard to pitch



Reporters do not all come from one background

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Reporters may be trained in journalism only, in science or engineering, or in some combination of these fields.

DO NOT USE JARGON



Courtesy Georgia Tech Center for Low Cost Electronics Packaging Research, photo by Stanley F. Lacey

Reporters do not all come from one background

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WHERE DISCOVERIES BEGIN

Some reporters have a firm grasp of science and engineering, others may not – do not underestimate their ability to process complex information.

That said, err on the side of *simplicity* and . . .

DO NOT USE JARGON



Courtesy Georgia Tech Center for Low Cost Electronics Packaging Research, photo by Stanley F. Lacey

We can often tell you if a reporter or producer is biased, has an agenda, or has a questionable reporting record.

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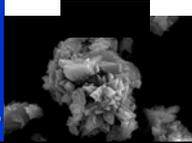
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NSF requires grantees to acknowledge NSF funding when interviewed by the media.



If you are prepared for responding to the media, you will be prepared when a reporter calls with no warning.

Article 19. "Publications"
a. Acknowledgment of Support.
2. NSF support must also be orally acknowledged during all news media interviews, including popular media such as radio, television and news magazines.



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Working with NSF Media Relations

Provide timely information – well in advance of journal publication dates or meetings.

Be available to speak to the media

When you are queried, let us know – we can track media interest

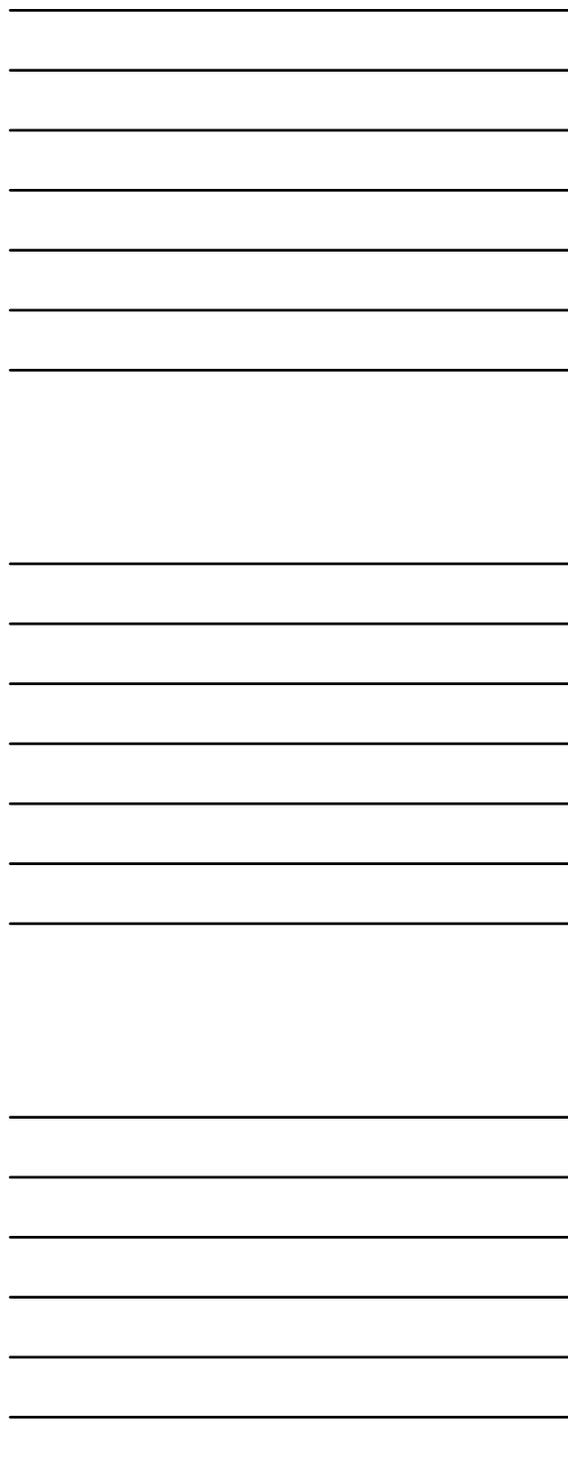
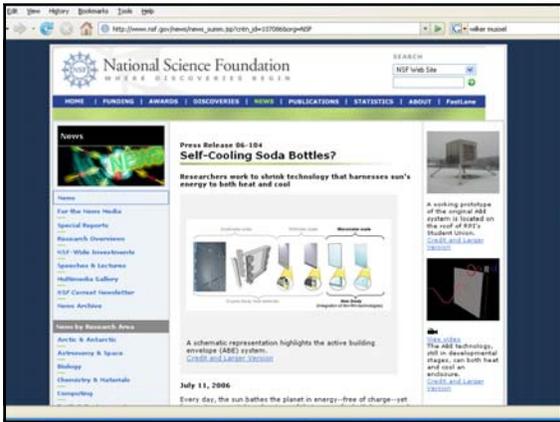


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OLPA both works with the commercial broadcast media and produces video segments of its own . . .

- On-camera interview preparation
- Video News Releases
- "B-Roll"
- Archival Footage
- Animations
- Illustrations







What do I do when a reporter calls?

Give yourself time and consider consulting with NSF on how best to respond. Say, **“Thanks very much for calling, but now is a really bad time. Tell me your deadline, I’m going to have to call you back.”**

Call me at **292-7730** and e-mail me at jchamot@nsf.gov

Never give an interview for which you aren’t prepared

NEVER speak “off-the-record.”





The “Off the Record” Myth

There is no universally accepted definition of what “off the record” means. It means what the **reporter** thinks it means

Assume that anything and everything you say to a reporter is **ON** the record

You cannot “take back” something that you already have said in an interview

Never say anything you would not wish to see in *The Washington Post*

The Bottom line: Never speak “off-the-record.”



Remember: ***An interview is strictly business***

While keeping it friendly, the interview is not a good venue for chit chat.

Conflict is best reserved for later. When in an interview, use logical, prepared statements – not emotional arguments, lectures, or other forms of debating or cajoling.

And finally, deadlines are tight and reporters need all the time they can get to prepare an accurate story. Be brief.

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Some Common Concerns About Media Interaction . . .

- I'll be misquoted
- I'll be taken out of context
- I'll look stupid ("peer sneer")
- I'll mistakenly contradict agency policies in print
- I'll be hounded by the press



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Some Common Concerns About Media Interaction . . .

I'll be misquoted / You can reply by email, or request that reporter fact-checks your quotes (before you submit to the interview)

I'll be taken out of context / see above

I'll look stupid ("peer sneer") / If subject matter is outside your field of expertise, re-direct the reporter to another source (if the fear is being viewed as "the best engineer on television," recognize peer jealousy for what it is and move on – communicating complex processes in a way the public will understand is a skill, not acting)

I'll mistakenly contradict agency policies in print / Please don't respond to a press query without calling OLPA first – we'll provide coaching, tips, even talking points if necessary (and we will be present at the interview if necessary, particularly television)

I'll be hounded by the press / Press should go through our office first – we'll work with you to schedule the interview

By preparing together,
we can address and minimize these concerns



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Who to contact:

Josh Chamot
NSF Media Officer for ENG/MPS
(703) 292-7730
jchamot@nsf.gov






New STTR Solicitation

Cheryl Albus

SBIR/STTR Program Director

National Science Foundation
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New STTR Solicitation

Cheryl Albus
SBIR/STTR Program Director

National Science Foundation
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Background

- Separated STTR from SBIR starting June 2008.
- STTR will be a more focused topic
- Strengthen partnerships with universities and non-profits
- Work with the NSF research directorates

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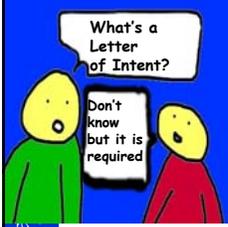
What's New in the STTR Solicitation?

- **STTR** solicitation has only one topic - Multi-Functional Materials
- Co-PIs are now officially recognized by NSF (this is for STTR proposals only!)
- Letters of Intent are **REQUIRED!**



ation
GIN

Timing



What's a Letter of Intent?

Don't know but it is required

- STTR solicitation release:
 - September 2008
- Letters of Intent due:
 - January 14, 2009
- Full Proposals due:
 - February 25, 2009

Ne
NSF

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NSF



Phase I Reporting and How Do I Get Paid??

Amanda Morris

SBIR/STTR Support Contract

Program Manager



Phase I Reporting and How Do I Get Paid??

Amanda Morris
SBIR/STTR Support Contract
Program Manager



Phase I Final Report

- If your grant expires on December 30th, your final report is due by January 15th
- If your grant expires on June 30th, your final report is due by July 15th
- Final Report should not exceed 15 pages of technical content
- Your Final Report submission in FastLane must include a signed "Cover Page" (you can not get paid without it!)
- Upload your Final Report & Cover Page as SINGLE .PDF file to FastLane!



SBIR/STTR PHASE I FINAL REPORT COVER PAGE

PIF or PI Number:	Project Title:	
Date:	Period Covered by this Report:	
Company Name:	PI Name:	Email:
Telephone Number:	Fax Number:	
Company Address:		

Please check appropriate boxes:
 This is a Phase II Proposal Award Add
 Report on a Phase I Proposal

Acknowledgment of NSF support and disclosure:
 This material is based upon work supported by the National Science Foundation under Award Number []. All opinions, findings, and conclusions or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.

Conflict of interest:
 I certify that the Principal Investigator(s) is/are not "financially engaged" by the grantee organization as defined in the NSF regulations.
 I certify that the work under this project has not been submitted for funding to another Federal agency and that it has not been funded under any other Federal grant, contract, or other award.

I certify that to the best of my knowledge the work described in this proposal is based on research that has not been previously reported.

I certify that the work described in this proposal is based on research that is original and novel, and that the work is not a review or synthesis of previously published work. I understand that the NSF is not a publisher of this work and that the NSF is not responsible for the distribution of this work. I understand that the NSF is not a publisher of this work and that the NSF is not responsible for the distribution of this work.

Individual Company Officer Name: _____ Date: _____
 PI Name: _____ Date: _____
 P.I. Signature: _____ Date: _____

**SBIR/STTR
Final Report
Cover Pages are
available on the
SBIR/STTR
website at**

<http://www.nsf.gov/eng/iip/sbir/forms.jsp>



FastLane Reporting Module



Phase I Final Report

Click on "Participants"

- Name of Individuals
- Role Played on the project
- Extent of time put on the project
- What the person has done on the project

Click on "Activities and Findings"

- Upload your technical report by clicking on the "Activities File" button
- Click on Publications and Products (if applicable)
- Click on Contributions (if applicable)



How Do I Get Paid??

Your final payment will be released when the following tasks are accomplished:

- Your Final Technical Report (no more than 15 pages) and signed SBIR Cover Page is uploaded to FastLane as a single PDF document
- Your Program Director approves the report and sends a payment request to Division of Financial Management
- Payment typically takes 15-30 days AFTER the Program Director approves the report and requests payment



Phase IB Supplements

Joseph Hennessey

Senior Advisor

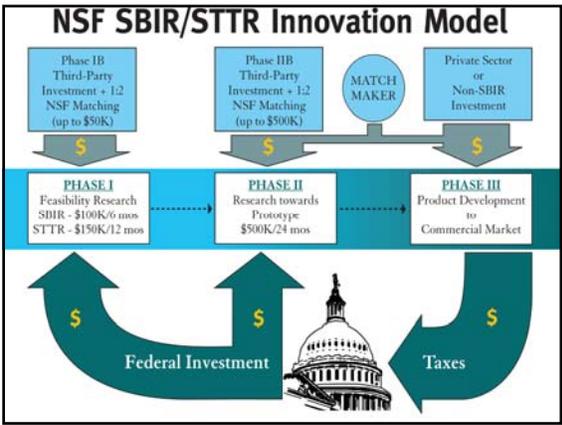
Industrial Innovation & Partnerships

National Science Foundation
WHERE DISCOVERIES BEGIN



Phase IB Supplements

Joseph Hennessey
Senior Advisor
Industrial Innovation & Partnerships



National Science Foundation
WHERE DISCOVERIES BEGIN



Phase IB Objectives

- Foster relationships with strategic partners and investors
- Advance Phase I research
- Help bridge the Phase I/Phase II gap
- Accelerate commercialization



Phase IB Requirements

- An active SBIR or STTR Phase I award
- Funding from a third party investor
 - Cash
 - Liquid assets
 - Tangible financial instrument
 - In-kind, loans, self funding, etc not acceptable
 - Minimum of \$40,000 from investor up to \$100,000. NSF will match 50%



Phase IB Requirements

- Submission deadlines are April 15th or October 15th of your current award period (two options for STTR).
- Your award can not be in a no-cost extension when you apply.
- Although it extends your Phase I end date, the Phase IB supplement does not alter or extend your Phase II submission deadlines.
- NSF money for additional research; investor money for research or acceleration of commercialization



Phase IB Review Process

- Peer review by three external reviewers
- Preliminary notification 30 days after submitting proposal
- All financial documents must submitted via FastLane as part of the Phase IB proposal
- 100% of Phase IB funds provided at award
- Submit an "Interim Report" at the end of your original Phase I award period
- Submit a "Final Report" at the termination of the Phase IB extension.



Phase IB Supplement

- Phase I budget requirements apply
STTR: min 40% performed by small business & min 30% performed by collaborating research institution
- Talk to your Phase I Program Director
- See the following website for details:
<http://www.nsf.gov/eng/iip/sbir/ibinstructions.jsp>



Phase II Proposal Preparation & Review Process

Murali Nair
SBIR/STTR Program Director



Phase II Proposal Preparation & Review Process

Murali Nair
SBIR/STTR Program Director



Agenda

- Phase II Proposal Preparation
- Phase II Review Process
- Phase II Reporting Requirements



Phase II Proposal Preparation

Phase II Proposal Objectives

- Convince reviewers to recommend funding!
- Continue the R&D effort of Phase I
- Present a plausible, realistic commercialization path
- Present project in clear, succinct language

Suggestion: Have someone not very familiar with your technology read the proposal. Did they understand what you are proposing?

Phase II Submission Deadlines

- Phase I Awards expiring on December 31, 2008 have submission opportunity dates of:
 - January 27, 2009
 - July 28, 2009
- Phase I Awards expiring on June 30, 2009 have submission opportunity dates of:
 - July 28, 2009
 - January 29, 2010

Important Information!

- Phase I Final Report must be uploaded into FastLane as part of the Phase II proposal (not to exceed 15 pages) under the "Supplementary Docs" module.
- Project Summary has "4" parts
- Consultant Rate is \$571 per day (consultant letters must specifically state # of days not to exceed \$571 per day)
- Company Commercialization History has been updated
- Page Count applies to three sections: Project Description, Commercialization Plan and Phase I Final Report (each section not to exceed 15 pages)
- Letters of Support are NOT included in page count
- Electronic Signature (must be completed at submission otherwise proposal cannot be reviewed)



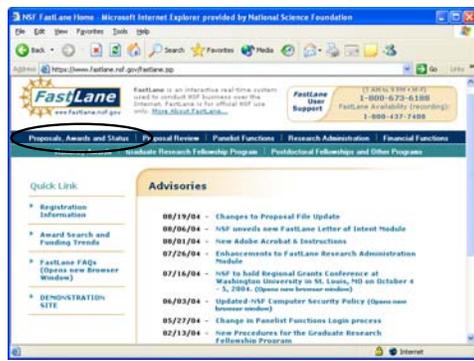
Building a Phase II Proposal in FastLane

Phase II Requirements found at:

http://www.nsf.gov/eng/iip/sbir/phase_ii.jsp

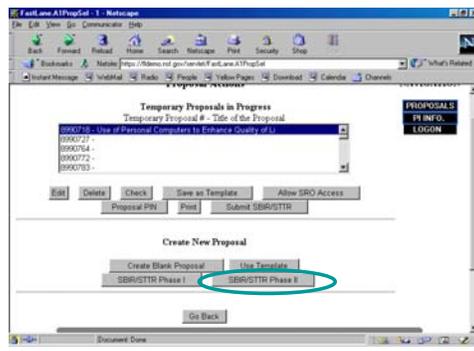


FastLane Home Page





Phase II Proposal Preparation Button





Phase II Proposal Contents Overview (1/2)

- **Cover Sheet** (consists of the "standard" NSF coversheet, certification, and SBIR addendum page)
- **Table of Contents** - automatically generated by FastLane
- **Project Summary** - 4 parts required
- **Project Description** - 5 parts required
- **References Cited** - Comprehensive listing of references & patent citations



Phase II Proposal Contents Overview (2/2)

- **Biographical Sketches** - for PI, key personnel, subcontractors & consultants
- **Proposal Budget & Justification** - [Support all line items](#)
- **Current & Pending Support** - for the PI & key personnel (committed & proposed)
- **Facilities & Equipment** - available for the project
- **Supplementary Docs** - Upload 4 documents (5 if STTR grantee)
- **List of Suggested Reviewers** - provide listing of reviewers or a listing of individuals that you prefer not to review



Project Summary

- Part 1: 200 word summary addressing "Intellectual Merits" ([no proprietary info](#))
- Part 2: 200 word summary addressing the "Broader Impacts" (RWR if missing)
- Part 3: a listing of keywords (6-8)
- Part 4: State topic name and subtopic letter/number, for example:
 - Topic Name: Electronics (EL) Letter/Number: A.5

A File can be uploaded to this FastLane Form

Phase II Proposal Content

- Project Description - cannot exceed **15 pages**
- All parts must be labeled as follows:
 - Part 1. Results of the Phase I Project
 - Part 2. Phase II Technical Objectives, Approach & Work Plan
 - Part 3. Organizational Information
 - Part 4. Consultant and Subaward Agreements (Consultant letters must be scanned and placed under Part 4)
 - Part 5. Equivalent or Overlapping Proposals to Other Federal Agencies

A File **MUST** be uploaded to this FastLane Form

Phase II Proposal Content (Contd.)

- **References Cited** - Provide a comprehensive listing of all relevant references, including patent citations that supports your proposed project activities.

A File can be uploaded to this FastLane Form

Phase II Proposal Content (Contd.)

- **Biographical Sketches** - Provide information on the PI, key personnel, subcontractors and consultants. (SBIR limits each bio to no more than 2 pages each.)
 - Suggestion - Prepare all BIOS in one file and then upload one single file by clicking on the PI's name and then selecting "Transfer File"

A File can be uploaded to this FastLane Form



Phase II Proposal Content (Contd.)

- **Proposal Budget and Justification** - Provide both the company budget and subaward budget plus budget line item justifications - all line items must be justified!
 - The Budget should be entered directly into the FastLane Budget Form.
 - The Budget Justification may be uploaded or directly input in the text box.
 - Remember a budget justification is required for the subawardee as well as for the company.

A File **MUST** be uploaded to this FastLane Form



Phase II Proposal Content (Contd.)

- **Current and Pending Support** - Provide information for the PI and key personnel; the time they have committed on current, pending and "proposed" projects.
- **Facilities and Equipment** - Describe your facilities and equipment to perform the proposed tasks.

A File can be uploaded to these FastLane Forms



Phase II Proposal Content (Contd.)

- **Supplementary Docs** - Consists of four (5 if STTR) components
 1. Payment Schedule and Project Milestone Chart
 2. Commercialization Plan (cannot exceed 15 pages, excluding letters of support)
 3. Company Commercialization History
 4. Phase I Final Report (Cannot exceed 15 pages)
 5. For STTR grants only - Updated Cooperative Research Agreement or a Letter stating the previous agreement is still valid
- **List of Suggested Reviewers or Reviewers Not to Include**

Payment Schedule and Project Milestone Chart (1/2)

- Provide a statement on the payment schedule. If a deviation is required, provide an explanation of why the deviation is required.
- Otherwise the standard schedule is:
 - Initial Payment of 25% (of the total budget)
 - 3 interim payments of 20% (released upon *acceptance* of a interim progress report)
 - 1 final payment of 15% (released upon acceptance of the final report). *Note: Even if a deviation is requested the Final Payment must always be 15% of the overall budget of the project*

Payment Schedule and Project Milestone Chart (2/2)

- **Milestone Information**
 - A "projected" chart is provided in the proposal submission
 - An updated chart is part of each progress report "showing actual expenditures"





Previous Phase I Awardees Say...

- The experience was extremely useful.
- The more you put into this program, the more you get out of it.
- Marketing report alone was worth the experience.
- Demonstrated that my limited business experience and commercial planning capabilities were inadequate.
- Forced us to focus more on the end goal (selling product) rather than purely developing a technically appealing product.
- I had to develop the critical methodology of how to locate and contact potential customers. Without their push, I probably would not have done so.



And Say...

- We already had a business plan put together, but we lacked many of the expensive market research reports. We were able to get information that would have been much more expensive otherwise.
- The process helped us identify the market in detail and organize a methodology of capturing the market.
- Since I only had a technical background and not in business planning, it would have been extremely difficult for me to prepare a good Commercialization Plan without their help.
- Great to have an experienced person to review/ advise my business plan.
- Great perspective on what was expected and what the common pitfalls are.



Company Commercialization History

1. Firm Name
2. Identify any name change your firm has gone through within the past five years
3. List the parent company if you are a subsidiary or a spin-off
4. Percentage of the Firm's Revenues for each of the past **THREE FISCAL YEARS** from Federal SBIR/STTR funding (includes Phase I and Phase II awards)



Company Commercialization History (Contd.)

- 5. Number of SBIR/STTR Phase II Awards Received from the Federal Government
- 6. Identify each of the Phase II SBIR/STTR awards the firm has received by agency, award amount, and award number
- 7. Total Revenues to Date From the Commercialization Results of these Awards

NOTE: Questions have changed and we require that you use this format!



Phase I Final Report

- Upload the 15 page Phase I Final Report
- Phase I Final Report consists of:
 - A summary description of the research carried out, the results and the extent to which the stated Phase I objectives were met
 - Problems encountered and methods of resolution used
 - Problems remaining or unfilled research objectives
 - Conclusions of the Phase I findings and how these conclusions support a Phase II proposal



Cooperative Research Agreement (STTR-only)

- Upload an "updated" Cooperative Research Agreement or provide a letter from the Research Partner stating that the previous CRA is still valid.



Suggested Reviewers or Reviewers Not to Include

- List suggested reviewers who you believe are especially well qualified to review your proposal
- List reviewers that you would prefer not review your proposal, indicating the reason "why"

These suggestions are optional!





Phase II Panel Review Process



Panel Review Process

- All proposals are reviewed equally for:
 - Technical Merit
 - Commercial Potential
- Depending on the subject matter proposals are reviewed in one of the following ways:
 - Technical/Commercial Panel
 - Separate panels for technical and commercial
 - Mail reviews for Technical and a Commercial Panel
 - Any combination of the above

Bottom line: Technical & Commercial Sections are weighted EQUALLY.



Panel Review Process

Each proposal will receive at a minimum:

- Three (3) technical reviews
- Three (3) commercial reviews
- Panel Summary (if a panel is used)

Program Director may request additional clarification in order to make a recommendation - be prompt in responding to request for additional information

A declined Phase II cannot be resubmitted

- Advice: Give it your best shot!!!



Questions?





Phase II Reporting Requirements



Initial Payment

- NSF Grant Letter (via email)
- Submit Request for Initial Payment (see next slide)
- Register with Central Contractor Registry (CCR)
- Payment typically received within 1 week of NSF receiving the two documents



Example of Award Notification

Award Date: December 15, 2005
 Award No.: DMI-0300000
 Proposal No.: DMI-0300000

Dr. Joe Public
 President
 XYZ, Inc.

Dear Dr. Public:

The National Science Foundation hereby awards a grant of \$500,000 to XYZ, Inc. for support of the project described in the proposal referenced above.

This project, under the direction of Dr. John Citizen , is entitled:
 "NSIR Phase II: Novel Manufacturing of Widgets"

This award is effective January 1, 2005 and expires December 31, 2006.

This grant is awarded pursuant to the authority of the National Science Foundation Act of 1950, as amended (42 U.S.C. 1861-75).

This grant is subject to the NSF Small Business Innovation Research (SBIR) - Phase II Grant General Conditions (10/04) <http://www.nsf.gov/sbirs/grants/awards/dfw04011004>. Further, the provisions of the Small Business Innovation Research and Small Business Technology Transfer Program Phase I Solicitation FY-2003 (SBIR-STTR) <http://www.nsf.gov/pubs/2003/inf033330/inf033330.html> are applicable to this grant.

Request for initial payment must be submitted to the NSF Division of Financial Management using the SBIR Award Request for Initial Payment Form available at http://www.nsf.gov/sbirs/form_1004. To receive payment, SBIR grant recipients must register with the Central Contractor Registry (CCR) at <http://www.ccr.gov>. NSF will use the grantee address and electronic funds transfer information from CCR to register your official address and banking information for payments. NSF is no longer using the SF 3861 ACM Vendor Release/Payment Enrollment Form to collect electronic funds transfer information.



Interim & Final Phase II Reports

- Three (3) interim reports
- One (1) Final Report with Commercialization section

Reports **MUST** be approved by the Program Director before payment is released!



Interim Phase II Reports

- **Interim Progress Report: Due every 6 months.** The report **MUST** have the following components:
 - **A Phase II SBIR/STTR Report Cover Page** Sign & scan into Report (**this is new!**) A copy of the report cover page is found at:
http://www.nsf.gov/eng/iip/sbir/PII_Report_Cover.doc
 - **Project Milestone Information Chart:** Each progress report must contain updated project milestone information. This section should reflect the cumulative effort and expenditures for the reporting period.



Interim Phase II Reports (Contd.)

- A 3-5 page narrative that includes the following:
 - Details about progress and percentage completion of milestones during the six-month period being reported
 - Problems encountered during the six-month period being reported
 - Status of commercialization activities during the six-month period being reported (if NONE, so state)



Phase II Final Reports

- Final Report: Consists of three (3) parts

I. Cumulative Project Milestone Information Chart: This should be completely filled-in reflecting "actuals" accumulated from each reporting period.



Phase II Final Reports (Contd.)

II. A technical report documenting the research accomplishments of the entire project. This section should demonstrate that the research activities were carried out and are consistent with the level of effort originally proposed and the amount of funding received. This section should not exceed 10 pages, plus associated reference data, graphics, or tabular data. This section will have the following parts:



Phase II Final Reports (Contd.)

- Summary description of the research carried out, the results and the extent to which the stated Phase II objectives were met
- Problems encountered and methods of resolution used
- Problems remaining or unfulfilled research objectives
- Unexpected or serendipitous results, information or events which may have altered the direction of the project. The impact these results may have on the potential transition into similar or related research or products

Phase II Final Reports (Contd.)

III. A commercialization section

- Part 1: Company Data (basic data about the company and the SBIR project)
- Part 2: Funding Commitment(s)
- Part 3: Were you awarded a Phase IIB supplement? If yes, describe the commercialization activities related to this supplement.
- Part 4: List any products and/or processes currently in the marketplace, or patents or other intellectual property resulting from the SBIR/STTR project.

Phase II Final Reports (Contd.)

- Part 5: Company Employment and Revenue Data
- Part 6: Briefly describe the company's efforts to commercialize technology resulting from this SBIR/STTR award (include customer/potential customer base, an overview of marketing and sales strategies, market readiness and/or market window of opportunity and financing strategies for product life cycle).

Payment Process - Interim & Final

The signed Report Cover Page must be submitted as part of the report in FastLane!

- A report is received via FastLane
- Program Director "accepts or rejects report"
- An accepted report forwarded to Finance Department with payment release form
- Finance Department releases payment upon receiving request from Program Director
- Typically, payment received in ~2-3 weeks from submission of report

Payments cannot be released without signed and scanned Report Cover Page!!



Final Comments

- Call your Program Director if you have questions
- Call the FastLane Help Desk 800-673-6188 or email fastlane@nsf.gov

We are here to help you!



Questions?



NSF SBIR/STTR Phase I Commercialization Planning

Errol Arkilic

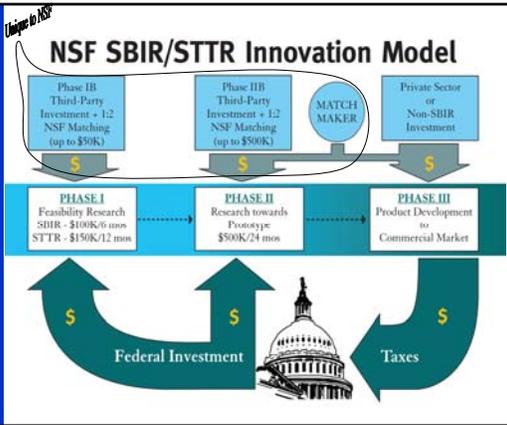
SBIR/STTR Program Director



NSF SBIR/STTR Phase I Commercialization Planning

Errol Arkilic
SBIR/STTR Program Director





Participating Agencies



- DOD Defense
- HHS Health
- NASA Space
- DOE Energy
- NSF ~\$110 Million
- DHS HomeLand Security
- USDA Agriculture
- DOC Commerce
- EPA Environment
- DOT Transportation
- DoED Education

TOTAL ~ \$2.5B
Est. FY 2007





Why does NSF care about commercialization?

- What is the NSF Vision?

NSF Vision: "...catalyze the strong progress in science and engineering needed to establish world leadership and secure the Nation's security, prosperity, and well being"

- What is the NSF IIP Vision?

To be the pre-eminent federal resource to leverage high technology through small businesses to stimulate our nation's innovation leadership and contribute to the U.S. economy and society



NSF Phase II commercialization outcome assessment

- Gauge the effectiveness of the NSF-SBIR program in fostering commercialization
- Identify opportunities to improve the program's service to the nation
- "High-touch" interview initiated in July '05
- Contacted at 3, 5 and 8 years post Phase II award
- Over 450 phone interview to date
- 88% Contact rate



How are we (you) doing

- 223 contacts had "failed" projects.

~50% failed to get to market

Causes for failure

- "Technical" forces
 - Key people left
 - Ran out of money
 - Cost too high
- "Market" forces
 - Cost competitiveness
 - Shift in strategic direction
 - Market "disappeared"
- Market failures almost 2:1 over Technical failures



Doing Business with NSF

- NSF is not the Final Customer
- NSF is not buying a product/process/software or intellectual property
- NSF wants to see you successfully **commercialize** the innovation
- Company needs investment dollars beyond NSF SBIR/STTR



Commercialization Plan Overview

- 15 Pages to convey how you are going to make money
- Not *Can* it be Done but *Should* it be Done
- 4 Parts
 - Market Opportunity
 - Company/Team
 - Product/Technology, Competition
 - Finance and Revenue Model



Successes, from the Data!

- 60% Had strong ties (collaboration) with a market leader or customer.
 - MARKET OPPORTUNITY
- 40% Had a strong COLLABORATIONS with leading academics.
 - BALANCED TEAM
- 57% Claimed to have a strong patent position (biased by IT numbers).
 - DEFENDABLE IP
- Among 106 8-year companies contacted, the average sales growth rate was 27% per year and the personnel growth was 10.7% per year.
 - REVENUE DOUBLING IN 3 YEARS (biased by hardware and Biotech numbers)



Commercialization Plan Review Process

- So, the Commercialization plan counts for 50% right?
- The review process
- Who sits at the table?
- How do I protect my IP?
- What guidance does NSF give Reviewers?



Some General Questions Addressed by Commercialization Plan

- Who is the customer for this innovation?
- What is my company's profile/makeup?
- What are my team's strengths/weaknesses?
- Are the tasks and budget reasonable for the program being proposed?
- How does the competitive space appear?
- Has ownership of intellectual property been addressed?
- Does the company have a vision of the IP landscape?
- Number of customers, what are they willing to pay?
- How much \$ is required to get the innovation to market?
- What channels do I need to access to get to market?
- What is the plan to finance the commercialization effort?
- **Why is this a Compelling "Investment" for the American Taxpayer**



Commercial Plan: Discussion at the Review Table

- Market Opportunity
- Company and Team
- Product, Technology and Competition
- Revenue and Finance Plan



Market Opportunity

Describe succinctly the product or service and the “customer needs” which are being addressed? Based upon the information in the proposal, describe the customer served by the described innovation? How does the customer currently meet those needs? What is the business model for this innovation? Is the model a service, product, license or “other” strategy? Has the company described how they are going to get the innovation to market? Can you tell where they are in the development cycle and describe the critical milestones required to get to market? Is there some strategic reason (societal benefit) for the nation to invest in this business? If so, what is it?



Company/Team

Based on the information in the proposal, is this a seed, early stage or expanding company? How big is the company and where do the entrepreneurs want to take the company? Have they described their financial resources? Do they have other external funding sources such as investors or strategic partners? If there is revenue, what are the sources of revenue and assess revenue history over the past three years? How well is the team poised to take this innovation to market? Have they taken similar products to market previously? Do they have additional outside advisors, mentors, partners and stakeholders? Is the corporate structure consistent with the company’s vision?



Product/Technology and Competition

Has the company described the features of their technology that are going to provide a compelling value proposition to the customer? If so, what are they? What validation is there from the market about the proposed value proposition? What does the company think people will pay for the innovation or service enabled by the innovation? Is there any evidence that this assumption has been validated? Does the company demonstrate a realistic understanding of the cost to take this innovation to market? Who are the main competitors in the market space? How is this company going to compete: price, performance or other? Has the company adequately addressed the IP landscape? Is there evidence that a patent search has been undertaken? Is there adequate evidence that the company knows its position in the IP landscape and has a management plan for handling IP issues as they arise?



Revenue/Finance Plan

Does the company demonstrate adequate knowledge for the level of financial resources it will take to get the innovation to market? Do they have a phased plan to bring these funds to the table? Is there evidence of commitment for the funding beyond the Phase II effort? What are the revenue streams for this innovation. When will those revenues be received? When does cashflow breakeven occur? Are the pro formas reasonable given the state of the innovation? Has the company adequately described and tried to validate the assumptions behind the models?

***** ALWAYS CHECK THE WEBSITE FOR LATEST PHASE II COMMERCIALIZATION PLAN GUIDANCE**

***** Only Require P&L statements 5 years out from START of the Award (3 years post Phase II)**



Company Commercialization History

HAS YOUR FIRM RECEIVED PHASE II AWARDS FROM ANY AGENCY? If so...

- How much of your annual revenue is coming from SBIR/STTR awards (3 Year)?
- How much SBIR/STTR funding have you received (In Total)?
- What is the total revenue resulting from your Phase II projects (In Total)?



Why Do Commercial Plans Fail?

- Lack of identified opportunity (science projects)
- Lack of team self awareness
- Unrealistic cost structure
- Unrealistic finance plan
- Top-down and unrealistic market analysis
- Lack of awareness of the competitive landscape
- Intellectual property "issues"

Doing Business with NSF (part 2)

- Ideas do NOT equal business opportunities
- Do your HOMEWORK, describe the *opportunity*
- Get some market validation BEFORE you submit a Phase I proposal
- Consider proposal YOUR ADVOCATE at the table
- Proposal as “selling” document
- Why This? Why This Team? Why Now?
- NSF SBIR/STTR: an Equity-Free Investment
 - NOT CONTRACT R&D

Additional Commercialization Takeaways from the Survey?

- Reinforces the NSF SBIR commercialization planning early.
- High- and Low-performing companies can be identified - Commercialization History Section is often misleading.
- Excursion from existing company *technologies* lead to more failures.
- Too small an excursion from existing *products*, i.e., product optimizations and expansions lead to incremental “wins.”
- Start-ups (under 10 employees at the time of the award) are slightly better than more established companies at commercializing NSF awards.
- Efforts with strong collaborations and financial backing from industry leaders early are more successful.

Supplements

<http://www.nsf.gov/eng/iip/sbir/>
http://www.nsf.gov/eng/iip/sbir/supplemental_requests.jsp

- IB
- IIA
 - Max \$150K partnership with a CREST institute to delve deeper into the technology 30:70 (grantee:institute)
- IIB
 - Max \$500K (1:2) match for third party funds
- IICC
 - Max \$40K partnership with a MSCC institute to delve deeper into the technology 25:75 (grantee:institute)
- REU/RET

Questions?



Audit & Investigation

Montgomery K. Fisher, JD, PhD

Senior Counsel, Investigations

Office of Inspector General

National Science Foundation
WHERE DISCOVERIES BEGIN



Audit & Investigation

Montgomery K. Fisher, JD, PhD
Senior Counsel, Investigations
Office of Inspector General

National Science Foundation
WHERE DISCOVERIES BEGIN



What we do

National Science Foundation
WHERE DISCOVERIES BEGIN



Audits

- We used to audit SBIR awards, found many administrative problems & questioned costs
- SBIR awards are now fixed-price, so no more audits

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WHERE DISCOVERIES BEGIN



Investigations

- We used to investigate fraud in receipt and use of SBIR grant funds, had numerous successful civil and criminal cases
- We still find fraud in receipt & use of SBIR grant funds ... but less often than previously

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WHERE DISCOVERIES BEGIN



There are rules

National Science Foundation
WHERE DISCOVERIES BEGIN



A Good Budget

- **Document your budget estimates**
 - Retain subcontractor/vendor quotations
 - Notify the program officer if circumstances change before you receive the award
- **Post-Award**
 - If any budget items were disapproved upon award, do not spend grant funds on those items
 - Subcontracts or equipment purchases above \$5,000 not in approved budget must be pre-approved

Must be a Small Business

- Company must fit Small Business Administration's definition of Small Business Concern, such as:
- U.S. ownership
- Fewer than 500 employees (including subsidiaries, parent, other affiliates)

No Duplicate Funding

- NSF will not make awards that duplicate or substantially overlap research funded by other agencies
- You must disclose whether your company has: (1) received federal awards for related work, or (2) submitted or intends to submit proposals for similar work to any other federal program

C&PS

- **Current and Pending Support (C&PS)**
 - Intended to show that the PI and senior personnel have time available to perform the proposed research during the grant period
 - Must provide information about all research to which the PI and other senior personnel either have committed time or plan to commit time

(If you lie about duplicative proposals/awards, you'll probably have to lie about C&PS too)

Work by the Grantee

- Phase I: two-thirds of the work must be performed by the grantee company
- Phase II: one-half of the work must be performed by the grantee company

(Work performed in a university research lab is NOT performed by the grantee company)

PI's Primary Employment

- The PI's primary employment must be with the small business at the time of award
 - The PI canNOT be employed full-time elsewhere
- Change of PI requires advance written request via FastLane and approval by NSF

There are certifications



- Lying to obtain an SBIR grant, or lying about what you did under a grant, violates several criminal laws, such as:
 - False Statements, 18 USC §1001
 - Theft of Federal Funds, 18 USC §641
 - Wire Fraud, 18 USC §1343
- You can go to prison, and have to pay full restitution plus fines



- Using SBIR grant funds for your personal use is criminal conversion (18 USC §641) and, if you don't report it to the IRS as personal income, it's tax evasion (18 USC §7201)
- Lying to us (e.g. Martha Stewart), or destroying evidence, when we're investigating is obstruction of justice (18 USC §1505)



- The False Claims Act
 - **Treble damages** plus a fine of \$11,000 for each false claim
 - "False Claims" include false information in the SBIR proposal, the Certification of Current Cost or Pricing Data, the Request for Initial Payment, and the interim and final reports

(For example, a false Phase I final report is a false claim for the final Phase I payment and for the full Phase II award)

- **Suspension and Debarment**
 - Prohibited from receiving federal awards or working under someone else's awards
 - Suspension during investigation and prosecution, followed by 3-year debarment
 - Successful civil or criminal prosecution is invariably followed by debarment
- **Termination of Current Awards**

3 True Stories

- **Fraud:**
 - Two companies with same owner, received duplicate SBIR awards from several agencies for the same work
 - Pls' primary employment was falsified
 - Research had actually been conducted by a university lab, not by the company
- **Settlement with DOJ:**
 - \$1.7M restitution + \$1.6M additional civil damages
 - \$909K in awards terminated; company and officers debarred for 3 years

National Science Foundation
WHERE DISCOVERIES BEGIN

- **Fraud:**
 - University professor applied for SBIR Phase I grant in name of wife's non-existent company (without wife's or university's knowledge)
 - No research performed under Phase I; Prof & wife wrote checks to selves for non-existent expenses
 - Phase I final report was copied verbatim from prof's student's thesis
 - NSF awarded Phase II on basis of Phase I report
 - Prof & wife received first payment, wrote checks to selves for non-existent expenses

National Science Foundation
WHERE DISCOVERIES BEGIN

- **University discovered Prof's activities, notified NSF; we investigated**
- **Settlement with DOJ:**
 - Before the start of negotiations, Prof & wife repaid \$199K of grant funds, and made an unrestricted & unsolicited donation of \$27.5K to NSF
 - \$300K grant terminated, company dissolved
 - Prof pled guilty to violation of 18 USC §1001, sentenced to 5 years probation + \$15K fine
 - Prof debarred for 3 years

National Science Foundation
WHERE DISCOVERIES BEGIN

- **Fraud:**
 - Owner of small business (1) submitted falsified SBIR reports and (2) used SBIR funds for personal expenses (such as renovations of his home) and to make excessive payments to vendors so he could pocket the reimbursements
- **DOJ Action:**
 - The owner pled guilty to mail fraud and tax evasion, settled civil case
 - Paid \$1.4M, sentenced to 1 year home detention and 5 years probation
 - 5-year ban on federal grants or contracts

National Science Foundation
WHERE DISCOVERIES BEGIN



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Phase II Budget Submission Guidance & Requirements

Juan Figueroa
SBIR/STTR Program Director

SUMMARY PROPOSAL BUDGET

YEAR 1

ORGANIZATION abc inst				FOR NSF USE ONLY			
				PROPOSAL NO.	DURATION (months)		
PRINCIPAL INVESTIGATOR / PROJECT DIRECTOR Terry Demo				AWARD NO.	Proposed	Granted	
				A. SENIOR PERSONNEL: PI/PD, Co-PI's, Faculty and Other Senior Associates (List each separately with title, A.7. show number in brackets)			
	CAL	ACAD	SUMR				
1. Terry Demo - PI	4.00	0.00	0.00	\$	40,000	\$	
2. Frederick Scott - Engineer	1.50	0.00	0.00		15,000		
3. Joseph Smith - Engineer	1.50	0.00	0.00		15,000		
4.							
5.							
6. (0) OTHERS (LIST INDIVIDUALLY ON BUDGET JUSTIFICATION PAGE)	0.00	0.00	0.00		0		
7. (3) TOTAL SENIOR PERSONNEL (1 - 6)	7.00	0.00	0.00		70,000		
B. OTHER PERSONNEL (SHOW NUMBERS IN BRACKETS)							
1. (0) POST DOCTORAL SCHOLARS	0.00	0.00	0.00		0		
2. (2) OTHER PROFESSIONALS (TECHNICIAN, PROGRAMMER, ETC.)	2.00	0.00	0.00		3,000		
3. (0) GRADUATE STUDENTS					0		
4. (0) UNDERGRADUATE STUDENTS					0		
5. (0) SECRETARIAL - CLERICAL (IF CHARGED DIRECTLY)					0		
6. (0) OTHER					0		
TOTAL SALARIES AND WAGES (A + B)					73,000		
C. FRINGE BENEFITS (IF CHARGED AS DIRECT COSTS)					0		
TOTAL SALARIES, WAGES AND FRINGE BENEFITS (A + B + C)					73,000		
D. EQUIPMENT (LIST ITEM AND DOLLAR AMOUNT FOR EACH ITEM EXCEEDING \$5,000.)							
High Performance Server				\$	6,500		
Miniature Spectrometer					7,500		
TOTAL EQUIPMENT					14,000		
E. TRAVEL					2,000		
1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSESSIONS)					2,000		
2. FOREIGN					0		
F. PARTICIPANT SUPPORT COSTS							
1. STIPENDS	\$		0				
2. TRAVEL			0				
3. SUBSISTENCE			0				
4. OTHER			0				
(0) TOTAL PARTICIPANT COSTS					0		
G. OTHER DIRECT COSTS							
1. MATERIALS AND SUPPLIES					3,500		
2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION					0		
3. CONSULTANT SERVICES					5,710		
4. COMPUTER SERVICES					0		
5. SUBAWARDS					85,000		
6. OTHER					50,000		
TOTAL OTHER DIRECT COSTS					144,210		
H. TOTAL DIRECT COSTS (A THROUGH G)					233,210		
I. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE)							
G&A (Rate: 30.7400, Base: 73000)							
TOTAL INDIRECT COSTS (F&A)					22,440		
J. TOTAL DIRECT AND INDIRECT COSTS (H + I)					255,650		
K. FEE (IF REQUESTED MAXIMUM = 7% OF J)					17,895		
L. TOTAL COST AND FEE (J + K)				\$	273,545	\$	
PI/PD NAME Terry Demo				FOR NSF USE ONLY			
ORG. REP. NAME*				INDIRECT COST RATE VERIFICATION			
		Date Checked	Date Of Rate Sheet	Initials - ORG			

SUMMARY PROPOSAL BUDGET

YEAR 2

ORGANIZATION abc inst				FOR NSF USE ONLY		
				PROPOSAL NO.	DURATION (months)	
PRINCIPAL INVESTIGATOR / PROJECT DIRECTOR Terry Demo				AWARD NO.	Proposed	Granted
					NSF Funded Person-months	
A. SENIOR PERSONNEL: PI/PD, Co-PI's, Faculty and Other Senior Associates (List each separately with title, A.7. show number in brackets)				CAL	ACAD	SUMR
1. Terry Demo - PI				4.00	0.00	0.00
2. Frederick Scott - Engineer				3.00	0.00	0.00
3. Joseph Smith - Engineer				2.50	0.00	0.00
4.						
5.						
6. (0) OTHERS (LIST INDIVIDUALLY ON BUDGET JUSTIFICATION PAGE)				0.00	0.00	0.00
7. (3) TOTAL SENIOR PERSONNEL (1 - 6)				9.50	0.00	0.00
B. OTHER PERSONNEL (SHOW NUMBERS IN BRACKETS)						
1. (0) POST DOCTORAL SCHOLARS				0.00	0.00	0.00
2. (4) OTHER PROFESSIONALS (TECHNICIAN, PROGRAMMER, ETC.)				4.00	0.00	0.00
3. (0) GRADUATE STUDENTS						
4. (0) UNDERGRADUATE STUDENTS						
5. (0) SECRETARIAL - CLERICAL (IF CHARGED DIRECTLY)						
6. (0) OTHER						
TOTAL SALARIES AND WAGES (A + B)						
C. FRINGE BENEFITS (IF CHARGED AS DIRECT COSTS)						
TOTAL SALARIES, WAGES AND FRINGE BENEFITS (A + B + C)						
D. EQUIPMENT (LIST ITEM AND DOLLAR AMOUNT FOR EACH ITEM EXCEEDING \$5,000.)						
TOTAL EQUIPMENT						
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSESSIONS)						
2. FOREIGN						
F. PARTICIPANT SUPPORT COSTS						
1. STIPENDS \$ _____				0		
2. TRAVEL _____				0		
3. SUBSISTENCE _____				0		
4. OTHER _____				0		
(0) TOTAL PARTICIPANT COSTS						
G. OTHER DIRECT COSTS						
1. MATERIALS AND SUPPLIES						
2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION						
3. CONSULTANT SERVICES						
4. COMPUTER SERVICES						
5. SUBAWARDS						
6. OTHER						
TOTAL OTHER DIRECT COSTS						
H. TOTAL DIRECT COSTS (A THROUGH G)						
I. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE) G&A (Rate: 30.7400, Base: 93250)						
TOTAL INDIRECT COSTS (F&A)						
J. TOTAL DIRECT AND INDIRECT COSTS (H + I)						
K. FEE (IF REQUESTED MAXIMUM = 7% OF J)						
L. TOTAL COST AND FEE (J + K)						
				\$		\$

PI/PD NAME Terry Demo		FOR NSF USE ONLY		
ORG. REP. NAME*		INDIRECT COST RATE VERIFICATION		
		Date Checked	Date Of Rate Sheet	Initials - ORG

SUMMARY PROPOSAL BUDGET Cumulative

ORGANIZATION abc inst				FOR NSF USE ONLY			
				PROPOSAL NO.	DURATION (months)		
PRINCIPAL INVESTIGATOR / PROJECT DIRECTOR Terry Demo				AWARD NO.	Proposed	Granted	
A. SENIOR PERSONNEL: PI/PD, Co-PI's, Faculty and Other Senior Associates (List each separately with title, A.7. show number in brackets)				NSF Funded Person-months		Funds Requested By proposer	Funds granted by NSF (if different)
				CAL	ACAD	SUMR	
1.	Terry Demo - PI			8.00	0.00	0.00	\$ 80,000
2.	Frederick Scott - Engineer			4.50	0.00	0.00	37,500
3.	Joseph Smith - Engineer			4.00	0.00	0.00	33,750
4.							
5.							
6.	() OTHERS (LIST INDIVIDUALLY ON BUDGET JUSTIFICATION PAGE)			0.00	0.00	0.00	0
7.	(3) TOTAL SENIOR PERSONNEL (1 - 6)			16.50	0.00	0.00	151,250
B. OTHER PERSONNEL (SHOW NUMBERS IN BRACKETS)							
1.	(0) POST DOCTORAL SCHOLARS			0.00	0.00	0.00	0
2.	(6) OTHER PROFESSIONALS (TECHNICIAN, PROGRAMMER, ETC.)			6.00	0.00	0.00	15,000
3.	(0) GRADUATE STUDENTS						0
4.	(0) UNDERGRADUATE STUDENTS						0
5.	(0) SECRETARIAL - CLERICAL (IF CHARGED DIRECTLY)						0
6.	(0) OTHER						0
TOTAL SALARIES AND WAGES (A + B)							166,250
C. FRINGE BENEFITS (IF CHARGED AS DIRECT COSTS)							0
TOTAL SALARIES, WAGES AND FRINGE BENEFITS (A + B + C)							166,250
D. EQUIPMENT (LIST ITEM AND DOLLAR AMOUNT FOR EACH ITEM EXCEEDING \$5,000.)							
				\$ 14,000			
TOTAL EQUIPMENT							14,000
E. TRAVEL							
	1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSESSIONS)						4,000
	2. FOREIGN						0
F. PARTICIPANT SUPPORT COSTS							
1.	STIPENDS \$ _____						0
2.	TRAVEL _____						0
3.	SUBSISTENCE _____						0
4.	OTHER _____						0
(0) TOTAL PARTICIPANT COSTS							0
G. OTHER DIRECT COSTS							
1.	MATERIALS AND SUPPLIES						8,500
2.	PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION						0
3.	CONSULTANT SERVICES						11,420
4.	COMPUTER SERVICES						0
5.	SUBAWARDS						115,000
6.	OTHER						60,000
TOTAL OTHER DIRECT COSTS							194,920
H. TOTAL DIRECT COSTS (A THROUGH G)							379,170
I. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE)							
TOTAL INDIRECT COSTS (F&A)							51,105
J. TOTAL DIRECT AND INDIRECT COSTS (H + I)							430,275
K. FEE (IF REQUESTED MAXIMUM = 7% OF J)							30,118
L. TOTAL COST AND FEE (J + K)							\$ 460,393 \$
PI/PD NAME Terry Demo				FOR NSF USE ONLY			
ORG. REP. NAME*				INDIRECT COST RATE VERIFICATION			
		Date Checked	Date Of Rate Sheet	Initials - ORG			

*ELECTRONIC SIGNATURES REQUIRED ONLY FOR REVISED BUDGET

SUMMARY PROPOSAL BUDGET

YEAR 1

ORGANIZATION Johns Hopkins University				FOR NSF USE ONLY			
				PROPOSAL NO.	DURATION (months)		
PRINCIPAL INVESTIGATOR / PROJECT DIRECTOR Randolph Macon				AWARD NO.	Proposed	Granted	
A. SENIOR PERSONNEL: PI/PD, Co-PI's, Faculty and Other Senior Associates (List each separately with title, A.7. show number in brackets)				NSF Funded Person-months		Funds Requested By proposer	Funds granted by NSF (if different)
				CAL	ACAD	SUMR	
1. Randolph Macon - Professor				2.00	0.00	0.00	\$ 20,000
2. Thomas Payne - Assoc. Professor				4.00	0.00	0.00	18,000
3.							
4.							
5.							
6. (0) OTHERS (LIST INDIVIDUALLY ON BUDGET JUSTIFICATION PAGE)				0.00	0.00	0.00	0
7. (2) TOTAL SENIOR PERSONNEL (1 - 6)				6.00	0.00	0.00	38,000
B. OTHER PERSONNEL (SHOW NUMBERS IN BRACKETS)							
1. (0) POST DOCTORAL SCHOLARS				0.00	0.00	0.00	0
2. (0) OTHER PROFESSIONALS (TECHNICIAN, PROGRAMMER, ETC.)				0.00	0.00	0.00	0
3. (2) GRADUATE STUDENTS							20,000
4. (0) UNDERGRADUATE STUDENTS							0
5. (0) SECRETARIAL - CLERICAL (IF CHARGED DIRECTLY)							0
6. (0) OTHER							0
TOTAL SALARIES AND WAGES (A + B)							58,000
C. FRINGE BENEFITS (IF CHARGED AS DIRECT COSTS)							0
TOTAL SALARIES, WAGES AND FRINGE BENEFITS (A + B + C)							58,000
D. EQUIPMENT (LIST ITEM AND DOLLAR AMOUNT FOR EACH ITEM EXCEEDING \$5,000.)							
TOTAL EQUIPMENT							0
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSESSIONS)							2,000
2. FOREIGN							0
F. PARTICIPANT SUPPORT COSTS							
1. STIPENDS \$ _____ 0							
2. TRAVEL _____ 0							
3. SUBSISTENCE _____ 0							
4. OTHER _____ 0							
(0) TOTAL PARTICIPANT COSTS							0
G. OTHER DIRECT COSTS							
1. MATERIALS AND SUPPLIES							15,000
2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION							0
3. CONSULTANT SERVICES							0
4. COMPUTER SERVICES							0
5. SUBAWARDS							0
6. OTHER							10,000
TOTAL OTHER DIRECT COSTS							25,000
H. TOTAL DIRECT COSTS (A THROUGH G)							85,000
I. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE) (Rate: , Base:)							
TOTAL INDIRECT COSTS (F&A)							0
J. TOTAL DIRECT AND INDIRECT COSTS (H + I)							85,000
K. FEE (IF REQUESTED MAXIMUM = 7% OF J)							0
L. TOTAL COST AND FEE (J + K)							\$ 85,000 \$
PI/PD NAME Randolph Macon				FOR NSF USE ONLY INDIRECT COST RATE VERIFICATION			
ORG. REP. NAME*							

SUMMARY PROPOSAL BUDGET

YEAR **2**

ORGANIZATION Johns Hopkins University				FOR NSF USE ONLY			
				PROPOSAL NO.	DURATION (months)		
PRINCIPAL INVESTIGATOR / PROJECT DIRECTOR Randolph Macon				AWARD NO.	Proposed	Granted	
A. SENIOR PERSONNEL: PI/PD, Co-PI's, Faculty and Other Senior Associates (List each separately with title, A.7. show number in brackets)				NSF Funded Person-months		Funds Requested By proposer	Funds granted by NSF (if different)
				CAL	ACAD	SUMR	
1. Randolph Macon - Professor				0.50	0.00	0.00	\$ 5,000
2. Thomas Payne - Assoc Professor				2.00	0.00	0.00	9,000
3.							
4.							
5.							
6. (0) OTHERS (LIST INDIVIDUALLY ON BUDGET JUSTIFICATION PAGE)				0.00	0.00	0.00	0
7. (2) TOTAL SENIOR PERSONNEL (1 - 6)				2.50	0.00	0.00	14,000
B. OTHER PERSONNEL (SHOW NUMBERS IN BRACKETS)							
1. (0) POST DOCTORAL SCHOLARS				0.00	0.00	0.00	0
2. (0) OTHER PROFESSIONALS (TECHNICIAN, PROGRAMMER, ETC.)				0.00	0.00	0.00	0
3. (2) GRADUATE STUDENTS							10,000
4. (0) UNDERGRADUATE STUDENTS							0
5. (0) SECRETARIAL - CLERICAL (IF CHARGED DIRECTLY)							0
6. (0) OTHER							0
TOTAL SALARIES AND WAGES (A + B)							24,000
C. FRINGE BENEFITS (IF CHARGED AS DIRECT COSTS)							0
TOTAL SALARIES, WAGES AND FRINGE BENEFITS (A + B + C)							24,000
D. EQUIPMENT (LIST ITEM AND DOLLAR AMOUNT FOR EACH ITEM EXCEEDING \$5,000.)							
TOTAL EQUIPMENT							0
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSESSIONS)							2,000
2. FOREIGN							0
F. PARTICIPANT SUPPORT COSTS							
1. STIPENDS \$ _____ 0							
2. TRAVEL _____ 0							
3. SUBSISTENCE _____ 0							
4. OTHER _____ 0							
(0) TOTAL PARTICIPANT COSTS							0
G. OTHER DIRECT COSTS							
1. MATERIALS AND SUPPLIES							4,000
2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION							0
3. CONSULTANT SERVICES							0
4. COMPUTER SERVICES							0
5. SUBAWARDS							0
6. OTHER							0
TOTAL OTHER DIRECT COSTS							4,000
H. TOTAL DIRECT COSTS (A THROUGH G)							30,000
I. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE) (Rate: , Base:)							
TOTAL INDIRECT COSTS (F&A)							0
J. TOTAL DIRECT AND INDIRECT COSTS (H + I)							30,000
K. FEE (IF REQUESTED MAXIMUM = 7% OF J)							0
L. TOTAL COST AND FEE (J + K)							\$ 30,000 \$
PI/PD NAME Randolph Macon				FOR NSF USE ONLY INDIRECT COST RATE VERIFICATION			
ORG. REP. NAME*							

SUMMARY PROPOSAL BUDGET Cumulative

ORGANIZATION Johns Hopkins University				FOR NSF USE ONLY			
				PROPOSAL NO.	DURATION (months)		
PRINCIPAL INVESTIGATOR / PROJECT DIRECTOR Randolph Macon				AWARD NO.			
				Proposed	Granted		
A. SENIOR PERSONNEL: PI/PD, Co-PI's, Faculty and Other Senior Associates (List each separately with title, A.7. show number in brackets)				NSF Funded Person-months		Funds Requested By proposer	Funds granted by NSF (if different)
				CAL	ACAD	SUMR	
1. Randolph Macon - Professor				2.50	0.00	0.00	\$ 25,000
2. Thomas Payne - Assoc Professor				6.00	0.00	0.00	27,000
3.							
4.							
5.							
6. () OTHERS (LIST INDIVIDUALLY ON BUDGET JUSTIFICATION PAGE)				0.00	0.00	0.00	0
7. (2) TOTAL SENIOR PERSONNEL (1 - 6)				8.50	0.00	0.00	52,000
B. OTHER PERSONNEL (SHOW NUMBERS IN BRACKETS)							
1. (0) POST DOCTORAL SCHOLARS				0.00	0.00	0.00	0
2. (0) OTHER PROFESSIONALS (TECHNICIAN, PROGRAMMER, ETC.)				0.00	0.00	0.00	0
3. (4) GRADUATE STUDENTS							30,000
4. (0) UNDERGRADUATE STUDENTS							0
5. (0) SECRETARIAL - CLERICAL (IF CHARGED DIRECTLY)							0
6. (0) OTHER							0
TOTAL SALARIES AND WAGES (A + B)							82,000
C. FRINGE BENEFITS (IF CHARGED AS DIRECT COSTS)							0
TOTAL SALARIES, WAGES AND FRINGE BENEFITS (A + B + C)							82,000
D. EQUIPMENT (LIST ITEM AND DOLLAR AMOUNT FOR EACH ITEM EXCEEDING \$5,000.)							
TOTAL EQUIPMENT							0
E. TRAVEL							4,000
1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSESSIONS)							4,000
2. FOREIGN							0
F. PARTICIPANT SUPPORT COSTS							
1. STIPENDS \$ _____				0			
2. TRAVEL _____				0			
3. SUBSISTENCE _____				0			
4. OTHER _____				0			
(0) TOTAL PARTICIPANT COSTS							0
G. OTHER DIRECT COSTS							
1. MATERIALS AND SUPPLIES							19,000
2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION							0
3. CONSULTANT SERVICES							0
4. COMPUTER SERVICES							0
5. SUBAWARDS							0
6. OTHER							10,000
TOTAL OTHER DIRECT COSTS							29,000
H. TOTAL DIRECT COSTS (A THROUGH G)							115,000
I. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE)							
TOTAL INDIRECT COSTS (F&A)							0
J. TOTAL DIRECT AND INDIRECT COSTS (H + I)							115,000
K. FEE (IF REQUESTED MAXIMUM = 7% OF J)							0
L. TOTAL COST AND FEE (J + K)							\$ 115,000
PI/PD NAME Randolph Macon				FOR NSF USE ONLY			
ORG. REP. NAME*				INDIRECT COST RATE VERIFICATION			
		Date Checked		Date Of Rate Sheet		Initials - ORG	

*ELECTRONIC SIGNATURES REQUIRED ONLY FOR REVISED BUDGET

Year 1 Budget Justification

A. Senior Personnel

Dr. Terry Demo - PI will work 2 person months on the project at \$20,000 per month for a total of \$40,000 in year 1.

Frederick Scott - Mechanical Engineer will work 1.5 person months at \$7,500 per month for a total of \$15,000 in year 1.

Joseph Smith - Electrical Engineer will work 1.5 person months at \$7,500 per month for a total of \$15,000 in year 1.

B. Other Personnel

2 Technicians will work 1 person month (each) for a total of \$3,000 in year 1.

D. Equipment

A high performance server is needed to carry out complex systems simulations. Readily available commercial offerings of servers do not have the speed and capability to carry out the multiple calculations.

High Performance Server \$6,500
Miniature Spectrometer \$7,500
Quotes from the vendors are available

E. Travel

Attendance to the required NSF Phase II Grantees Conference \$2,000

G. Other Direct Costs

1. Materials and Supplies

Hg source \$750/unit 2 units = \$1500
Sensors \$250/unit 4 units = \$1000
Chemical samples \$200/unit 5 units = \$1000

3. Consultant Services

The signed consultant agreement is contained in the proposal. Dr. Snow has agreed to work 10 days at the NSF maximum consultant rate of \$571 per day.

5. Subawards

A subaward budget is to Johns Hopkins University for their work on the high performance computing elements is for \$85,000 for year (see attached subaward budget and justification)

6. Other

Analytical testing will be provided by XYX Corporation. Each test will cost \$10,000 and will be performed 5 tests the first year for a total of \$50,000

I. Indirect Costs

The indirect cost rate for this project is 30% for salaries and wages (30% * 73,000).

K. Fee

The fee is within the NSF maximum of 7% of the total of direct and indirect costs.
\$17,895.

Year 2 Budget Justification

A. Senior Personnel

Dr. Terry Demo - PI will work 2 person months on the project at \$20,000 per month for a total of \$40,000 in year 2.

Federick Scott - Mechanical Engineer will work 3 person months at \$7,500 per month for a total of \$22,500 in year 2.

Joseph Smith - Electrical Engineer will work 2.5 person months at \$7,500 per month for a total of \$18,750 in year 2.

B. Other Personnel

1 Technicians will work 1 person month for a total of \$12,000 in year 2.

E. Travel

Attendance to the required NSF Phase II Grantees Conference \$2,000

G. Other Direct Costs

1. Materials and Supplies

Hg source \$750/unit 4 units = \$3,000

Sensors \$250/unit 4 units = \$1000

Chemical samples \$200/unit 5 units = \$1000

3. Consultant Services

The signed consultant agreement is contained in the proposal. Dr. Snow has agreed to work 10 days at the NSF maximum consultant rate of \$571 per day in the second year.

5. Subawards

A subaward budget is to Johns Hopkins University for their work on the high performance computing elements is for \$30,000 for year (see attached subaward budget and justification)

6. Other

Analytical testing will be provided by XYX Corporation. One test will cost \$10,000.

I. Indirect Costs

The indirect cost rate for this project is 30% for salaries and wages (30% * 93,250).

K. Fee

The fee is within the NSF maximum of 7% of the total of direct and indirect costs \$13,929.

Sub-Awardee: Year 1 Budget Justification

A. Senior Personnel

Dr. Randolph Macon - Professor will work 2 person months on the project at \$10,000 per month for a total of \$20,000 in year 1.

Dr. Thomas Payne – Associate Professor will work 4 person months on the projects at \$4,500 per month for a total of \$18,000 in year 1.

B. Other Personnel

2 graduate students will work 6 person months (each) for a total of \$20,000 in year 1.

E. Travel

Attendance to the NSF Phase II Grantees Conference \$2,000 (either Dr. Macon or Dr. Payne will attend)

G. Other Direct Costs

1. Materials and Supplies

Sensors \$250/unit 20 units = \$5,000

Laboratory glassware \$2,500

Chemical samples \$200/unit 20 units = \$4,000

Servo motors \$350/each 10 motors = \$3,500

6. Other

Analytical testing will be provided by XYX Corporation. Each test will cost \$10,000 and will be performed 1 test the first year for a total of \$10,000

Sub-Awardee: Year 2 Budget Justification

A. Senior Personnel

Dr. Randolph Macon - Professor will work 0.5 person months on the project at for a total of \$5,000 in year 2.

Dr. Thomas Payne – Associate Professor will work 2 person months on the projects at \$4,500 per month for a total of \$9,000 in year 2.

B. Other Personnel

2 graduate students will work 3 person months (each) for a total of \$10,000 in year 1.

E. Travel

Attendance to the NSF Phase II Grantees Conference \$2,000 (either Dr. Macon or Dr. Payne will attend)

G. Other Direct Costs

1. Materials and Supplies

Chemical samples \$200/unit 20 units = \$4,000



Financial and Administrative Reviews

Carrie Davison, Cost Analyst

Division of Institution and Award Support
Cost Analysis and Audit Resolution (CAAR)



Financial and Administrative Reviews

Carrie Davison, Cost Analyst
Division of Institution and Award Support
Cost Analysis and Audit Resolution (CAAR)



CAAR Reviews

- Financial Capability
- Accounting and Timekeeping
- Budget



Financial Capability

Organizations must provide for last two fiscal periods:

- Financial Statements
- Most recent audit (CPA Compiled)
- Tax returns



Considerations for Assessing Adequacy of Accounting Systems

- Responses to “Financial Management Systems Questionnaire”
- Sample Timesheet
- Federal Audits and Accounting System Reviews, if available



Accounting System - Basic Requirements

- Detailed budget preparation with proposed cost based on actual historical cost data
- Identification of expenditures as direct, indirect and unallowable
- Identification of costs (budgeted costs and actual expense) by project/grant
- Complete and accurate financial reports (balance sheet, income statement, and cash flow statement)
- Maintenance of adequate source documentation (purchase orders, invoices, canceled checks, etc.)



Timekeeping System

- Name and signature of employee & supervisor
- Total hours an employee worked during a given pay period
- Specific activities during the pay period (i.e., projects, G&A, vacation, sick, leave without pay, etc.)



Budgeted Costs

Funding Criteria:

- Necessary for conduct of the project
- Allowable, reasonable, allocable
- Based on current cost and pricing information (invoices, purchase orders, catalog, quotations)



Allocability (FAR 31.201-4)

- Incurred specifically for the project (Direct)
- Necessary to the overall operation of the business (Indirect)



Indirect Costs

- Safe Rate: 50% Salaries and Wages
- Ceiling: 150% Salaries and Wages



Indirect Costs

- Calculation for most recently completed Fiscal Year
- Total costs per the IDC calculation must reconcile with the Statement of Profit & Loss
- Adjustments:
 - IR&D treated as direct costs
 - Patent
 - Sales/Marketing & Business Development
 - Manufacturing & Production
 - IDC S&W > 35% total S&W less paid time off
 - Subawards excluded from base (ODC's)
- No Facilities Capital Cost of Money (FCCM)



Other Budget Highlights

- Salaries and Wages
1 CAL = 173 hours
- Items or Extended Amounts > \$5,000
- Consultant Limitation (\$571/Day)



Summary

- Financial Capability Review - Adequate financial resources to perform the award
- Accounting System Review - Meets the basic requirements for a Federal award
- Budget Review - Budgeted amount is fair and reasonable based on certified cost and pricing data



Certificate of Current Cost or Pricing Data

- Certification that supporting documentation is based on accurate, complete, and current cost and pricing data
- Requested by DGA after final determination of the amount to be awarded



Cost Analysis & Audit Resolution

Telephone (703) 292-8244
Fax (703) 292-9140
E-mail bfacaarsbir@nsf.gov

www.nsf.gov/bfa/dias/caar



What Do I Do Now? Frequently Asked Questions

Kimberly Crabb

Division of Grants and Agreements



What Do I Do Now? Frequently Asked Questions

Kimberly Crabb
Division of Grants and Agreements



**NOW is NOT
the time to
WHINE!**



**READ THE
SOLICITATION!**

PLEASE!!!
(Make note of the
CHANGES!)



What are you doing here??

- YOU ARE HERE TO LISTEN
- YOU WILL SHARE WHAT YOU'VE LEARNED WITH ANYONE ELSE AT THE COMPANY
- YOU WILL PASS ALONG THE MATERIALS

WHY?



THE MOST COMMON CALLS & E-MAILS

- I haven't been paid
- Did you get my report?
- I want to change our name
- Our company was sold and we need to novate
- We spent money before the grant was awarded- what do we do
- NSF is wrong about the funding for our Phase II



I haven't been paid

DGA HAS **NOTHING** TO DO WITH PAYING YOU!

1. Upload report to FastLane
2. Wait 3 weeks (10 days for program review and 10 days for finance) and only THEN...
3. Call your program officer to see if the report was approved and when (the date!)
4. If 10 days have elapsed from that date, call Division of Financial Management.



DGA DOES NOT MAKE PAYMENTS
EVER!



Did you get my report?

- NO, DGA does not approve reports
- All questions about reports should be addressed to your Program Director or to FASTLANE
- Is there a question about this??



I want to change our name

Tell your program officer and send me these items:

1. The document effecting the name change, authenticated by a proper official of the State having jurisdiction.
2. A list of all affected awards between the Awardee and the NSF.
3. The opinion of your legal counsel that this was properly effected under applicable law.



Company is sold, we need to NOVATE

1. This can take a long time.
2. You can make it shorter by sending in everything correctly the first time.
3. By the way, did I mention that this can take a long time?



I still need to novate

The full financial package from the new organization:
<http://www.nsf.gov/bfa/dias/caar/sbirrev.jsp>

AND

1. An authenticated copy of the instrument effecting the transfer of assets; e.g., bill of sale, certificate of merger, contract, deed, agreement, or court decree.
2. A list of all affected awards.
3. A certified copy of each resolution of the corporate parties' boards of directors authorizing the transfer of assets.
4. The opinion of legal counsel for the transferor and transferee stating that the transfer was properly effected under applicable law and the effective date of transfer.
5. An authenticated copy of the transferee's certificate and articles of incorporation, if a corporation was formed for the purpose of receiving the assets involved in performing the Government award.
6. Evidence of transferee's capability to perform the award.
7. Balance sheets of the transferor and transferee as of the dates immediately before and after the transfer of assets, certified for accuracy by independent accountants.



I spent money before the award was made

1. This is totally at your own risk. If we don't make the award, you don't get the money from NSF.
2. If the expenses are within 90 days before the effective date, you are in the clear.
3. More than 90 days before, you must ask for approval via FASTLANE.



NSF took my money! (Phase II reductions)

Applying for a Phase II does not guarantee that you will be funded at your proposed budget level.

Being recommended for Phase II by the Program Director does no guarantee that you will be funded at your proposed budget level.

Again, this is NOT the time to whine!

Submit a complete & error free BUDGET!



BE PREPARED AND BE TIMELY

- When you are asked to send your financial information to NSF- do it! If this isn't a priority for you, there are a few other people who would be glad to take your place.
- Have the package complete - NSF does not have to keep asking you to fix it if it is incorrect or incomplete



IDC LIMITATION

YES, the effective rate of 150% of salaries and wages for IDC applies to YOU

For PHASE IB, you must use the same rates as PHASE I. For PHASE IIB, You must use the rates determined for the PHASE II.

This applies to EVERY SBIR AWARD!!!



FINANCIAL REVIEW

- The review of your materials is done by contracted CPA firms and then at NSF by our cost analysts
- The recommendations forwarded to DGA are relayed to the proposer by a DGA specialist who is not an accountant
- DGA stands by the recommendations we receive
- NO WHINING



IT'S STILL NOT YOUR MONEY!

- It is NSF's money- it is NSF's money until it is paid to you (and even then....)
- Interim payments may be reduced by your Program Director based on your report
- If estimated total expenditures are significantly less than the award amount, NSF reserves the right to renegotiate the amount and/or duration of the award



REPEAT WHAT YOU LEARN

- TELL STAFF (or yourself if you are the staff) what you learned.
- Ignorance of the rules is no excuse.



We have Rules

- The Solicitation has **rules**.
- The Dear Colleague letters have **rules**.
- All of the supplements have **rules**.
- If you don't like the **rules**, you don't have to apply.
- AND the **RULES** do apply to you.



PROPOSAL/GRANT NUMBER

When you call or send email,
always use your grant number-
even if you called or emailed me
earlier in the day



Questions

kcrabb@nsf.gov

703-292-7441





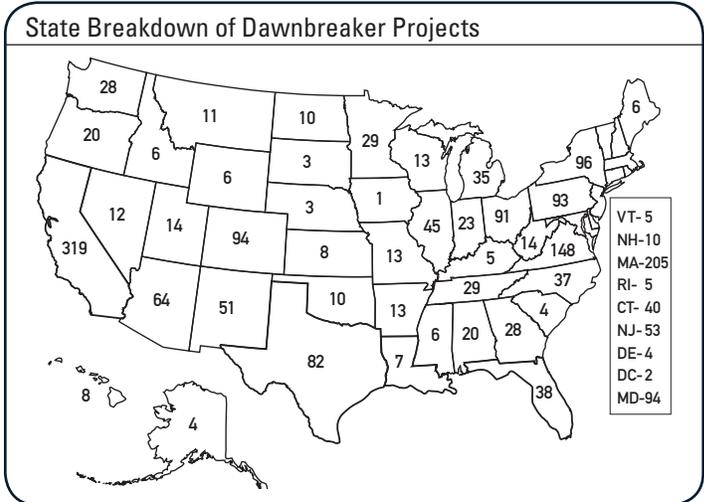
Phase I Commercialization Planning Program (CP²)

Welcome! We look forward to continuing our interaction with you. During the Grantees Conference one-on-one meetings have been scheduled between representatives of your firm and the Dawnbreaker portfolio manager assigned to work with you. We have a table set up in the registration area, so if you have any questions regarding your meeting time or location, please stop by and we will be glad to assist you. The purpose of the one-on-one meetings is to focus on the market research you will need, to refine your commercialization strategy, and discuss potential sources of Phase III funding. We're glad to have the opportunity to meet with you personally at the Grantees conference.

About Dawnbreaker, Inc.

Dawnbreaker, Inc. is a professional services firm recognized for offering commercialization and transition assistance to advanced technology firms, as well as their government R&D sponsors, strategic partners, and private sector investors. Since 1990, Dawnbreaker has provided assistance to over 2,400 Small Business Innovation Research (SBIR), Small Business Technology Transfer (STTR) and Advanced Technology Program (ATP) companies. We have assisted over 1,000 companies through the NSF Phase I CP² program. Dawnbreaker employs a team of 57 talented individuals that conduct programmatic interventions on behalf of federal agencies and state municipalities. We are technology generalists and work with companies with widely diverse backgrounds including energy, materials, electronics, defense, biotech, information technologies, therapeutics and diagnostics. Since 2000, companies that have participated in our programs have cumulatively received in excess of \$1 billion in increased sales and investment.

Carol Rabke, Ph.D.
NSF SBIR/STTR Program Manager
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Herndon, VA 20170
Phone: 571-323-0080
Email: lstoyen@dawnbreaker.com

Dawnbreaker 1-on-1 Meeting Schedule

Award ID	Organization	Title	Meeting Time	DB Portfolio Manager	Meeting Room
0810682	3F, LLC	STTR Phase I: Light-Weight Bio-Based Nano-Enhanced SMC Formulations	6:00 PM	Rich Smerbeck	NSF RM 130
0810755	Ablitech, Inc.	SBIR Phase I: PolyRNA - A Radical Innovation for Healing the Human Body	5:30 PM	Rich Smerbeck	NSF RM 130
0810791	ABQMR, Inc	SBIR Phase I: Compact NMR for Dilute Pathogen Detection	1:30 PM	Rich Smerbeck	NSF RM 130
0810454	Acoustic Cytometry Systems	SBIR Phase I: Low-Cost, Acoustic Flow Cytometry Analyzer/Imager	4:30 PM	Rich Smerbeck	NSF RM 130
0808857	Adaptive Cognitive Systems LLC	SBIR Phase I: Enhancing Knowledge Engineering through Cognitive Modeling and Instance-Based Learning	4:00 PM	Lana Stoyen	NSF RM 370
0810790	Adaptive Communications Research Inc.	SBIR Phase I: Non-Eigen Decomposition Beamforming for Smart Antenna Systems	3:00 PM	Lana Stoyen	NSF RM 370
0810531	Advanced Thermal Technologies	STTR Phase I: Diamond Carbon Coated Graphite-Copper Material for Use in RF Power Amplifier Packaging	5:30 PM	Tallam Nguti	NSF RM 330
0810609	Agiltron Incorporated	SBIR Phase I: Solution Processed p-i-n type Multilayer White Emission OLED with High Power Efficiency and Long Lifetime	3:30 PM	Carol Rabke	NSF RM 365
0810618	Agiltron Incorporated	SBIR Phase I: Ultra-High Flux Carbon Nanotube Water Purification Technology	4:00 PM	Carol Rabke	NSF RM 365
0810548	Alces Technology, Inc.	SBIR Phase I: Micro-Compliant-Interconnect-Mechanisms (MCIMs)	4:30 PM	Tallam Nguti	NSF RM 330
0810542	Alenas Imaging LLC	STTR Phase I: Thermoreflectance for Defect Mapping and Process-Control of Solar Cells	2:15 PM	Carol Rabke/Rich Smerbeck	NSF RM 365
0810544	Aquaculture Systems Technologies, LLC	SBIR Phase I: Development of Design and Operational Criteria of Continuous Culture Hatchery Techniques for the Production of <i>Brachionus rotundiformis</i> (s-type) rotifers	3:30 PM	Rich Smerbeck	NSF RM 130
0810420	Artbox LLC	SBIR Phase I: Method of Integrated Web-Based Tools to Enable a Collaborative Community of Professional Creatives	4:00 PM	Rich Smerbeck	NSF RM 130
0810763	Auma Laboratories, LLC	SBIR Phase I: Biosensor Compatible Polymers for Use in a Commercial 3D Microdevice Printer	5:00 PM	Rich Smerbeck	NSF RM 130
0810782	Berkeley ExoWorks	STTR Phase I: Integrated Powered Knee-Ankle Prosthetic System	12:15 PM	Rich Smerbeck	NSF RM 130
0810568	Bioprocessing Innovative Company, Inc.	STTR Phase I: Engineering Clostritrial Fermentation for Biobutanol Production	2:00 PM	Carol Rabke/Rich Smerbeck	NSF RM 365
0810428	Bluefin Lab, Inc.	SBIR Phase I: Semi-Automated Sports Video Search	1:30 PM	Tallam Nguti	NSF RM 330
0810614	Boston Applied Technologies, Incorporated	STTR Phase I: Portable Ultrasound Devices for Noninvasively Monitoring Intracranial Pressure	1:00 PM	Carol Rabke	NSF RM 365
0810778	Bridger Photonics, INC	STTR Phase I: Compact Aberration Compensated Focus and Scan Control for Biomedical Sensors	3:00 PM	Carol Rabke	NSF RM 365
0810507	Children's Progress, Inc.	SBIR Phase I: Speech Analysis and Intervention for Early Childhood	3:00 PM	Rich Smerbeck	NSF RM 130
0810765	Cognisense Labs Inc	STTR Phase I: Robotic System for Visual Placement-RSVP	1:00 PM	Lana Stoyen	NSF RM 370
0810648	Conservation Seeding and Restoration, Inc.	SBIR Phase I: Spray-on Biological Soil Crusts for Arid Land Restoration	4:30 PM	Carol Rabke	NSF RM 365
0810826	Curant, Inc.	SBIR Phase I: Dynamic Device for the Treatment of Stress Urinary Incontinence	5:00 PM	Carol Rabke/Rich Smerbeck	NSF RM 365
0810693	CVISION Technologies, Inc.	SBIR Phase I: Real-time, accurate OCR from Video using Intra- and Inter-Frame Machine Learning	1:00 PM	Rich Smerbeck	NSF RM 130
0810595	DENDRITECH, INC	SBIR Phase I: Nanostructured Biocidal Coatings Targeting Spore-Forming Bacteria	12:30 PM	Rich Smerbeck	NSF RM 130

All meetings are scheduled for Thursday, September 25 unless otherwise noted.

Dawnbreaker 1-on-1 Meeting Schedule

Award ID	Organization	Title	Meeting Time	DB Portfolio Manager	Meeting Room
0810640	Edenspace Systems Corp	STTR Phase I: Processing Genetically Engineered Biomass to Obtain Optimal Enzymatic Digestion of Cell Wall Polysaccharides in Cellulosic Biofuel Production	WED 6:00 PM	Carol Rabke	Holiday Inn TBD
0810367	Electrawatch, Inc.	SBIR Phase I: Coating Health Monitors for Smart Infrastructure	1:30 PM	Lana Stoyen	NSF RM 370
0809450	Equinosis LLC	STTR Phase I: Wireless Sensing of Body Movement: Detection and Evaluation of Lameness in Horses	2:30 PM	Carol Rabke	NSF RM 365
0810485	Eensors Inc.	SBIR Phase I: High Resolution Tunable Receiver For Remote THz Sensing	WED 12:30 PM	Carol Rabke	Holiday Inn TBD
0810652	Evigia Systems Inc.	SBIR Phase I: Batteryless Wireless Smart Labels with Embedded Non Volatile Memory	3:30 PM	Lana Stoyen	NSF RM 370
0809678	Evolutionary Genomics, LLC	SBIR Phase I: Bioenergy from Genomics: Genes that Increase Corn Kernel Starch and Oil Content.	WED 6:00 PM	Carol Rabke	Holiday Inn TBD
0810299	Exoventure Technologies, Inc.	SBIR Phase I: Knowledge Management Framework For High Growth Startups	12:30 PM	Tallam Nguti	NSF RM 330
0810330	Fleenor Manufacturing Inc.	SBIR Phase I: Reducing Diesel Fuel Consumption in Recovering Woody Biomass	2:00 PM	Rich Smerbeck	NSF RM 130
0810649	GrassRoots Biotechnology, Inc.	STTR Phase I: Constitutive Promoters for Crop Improvement	WED 6:00 PM	Carol Rabke	Holiday Inn TBD
0810551	HEPREGEN	SBIR Phase I: Optimization of a Microscale Human Liver Tissue for Evaluating Chronic Drug Toxicity	3:05 PM	Rich Smerbeck	NSF RM 130
0810340	Innovative Micro Technology	SBIR Phase I: MEMS Gas Sensor	1:30 PM	Carol Rabke	NSF RM 365
0810633	Inquus Corporation	SBIR Phase I: Social Marketplace for E-learning	2:00 PM	Lana Stoyen	NSF RM 370
0810785	Inscent, Inc	SBIR Phase I: Development of Novel Repellents for the Honeybee, <i>Apis mellifera</i>	12:30 PM	Carol Rabke	NSF RM 365
0806858	Intelligent Micro Systems, Ltd.	SBIR Phase I: AuthorIT: Authoring Adaptive and Configurable Tutoring Systems (A-ACTS)	2:30 PM	Lana Stoyen	NSF RM 370
0810466	Ionographics, Incorporated	SBIR Phase I: Repair and Manufacturing of Integrated Circuit Probe Cards through Innovations in Electrochemical Printing	1:00 PM	Tallam Nguti	NSF RM 330
0810586	Kalinex, Inc.	SBIR Phase I: Chemically Selective Litmus Paper for Exposure Monitoring	2:30 PM	Rich Smerbeck	NSF RM 130
0810023	Kerner Graphics, Inc.	SBIR Phase I: Topologically Encoded Animation (TEA) for Visual Effects in the Digital Arts	2:00 PM	Tallam Nguti	NSF RM 330

All meetings are scheduled for Thursday, September 25 unless otherwise noted.



Development Capital Networks, LLC (DCN) would like to congratulate all of our current NSF Phase I Grantees. This is an exciting time for you and we look forward to working with you throughout your Phase II Commercialization Plan process.

During the week, you will have several opportunities to meet your DCN Advisors and hear about our Commercialization Plan Assistance program. All meetings are being held at the National Science Foundation.

Group Orientation Meetings

DCN Grantees were requested to pre-register any team members or partners that would be attending the Group Orientation Meetings on Thursday. Below are the times and locations for each meeting. You should plan to stay for the entire meeting.

- **Thursday, September 25th**
 - 1:00 pm to 3:00 pm
- **Thursday, September 25th**
 - 3:30 pm to 5:30 pm

Note: Orientation will be held in Room 110 at the NSF. Once in the NSF Lobby Area the room will be to the left of the Information Desk. You will not be required to go through security to attend our meetings.

Commercialization Planning

The Commercialization Plan is an extremely important element of each Phase I Grantee's Phase II proposal. It is critical that it be carefully and thoughtfully prepared so as to clearly describe the strategy each Grantee will employ to generate revenue from the proposed innovation research. The Commercialization Plan must concisely convey the business opportunity enabled by the innovation, articulate a compelling value proposition for the intended customer, and cover the key points of a commercialization plan appropriate for the company's stage of development.

DCN will provide you with the resources necessary to allow you to prepare a compelling and professional Plan that will communicate your technology's journey from the lab bench to the market place. Our approach to commercialization planning is tested and proven.

We welcome you to the DCN family and look forward to working with you.

Enjoy the week!

JulieAnn Evans
NSF SBIR/STTR Program Manager

Wiley Larsen
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Jimmy Lewin
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Award ID: 0810523

National Science Foundation Speakers

Cheryl Albus joined the National Science Foundation in June 1995, serving in many roles within the Directorate for Engineering and the Directorate for Computer, Information Science and Engineering. She currently serves as a Program Director for Advanced Materials and Manufacturing in the SBIR/STTR Program. Additionally she has served as a Staff Associate for Information Technology and e-Business Activities, as the Executive Officer for the Computer and Network Systems Division, as well as the Project Manager for the Major Research Equipment and Facilities Construction (MREFC) project entitled, "Global Environment for Network Innovations", proposing to "reinvent the Internet". Before joining the National Science Foundation she spent 11 years at the National Institute of Standards and Technology (NIST) in the Manufacturing Engineering Laboratory. Cheryl received a MS degree (with honors) from Johns Hopkins University's Whiting School of Engineering and a BS degree (with honors) from the University of Maryland in Information Technology. Cheryl is a member of Phi Kappa Phi Honor Society, National Association for Female Executives, and the Society of Manufacturing Engineers.

Errol Arkilic joined the National Science Foundation in October 2003. He is one of eight program directors in the SBIR Program at NSF where he focuses on Emerging Opportunities, Information and Security Technologies. Before joining NSF, he was President and CEO of StrataGent Life Sciences – a venture-backed startup in Silicon Valley. Prior to StrataGent, Errol was President of Phasyn, Inc. (a developer of packaging technologies for optical components) and Manager of Product Engineering at Redwood Microsystems, both in the Bay area. Errol holds a Ph.D. from the Micro Technology Laboratory at MIT.

Joshua Chamot has been in the NSF Office of Legislative and Public Affairs since 2001 where he has served as both the Media Officer for Engineering and the Media Officer for Mathematics and Physical Sciences following a position as a general writer-editor and speechwriter. Prior to his term at NSF, Josh served as a Public Affairs Assistant at the Smithsonian National Museum of Natural History, a writing-editing consultant for the Temple University Institute for Survey Research and as a freelance science writer. His articles have appeared in a number of print and online publications including *Geotimes* and *Space.com*. He received his B.S. in Geology from the College of William and Mary in 1998 and his M.S. in Geology from the University of Tennessee at Knoxville in 2000.

Kimberly Crabb joined the National Science Foundation, Division of Grants and Agreements in September 2007 and serves as the SBIR program liaison. She has over seven years of grants management experience in the federal government. Before joining NSF, she worked at HUD headquarters in Washington, DC where she managed a grant portfolio of over \$10 billion and provided policy guidance to ten field offices in seven states. While at HUD, she also served as a community and economic development policy specialist in the Gulf coast region after Hurricane Katrina. Kimberly has worked in various capacities relating to Performance Measurements and Community Planning and Development. She received a Master's Degree in Public Administration and Policy Analysis from Southern Illinois University, a Bachelor's Degree in Political Science from Illinois State University, and is a National Development Council Certified Economic Development Finance Professional.

Juan Figueroa has served as an Electronics Program Director with SBIR/STTR Program at NSF since July 2002. Prior to NSF, Juan spent more than 20 years in R&D management positions

in the electronics and communications industries. His last position before joining NSF was Product Development Consultant for Material Sensing and Instrumentation, Inc. (MSI), an SBIR participant company. Prior to MSI Juan was Director of Strategic Development and Project Management for the Home Communications Division of Ericsson, a multinational telecommunications and consumer electronics company. His first appointment after graduate school was with Bell Laboratories as a member of the Technical Staff in Murray Hill, NJ and Allentown, PA working in the development of microprocessor, CMOS and networking technologies. Juan received his Ph.D. in Physics from the State University of New York at Binghamton. A native of Puerto Rico, Juan received his B.S in Physics from the University of Puerto Rico.

Joseph Hennessey serves as Senior Advisor in the Industrial Innovation and Partnerships Division within the Directorate for Engineering. He has also held placements as Acting Director for IIP, Program Director for SBIR, Program Director for the Management of Technological Innovation (MOTI) program, and as Acting Deputy Assistant Director for ENG. Joe came to NSF in June 1996 after retiring as Vice President and Director, Innovation at Armstrong World Industries. Armstrong is a \$3 billion global company recognized as a world leader in interior furnishings. During his 27 years at Armstrong, he led global innovation organizations, identified and leveraged technologies into commercially successful new products and designed multi-functional organizations consistent with global strategies. Joe received his Ph.D. in Organic Chemistry from the University of Maryland and is a member of the Industrial Research Institute (IRI), the Center for Innovation Management Studies (CIMS) at North Carolina State University, and a trustee of Millersville University.

Monte Fisher is Senior Counsel for Investigations within the Office of Inspector General at NSF. He earned a Bachelor of Arts in Chemistry and Computer Science from New College, a Ph.D. in Organic Chemistry from the University of Texas at Austin, and a J.D. from Columbia Law School. He clerked for a judge on the U.S. Court of Appeals for the Federal Circuit, worked for a private law firm for 3 years, and joined NSF OIG in 1990.

Amanda Morris is the Program Manager for the SBIR/STTR support contract. She and her staff work closely with SBIR/STTR Program Directors to screen proposals, create panels and recruit reviewers for Phase I and Phase II proposals. Amanda is also the primary point of contact and organizer for the SBIR/STTR Grantees Conferences. She has been at NSF since 2006 and has a background in operations and federal grants management. Prior to joining NSF, she was the Director of Operations for Science at a conservation non-profit organization. She earned her M.A. from George Washington University and her B.A. from North Carolina State University.

Murali S. Nair is the Electronics area cluster leader with the SBIR/STTR Program. Prior to joining NSF, he was the Founder and CEO of a wireless product company. In this capacity, he raised equity capital for worldwide operations in China, Brazil, India and the US. He designed, planned and implemented the product development cycle, and managed the marketing strategy, strategic alliances and business development processes. Before that, Murali was a Senior Systems Engineer at L-3 Communications where he provided strategic advice to the Executive VP for a complete re-plan of the Hughes contract for real-time, embedded ground control software for the \$350M PANAMSAT communications satellite. Prior to joining L-3 Communications, he was a Mission Planner at Motorola Iridium where he was involved in all aspects of satellite operations including orbit determination, generating guidance targets and orbital slot placement. Before joining Iridium, Murali was a faculty member at Embry-Riddle Aeronautical University, where he developed an entire Space

Systems Design Lab from concept inception to fully operational mode and national prominence, and supervised five (5) space system designs, three (3) of which were winners in the National AIAA/Loral Design Competition. He is a recipient of a number of awards that include the President's Innovation Award for Space Systems Design Courses. Murali is a registered professional engineer in the State of Florida.

Kesh Narayanan is the Division Director of Industrial Innovation and Partnerships (IIP) within the Directorate for Engineering (ENG) at NSF. The mission of the division of IIP is to catalyze the transformation of discovery into societal benefits through stimulating partnerships. Prior to his current assignment, he served NSF in various capacities. He has played a major role in shaping the NSF Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs to accelerate technological innovation by aligning the programs with the investment market opportunities. He joined NSF in 1994 from Certainteed, where he held the position of Chief Scientist for the building materials division. His longest tenure, spanning 20 years, was at the Norton Company. Kesh received his Ph.D. in Materials Science and Engineering from Carnegie Mellon University in 1974 and B.Tech. in Metallurgical Engineering from Indian Institute of Technology, Bombay in 1967.

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**National Science Foundation
One-on-One Meeting Schedule**

Award ID	Organization	PI Last	PI First	Title	NSF Program Director	Meeting Time	Location
0810682	3F, LLC	Dickinson	Larry	STTR Phase I: Light-Weight Bio-Based Nano-Enhanced SMC Formulations	Cynthia Znati	5:30 PM	570.10
0810755	Ablitech, Inc.	Kemp	Lisa	SBIR Phase I: PolyRNA - A Radical Innovation for Healing the Human Body	Cynthia Znati	4:45 PM	570.10
0810791	ABQMR, Inc	Fukushima	Eiichi	SBIR Phase I: Compact NMR for Dilute Pathogen Detection	Greg Baxter	2:15 PM	590.16
0810454	Acoustic Cytometry Systems	Kaduchak	Gregory	SBIR Phase I: Low-Cost, Acoustic Flow Cytometry Analyzer/Imager	Greg Baxter	5:15 PM	590.16
0808857	Adaptive Cognitive Systems LLC	Best	Bradley	SBIR Phase I: Enhancing Knowledge Engineering through Cognitive Modeling and Instance-Based Learning	Ian Bennett	3:30 PM	508
0810790	Adaptive Communications Research Inc.	Okamoto	Garret	SBIR Phase I: Non-Eigen Decomposition Beamforming for Smart Antenna Systems	Juan Figueroa	2:30 PM	570.04
0810531	Advanced Thermal Technologies	Connell	James	STTR Phase I: Diamond Carbon Coated Graphite-Copper Material for Use in RF Power Amplifier Packaging	Juan Figueroa	4:45 PM	570.04
0810609	Agiltron Incorporated	Wang	King	SBIR Phase I: Solution Processed p-i-n type Multilayer White Emission OLED with High Power Efficiency and Long Lifetime	Juan Figueroa	4:15 PM	570.04
0810618	Agiltron Incorporated	Salerno	Jack	SBIR Phase I: Ultra-High Flux Carbon Nanotube Water Purification Technology	William Haines	3:00 PM	570.06
0810548	Alces Technology, Inc.	Bloom	David	SBIR Phase I: Micro-Compliant-Interconnect-Mechanisms (MCIMs)	Murali Nair	3:30 PM	570.02
0810542	Alenas Imaging LLC	Domash	Lawrence	STTR Phase I: Thermoreflectance for Defect Mapping and Process-Control of Solar Cells	Juan Figueroa	3:00 PM	570.04
0810544	Aquaculture Systems Technologies, LLC	Drennan	Douglas	SBIR Phase I: Development of Design and Operational Criteria of Continuous Culture Hatchery Techniques for the Production of Brachionus rotundiformis (s-type) rotifers	Greg Baxter	2:00 PM	590.16
0810420	Artbox LLC	Messina	Elizabeth	SBIR Phase I: Method of Integrated Web-Based Tools to Enable a Collaborative Community of Professional Creatives	Errol Arkilic	3:45 PM	510
0810763	Auma Laboratories, LLC	Young	Aaron	SBIR Phase I: Biosensor Compatible Polymers for Use in a Commercial 3D Microdevice Printer	Cynthia Znati	4:00 PM	570.10
0810782	Berkeley Bionics	Fairbanks	Dylan	STTR Phase I: Integrated Powered Knee-Ankle Prosthetic System	Ian Bennett	3:15 PM	508
0810568	Bioprocessing Innovative Company, Inc.	Tang	I-Ching	STTR Phase I: Engineering Clostritrial Fermentation for Biobutanol Production	Cynthia Znati	3:00 PM	570.10
0810428	Bluefin Lab, Inc.	Fleischman	Michael	SBIR Phase I: Semi-Automated Sports Video Search	Errol Arkilic	2:30 PM	510
0810614	Boston Applied Technologies, Incorporated	Zhao	Hongzhi	STTR Phase I: Portable Ultrasound Devices for Noninvasively Monitoring Intracranial Pressure	Greg Baxter	1:45 PM	590.16
0810778	Bridger Photonics, INC	Reibel	Randy	STTR Phase I: Compact Aberration Compensated Focus and Scan Control for Biomedical Sensors	Cynthia Znati	2:00 PM	570.10
0810507	Children's Progress, Inc.	Camacho	Christopher	SBIR Phase I: Speech Analysis and Intervention for Early Childhood	Ian Bennett	2:15 PM	508
0810765	Cognisense Labs Inc	Owens	Kenneth	STTR Phase I: Robotic System for Visual Placement-RSVP	Murali Nair	2:00 PM	570.02
0810648	Conservation Seeding and Restoration, Inc.	Paulsen	Steven	SBIR Phase I: Spray-on Biological Soil Crusts for Arid Land Restoration	Cynthia Znati	5:15 PM	570.10

All meetings are scheduled for Thursday, September 25 at NSF, 4201 Wilson Blvd, Arlington, VA 22203

**National Science Foundation
One-on-One Meeting Schedule**

Award ID	Organization	PI Last	PI First	Title	NSF Program Director	Meeting Time	Location
0810826	Curant, Inc.	Vecchiotti	Richard	SBIR Phase I: Dynamic Device for the Treatment of Stressed Urinary Incontinence	Cynthia Znati	4:30 PM	570.10
0810693	CVISION Technologies, Inc.	Gross	Ari	SBIR Phase I: Real-time, accurate OCR from Video using Intra- and Inter-Frame Machine Learning	Ian Bennett	2:30 PM	508
0810595	Dendritech, Inc.	Kaganove	Steve	SBIR Phase I: Nanostructured Biocidal Coatings Targeting Spore-Forming Bacteria	Cynthia Znati	1:30 PM	570.10
0810640	Edenspace Systems Corp	Pappan	Kirk	STTR Phase I: Processing Genetically Engineered Biomass to Obtain Optimal Enzymatic Digestion of Cell Wall Polysaccharides in Cellulosic Biofuel Production	Cynthia Znati	3:15 PM	570.10
0810367	Electrawatch, Inc.	Davis	Guy	SBIR Phase I: Coating Health Monitors for Smart Infrastructure	Murali Nair	2:15 PM	570.02
0809450	Equinosis LLC	Keegan	Kevin	STTR Phase I: Wireless Sensing of Body Movement: Detection and Evaluation of Lameness in Horses	Greg Baxter	3:15 PM	590.16
0810485	Eensors Inc.	Wobschall	Darold	SBIR Phase I: High Resolution Tunable Receiver For Remote THz Sensing	Murali Nair	1:45 PM	570.02
0810652	Evigia Systems Inc.	Yazdi	Navid	SBIR Phase I: Batteryless Wireless Smart Labels with Embedded Non Volatile Memory	Murali Nair	2:30 PM	570.02
0809678	Evolutionary Genomics, LLC	Messier	Walter	SBIR Phase I: Bioenergy from Genomics: Genes that Increase Corn Kernel Starch and Oil Content.	Cynthia Znati	3:45 PM	570.10
0810299	Exoventure Technologies, Inc.	Rubin	Marco	SBIR Phase I: Knowledge Management Framework For High Growth Startups	Errol Arkilic	1:30 PM	510
0810330	Fleenor Manufacturing Inc.	Fleenor	Jeff	SBIR Phase I: Reducing Diesel Fuel Consumption in Recovering Woody Biomass	Greg Baxter	2:45 PM	590.16
0810649	GrassRoots Biotechnology, Inc.	Elich	Tedd	STTR Phase I: Constitutive Promoters for Crop Improvement	Greg Baxter	4:30 PM	590.16
0810551	Hepregen Corporation	Khetani	Salman	SBIR Phase I: Optimization of a Microscale Human Liver Tissue for Evaluating Chronic Drug Toxicity	Greg Baxter	3:00 PM	590.16
0810340	Innovative Micro Technology	Spong	Jaquelin	SBIR Phase I: MEMS Gas Sensor	Murali Nair	3:00 PM	570.02
0810633	Inquus Corporation	Sprague	Christopher	SBIR Phase I: Social Marketplace for E-learning	Ian Bennett	3:00 PM	508
0810785	Inscent, Inc	Woods	Daniel	SBIR Phase I: Development of Novel Repellents for the Honeybee, Apis mellifera	Greg Baxter	1:30 PM	590.16
0806858	Intelligent Micro Systems, Ltd.	Scandura	Joseph	SBIR Phase I: AuthorIT: Authoring Adaptive and Configurable Tutoring Systems (A-ACTS)	Ian Bennett	1:45 PM	508
0810466	Ionographics, Incorporated	Nelson	Jeffrey	SBIR Phase I: Repair and Manufacturing of Integrated Circuit Probe Cards through Innovations in Electrochemical Printing	William Haines	2:00 PM	570.06
0810586	Kalinex, Inc.	Horn	Thomas	SBIR Phase I: Chemically Selective Litmus Paper for Exposure Monitoring	Murali Nair	3:45 PM	570.02
0810023	Kerner Graphics, Inc.	Peters	Thomas	SBIR Phase I: Topologically Encoded Animation (TEA) for Visual Effects in the Digital Arts	Errol Arkilic	3:00 PM	510
0810684	KTM Industries	Graiver	Daniel	STTR Phase I: Designing and Engineering Thermoplastic Starch BioFoam Materials for Protective Packaging Applications	Cynthia Znati	5:00 PM	570.10
0810429	Lake Shore Cryotronics, Inc	Swinehart	Philip	STTR Phase I: Active Fiber Optic Sensor Array for Cryogenic Fuel Monitoring and Management	Juan Figueroa	3:30 PM	570.04
0810404	Language Analytic Corporation	Small	Sharon	SBIR Phase I: Virtual Collaborative Spaces for knowledge discovery and sharing on the Internet	Errol Arkilic	2:15 PM	510

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**National Science Foundation
One-on-One Meeting Schedule**

Award ID	Organization	PI Last	PI First	Title	NSF Program Director	Meeting Time	Location
0810792	LHC2 Inc.	Conley	Robert	STTR Phase I: Smart Antenna Systems for Unlicensed ISM-band Public Safety and Remote Meter Reading Data Networks	Juan Figueroa	1:45 PM	570.04
0810475	Lumetrics, Inc	Ignatovich	Filipp	SBIR Phase I: Fast Two-Color Heterodyne Non-Contact Scanning System for Mapping Optical Parameters of Human Eye	Greg Baxter	4:00 PM	590.16
0808990	Materials Innovation Technologies, LLC.	Janney	Mark	SBIR Phase I: Natural Fiber-Reinforced Bio-Based Thermoset Resin Composites	Cynthia Znati	2:45 PM	570.10
0810423	MHI Consulting LLC	Banu	Mihai	STTR Phase I: RF-System and Integrated Electronics for Low-Cost Smart Antenna Arrays	Juan Figueroa	5:00 PM	570.04
0810474	Microsurfaces Inc.	Guo	Athena	SBIR Phase I: High Throughput Screening of Multivalent Drugs and Nanomedicine	Greg Baxter	1:00 PM	590.16
0810445	Montgomery Rosser Media, LLC	Rosser	Roy	SBIR Phase I: vueDEW : Bi-stable, Electrowetting Display Technology	Juan Figueroa	2:00 PM	570.04
0810357	MultiMag3D Inc.	Preda	Mihai	STTR Phase I: Multilevel Magnetic Recording for Areal Densities Above 10 Terabit-per-square-inch	Juan Figueroa	3:45 PM	570.04
0810026	NanoGreen Solutions Corporation	Cheng	Lisen	SBIR Phase I: Highly Efficient CdTe Thin Film Solar Cells with Ordered Structure	Juan Figueroa	3:15 PM	570.04
0810530	Nasfine Photonics, Inc.	Dingel	Benjamin	SBIR Phase I: Multi-functional, Programmable LADAR using Photonics Arbitrary Waveform Generation	Juan Figueroa	2:15 PM	570.04
0810388	Neocera Inc.	Orozco	Antonio	SBIR Phase I: Fault Isolation of Open Circuits in Semiconductor Products using Magnetic Current Imaging	Murali Nair	1:30 PM	570.02
0810717	NetCrystal Inc.	Padmakumar	Bala	SBIR Phase I: Stretched Silicon	William Haines	1:45 PM	570.06
0810626	Ocean NanoTech, LLC	Wang	Andrew	STTR Phase I: Magnetic Nanoparticle Microfluidics for High Efficient Capture, Separation and Concentration of Foodborne Pathogens	Greg Baxter	4:45 PM	590.16
0810720	OptoNet Inc.	Huang	Yingyan	SBIR Phase I: Integrated Ultra-High-Throughput NSOM Probe Based on Nanoscale Waveguide Tip Integrated with Laser and Detector	William Haines	1:30 PM	570.06
0810029	Piezo Resonance Innovations, Inc.	Bagwell	Roger	SBIR Phase I: Active Device for Reliable Cleaning of Feeding Tubes	Cynthia Znati	1:00 PM	570.10
0810470	Plant Sensory Systems, LLC.	Turano	Frank	SBIR Phase I: GABA-Mediated Nitrogen Efficiency	Greg Baxter	1:15 PM	590.16
0810437	QM Power, Inc	Flynn	Charles	SBIR Phase I: High Power Density, High Efficiency Actuation for Robotic Applications	Murali Nair	3:15 PM	570.02
0810335	Real-Time Analyzers, Inc	Inscore	Frank	SBIR Phase I: A Label-Free SERS-Capture Assay in Microchips for Biological Warfare Agents	Greg Baxter	3:45 PM	590.16
0810012	Signal Processing, Inc.	Kwan	Chiman	SBIR Phase I: Novel Spatial Speech Separation Techniques to Improve Speaker Identification and Speech Recognition	Ian Bennett	1:30 PM	508
0810535	Silicon Audio, LLC	Hall	Neal	SBIR Phase I: Low-cost, High-performance Microphones Enabled by MEMS Integration Innovation	William Haines	2:15 PM	570.06
0810703	skribel, Inc.	Karkar	Victor	SBIR Phase I: Knowledge Discovery based on Personal Web Content Annotation	Errol Arkilic	4:00 PM	510
0809497	Smart Polymers Research Corporation	Komarova	Elena	SBIR Phase I: A Molecularly Imprinted Conductive Polymer-based Biodetector	Cynthia Znati	2:15 PM	570.10
0810637	Solid Concepts Inc	Xu	Xiaoshu	STTR Phase I: Designing Complex Internal Structures for Solid Freeform Fabrication	Errol Arkilic	1:45 PM	510

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**National Science Foundation
One-on-One Meeting Schedule**

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0810590	SustainX, Inc.	Bollinger	Benjamin	SBIR Phase I: Pneumatic Energy Storage with Staged Hydraulic Conversion for Low Specific Cost Renewables Support	William Haines	3:30 PM	570.06
0810794	Syagen Technology Inc.	Syage	Jack	SBIR Phase I: Electron Capture Dissociation for Radiofrequency Ion Trap MS	Greg Baxter	5:00 PM	590.16
0810391	Texas Piezoelectric Incorporated	Shah	Pradeep	STTR Phase I: High Energy Density Piezoelectric Thin Films and Energy Harvesting Devices	William Haines	3:15 PM	570.06
0810597	TransMembrane Biosciences	Nguyen	Hiep-Hoa	SBIR Phase I: Development of a Eukaryotic Membrane Protein Overexpression System	Greg Baxter	3:30 PM	590.16
0809892	Turner Designs, Inc.	Hoang	Sang	SBIR Phase I: An Accurate, Low Cost In-Situ Multi-Spectral Absorption Meter	Juan Figueroa	1:30 PM	570.04
0810670	United Environment & Energy, LLC	Wen	Ben	SBIR Phase I: Continuous Flow Fixed-bed Biodiesel Production from Algae Oil	Cynthia Znati	1:15 PM	570.10
0810751	Venture Gain	Wegerich	Stephan	SBIR Phase I: Intelligent Personalized Monitoring of Ambulatory Human Biosignals	Juan Figueroa	4:30 PM	570.04
0810434	VeritasCNC, Inc.	Esterling	Donald	SBIR Phase I: Intelligent Tool Wear Monitoring	Errol Arkilic	3:15 PM	510
0810565	Veros Systems, Inc.	Atiya	Amir	SBIR Phase I: Adaptive Methods for Sensorless Estimation of Induction Motor Efficiency	Errol Arkilic	3:30 PM	510
0810351	VitruMed Inc.	Schechter	David	SBIR Phase I: Biopolymer reinforced RF Tissue Welding	Cynthia Znati	1:45 PM	570.10
0810426	Vortex Hydro Energy LLC	MacBain	James	STTR Phase I: Harvesting Hydrokinetic Energy Using Vortex Induced Vibration and Fish Biomimetics: 1-5 kW System Development	William Haines	2:30 PM	570.06
0810561	VueLogic LLC	Garmon	Ronnie	SBIR Phase I: Predicting Behavior in Electronic Commerce Environments	Errol Arkilic	2:00 PM	510
0810566	Wasatch Microfluidics	Gale	Bruce	SBIR Phase I: High Throughput Flowcell for Biosensor Platforms	Cynthia Znati	3:30 PM	570.10
0808957	Xigen LLC	Geng	Jason	SBIR Phase I: A Novel 360-Degree Video Surveillance Camera	Juan Figueroa	1:15 PM	570.04
0810523	Zienon	Li	Dongge	SBIR Phase I: Tapping Finger Identification for Efficient Mobile Input	Ian Bennett	2:00 PM	508

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