

## DDC Entrepreneurial Training & Consulting



#### Developing the Business of Technology



#### **Technology Grants for Small Business**

- F.A.S.T. Federal State Technology Partnership
- SBIR Small Business Innovative Research
- STTR Small Business Technology Transfer

#### Part I: The ABCs of SBIR/STTR Part II – Walk Through The Application Process

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## Outline for Today...

#### Part I: The ABCs of SBIR/STTR

- Program Overview
- □ Eligibility
- □ SBIR vs. STTR
- Reauthorization
- Registrations

#### Part II: A Walk Through the Application Process

- National Science Foundation (NSF)
- National Institutes of Health (NIH)
- Dept. of Defense (DoD)
- Department of Energy (DOE)
- Wrap up: Commercialization









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#### What We Do

BBC works with technology-based entrepreneurs and companies on strategies to advance R&D efforts to commercialization. Through training courses and one-on-one counseling, the BBC team coaches clients in:

- Technology Assessment
- Commercialization Planning
- SBIR/STTR/Other Research Grant Assistance
- Entrepreneurial Training
- Grant/Contract Management
- Tech-Based Economic Development Programs

The BBC team is nationally recognized for its success in helping clients win federal funding through the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs, and use it tactically to propel growth.



Now about you...

HELLO MY NAME IS

- Where are you from....
  - University? Industry? Government? Other?
- What is your technology?
- How will your technology become a product?
- Who will purchase this product when commercialized?
- Already submitted grants or contracts
   SBIR/STTR? R0I? NIH, NSF, Other?
- Planning to submit?



#### Why SBIR/STTR?





#### Type of Funding









#### **\$2.5 billion of federal funding to:**



□ Stimulate technological innovation to

Develop products with commercial merit

## \* – Small Business Innovation Research

\*\* – Small Business Technology Transfer



## Purpose of SBIR/STTR Programs

- Develop innovative technologies
- Create jobs
- Promote small businesses



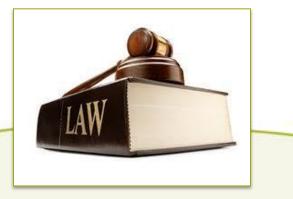
But a very compelling source of funds when basic/applied research leads to technologies based products with strong commercial potential....







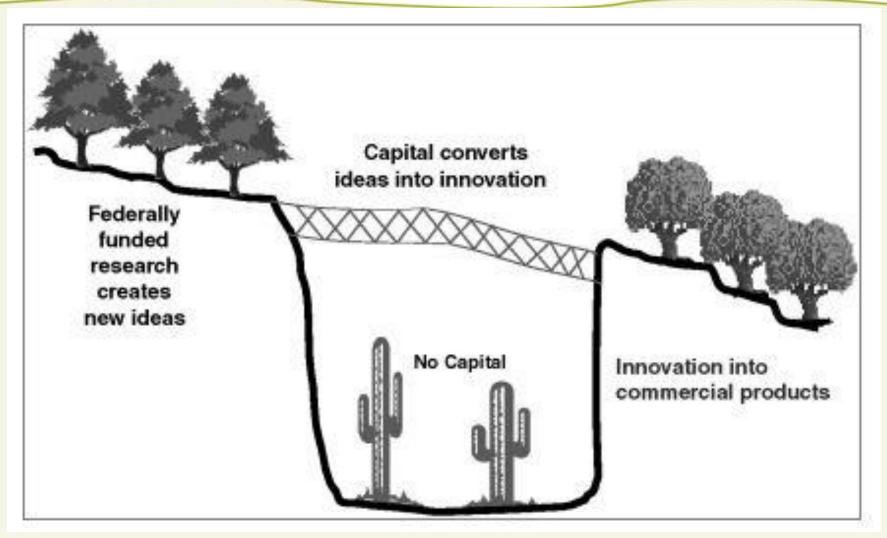
#### What is SBIR/STTR....



- Mandated by legislation (NDAA FY2012)
  - Current authorization for 6 years through 2017
  - Separate legislation for SBIR and STTR
- Applies to agencies with extramural research budgets that exceed certain thresholds
  - □ SBIR applicable to 11 Agencies
  - □ STTR applicable to 5 of the 11 SBIR agencies
  - Participation mandatory
- SBA "oversees" program implementation and compliance
  - SBIR/STTR Policy Directive
  - Small Business Size Regulations



#### Goal of SBIR/STTR Programs



Source: SBIR and the Phase III Challenge of Commercialization: Report of a Symposium. NAS, 2007.

## Why "I simply can't..."

- Not enough money
- The chances of getting funded are too low
- It takes too long to get funded
- I don't have the time to write the grant







## Which Would You Choose?

#### SBIR / STTR

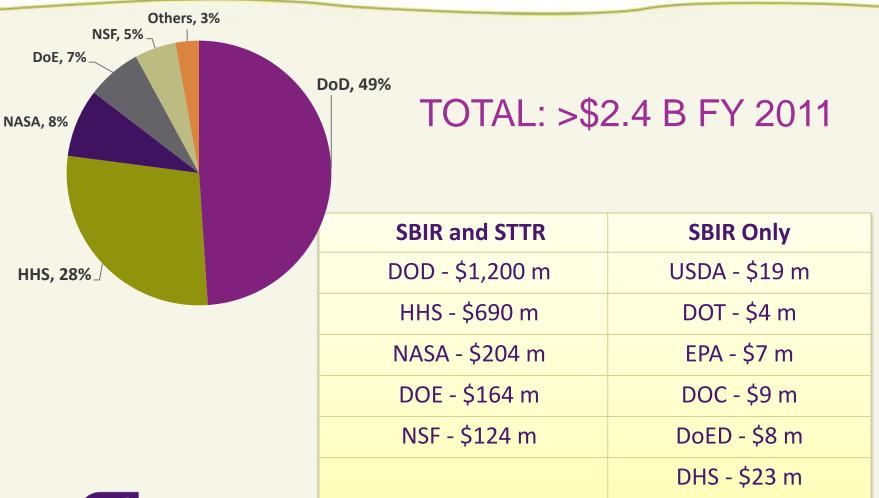
- 9 months to funding
- 10% 37% probability at NIH SBIR
- Don't need to know anyone
- Will fund early stage
- Don't take equity
- Don't take board seat
- \$2 billion per year available
- Peer review

## Venture Capital

- 6-12 months to funding
- <1% probability</p>
- Need to know someone
- Unlikely to fund early stage
- Take equity (sometimes lots)
- Take a board seat (and sometimes control)



#### Participating Federal Agencies\*









#### The Project

- What do you need the money for?
- The Company (there has to be one...)
  - Who owns it?
  - What resources does it have?
    - Facilities
    - People
  - Where will it get what it needs?



## The Project: What Does SBIR/STTR Fund?

PRODUCT Development

Based on "technological innovation"
 "high risk"

Credible Commercialization Strategy

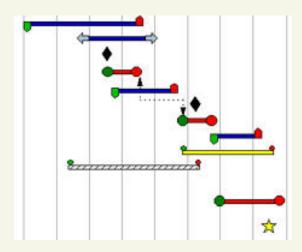






#### The Project – QUESTIONS:

- for <u>PRODUCT</u> Development
  - What is the intended product?
  - What applications will it be used for?
  - What has been done to date?
  - How much is left to do?





#### The Basics of SBIR: 3 Phases



Phase III: Commercialization (no federal <u>SBIR/STTR</u> \$\$)



## Three Phases of SBIR/STTR

- Details Agency Dependent
- Phase I Feasibility\*
  - 6 months 1 year
  - □ \$80k 225k

- Phase II Expand results, pursue further development\*
  - □ 2 years
  - □ \$750k \$1.5m
- Phase III Commercialization
  - □ Your own \$\$ ( ie no government \$!)
- \*Phase I and II supplements available at some agencies



## The Project – QUESTIONS:



Based on "technological innovation"

- What is the technological innovation that will enable the product to achieve the desired performance?
- How certain are you that it will work?
- Is there risk of failure?
- Will the product be revolutionary or evolutionary?



Commercialization

# There is no such thing as the "*Build it and they will come*" Business Model







## The Project – QUESTIONS:

- Credible Commercialization Strategy
  - □ Is there a market identified?
  - □ Has a competitive analysis been done?
  - □ How will the company generate revenue?
  - What additional resources will be required to achieve commercialization?
  - Have sources of those resources been identified?
    - Strategic Partners
    - Sources of capital





#### SBIR/STTR Programs

# Learn the Rules!



## The Company – QUESTIONS:

- A for-profit entity?
- Who owns the company?
  - May need to refer to cap table
- Who controls the company?



- Does the company have its own research facilities?
- Is there a qualified PI with primary employment at the company?





#### 2012 Reauthorization SBA Documents

#### **Small Business Size Regulations**

#### Final Rule

Published 12/27/2012 https://www.fodorolrogistor.gov/a

https://www.federalregister.gov/articles/2012/12/27/2012-30809/small-business-size-regulations-small-businessinnovation-research-sbir-program-and-small-business

Effective Jan 28, 2013





## **Eligibility for Funding**

- Small business
  - □ For-profit
  - U.S. owned and controlled
  - □ < 500 employees
  - Located in the U.S.
  - R&D must be performed in the U.S.





For solicitations issued after to Jan 28, 2013:

**Ownership and Control** 

- >50% owned and controlled by:
  - US citizens, permanent resident aliens and/or one or more domestic business concerns which themselves are >50% owned and controlled by US Citizens or permanent resident aliens
  - ii. Multiple domestic VCOCs, HFs, or PEFs, provided that no single such investor owns more than 50% (SBIR ONLY)

.....Or.....



#### **Size and Affiliation**

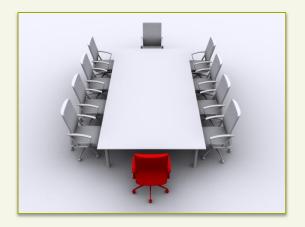


- Under 500 employees for SBIR applicant and its affiliates including:
  - Full-time, part-time or other basis
  - Employees obtained from a temporary employee agency, PEO or leasing concern
- Based on average of number of employees for each pay period in the preceding 12 months



#### **Size and Affiliation**

Affiliation exists when one business controls or has the power to control another or when a third party controls or has the power to control both businesses





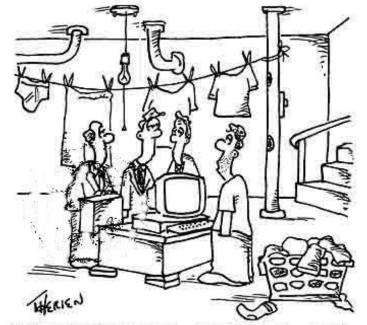


#### **Timing of Size Certifications**

- Size and eligibility certified at the time of award
- If awardee grows to > 500 employees during the time of the award it may continue to perform activities covered by the award
- If awardee merges or is acquired it may only continue for the current funding period and then will have to recertify



#### **Company-controlled research facilities**



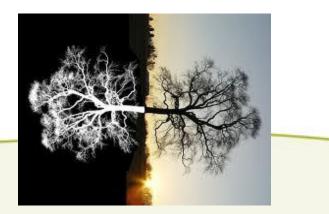
"Good afternoon, gentlemen, and welcome to multi.global.industries.com... otherwise known as my basement."



"We've rented the kitchen to an internet startup. Want to eat out?"

**Documentation Required!** \*\*Access to special facilities is permitted





- SBIR and STTR are two separate programs
- Federal set asides with different funding requirements

#### Not all agencies required to participate in the SBIR program are required to participate in the STTR program





# Not all agencies with both SBIR and STTR programs give YOU the choice of mechanism





#### SBIR vs. STTR

Primary difference is in the relationship with a nonprofit research institution:

- SBIR allows but does not require the involvement of a non-profit research institution
- STTR requires the involvement of a non-profit research institution

However – in either case: The Applicant Organization is always the Small Business!



## SBIR vs. STTR: Who does the work?

\*\* APPLICANT IS ALWAYS THE SMALL BUSINESS\*\*

#### Subcontract percentages

- SBIR: no more than 33% in a Phase I and 50% in a Phase II
- STTR: at least 40% at small business and at least 30% at partner non-profit research institution





SBIR vs. STTR: Where is the PI?



### \*\* APPLICANT IS ALWAYS THE SMALL BUSINESS\*\*

## Principal Investigator rules

- SBIR: PI at least 51% EMPLOYED at small business
- STTR: At small business or non-profit research partner. Must have an 'official relationship' with the small business and at least 10% effort on the project (except for NSF)



## STTR Applications - Extra Requirements

- Company & its University partner must sign intellectual property (IP) agreement (JIT)
- Budget and Certification of Research Institution" form required
- Virtual companies do not qualify
- Be conscious of conflict of interest issues

(Both of the above apply equally to SBIRs that include a subcontract to a non-profit research institution)



How do you choose ?



- Does the agency offer STTR?
- Is the relevant technology area/specific topic offered under both mechanisms?
- If yes to both above:

Do a resource inventory – people and facilities

- What do I have
- What do I need
- Where will I fill the gaps?

Talk to the Agency



# Advantages of SBIR over STTR

No academic partner necessary

- Fewer agreements, fewer lawyers, less cost
- Control of funds
- Less or no academic/institutional indirect costs
- More funds available
  - Set-aside \$\$ higher
- Payments to academic consultant
   Earn \$\$ from grant in consulting fees



## Advantages of STTR over SBIR

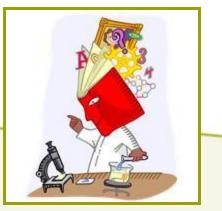
- Company lacks credible PI (>50% employed)
   No scientists employed by company
   Not ready to leave the University
- Access to superior academic facilities
   Institutional Review Board (IRB)
   Animal Welfare Committee
   Lab space/Equipment
- Higher percent subcontract possible





## **University Participation**

### **Faculty Roles\***



- Faculty member can own small company & identify someone else (well-qualified) as PI
- Faculty member can be PI (i.e., with appropriate leave of absence)
- Subcontracts to academic institution
  - □ Faculty member can be PI's of subcontracts
  - Faculty member can provide analytical and other support services
- Faculty member can be a consultant

\*subject to institution-specific policies



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## **Common Misconceptions**



- Universities can apply for STTRs
- If a University is involved you have to do an STTR
- If the IP comes from a University you have to do an STTR
- If the inventor and/or key scientist is faculty you have to do an STTR
- If the PI of an STTR is at the University it is the University's grant/contract
- All of the work of an STTR can be done at the University



Critical "watch-outs"

### Make sure that:



- The company has company-controlled research facilities
- If the PI of an SBIR also maintains a faculty appointment that they reduce their effort appropriately
- You accurately represent the company's resources



## **SBIR/STTR Reauthorization**





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## **Reauthorization Process**



Congress — Pass Legislation
 SBA — Draft rules/regulations
 Agencies — Implement changes

### STATUS:

- Policy directive released and effective August 6, 2012
- □ Size Rules released Dec 27, 2012, effective Jan 28, 2013
- Agencies implement changes as 2013 solicitations released



## 2012 Reauthorization SBA Documents

### **SBIR and STTR Policy Directive**

- Final Policy Directive with Request for Comments
- Published Aug 6, 2012 <u>https://www.federalregister.gov/articles/2012/08/06/2012-18119/small-business-innovation-research-program-policy-directive</u>
  - Effective upon publication
  - Public comments due on or before Oct 5, 2012
- Updated Policy Directive to be published Q1 2013?





Increased set aside over 6 years
 SBIR 2.6% FY2012 up to 3.2% FY 2017
 STTR 0.35% FY2012 up to 0.45% FY2017

### Increased funding "caps"\*\*

- Guidelines \$150k Phase I; \$1 million Phase II
- Caps up to 150% of guidelines
  - \$225k Phase I
  - = \$1.5 million Phase II

**\*\*** Refer to individual agency solicitations for specific funding guidelines and limits









- Streamline award process
  - 90 days to a decision, 180 days to funding
    - NSF and NIH up to 1 year

### Increased outreach

- Goal to increase participation by minority and women owned firms
  - Women-owned ~13% of FY2011
  - Minority-owned ~7%
  - 26 states combined ~8%







- "Invitation Only" Phase II no longer allowed
   Applies to new Phase I awardees
   Check with agency if prior Phase I awardee
- Can switch from SBIR to STTR or vice versa between Phase I and II
  - At agency discretion



## **Policy Directive**

### VC/PEF/HF "Quotas"



- Multiple VCOC/PEF/HF owned companies eligible to compete (Size Rules)
- Funding limited by "quota"
  - □ < 25% NIH, NSF, DoE
  - □ <15% all other agencies
- Agencies "opt in"
- Agencies can refuse to accept proposals



## Other Reauthorization Items



### **Focus on Commercialization**

- Establish commercialization benchmarks (mandated by statute)
  - □ Will only apply to frequent winners (e.g., >20 Phase I, >15 Phase II)
    - Phase I to II to be implemented January 2013
    - Phase II to III to be implemented October 2013
  - □ If don't make benchmarks may not qualify for awards for 12 months
- Increase technical assistance (e.g., 'commercialization' assistance)
  - □ \$5,000/award/year with potential to identify service provider
- Administrative funding to agencies to support new initiatives
- Sharing best practices between agencies



## **Other Reauthorization Items**

## **Reduce Fraud, Waste and Abuse**

- Eligibility
  - "Life cycle" certifications
- Performance
  - Location
  - PI employment
  - Subcontracting guidelines
  - Double dipping"







### **Acquisition Preference**

- Federal agencies and prime contractors, to the greatest extent practicable, shall issue Phase III awards to the SBIR Phase I or Phase II awardee
- Agencies may issue sole source Phase II awards to the SBIR Phase I or Phase II awardee
- Not all contracting officers are up to date on these changes to the law
  - □ "The law trumps the FAR"



## **Other Reauthorization Items**

## **Data and Reporting**

- Impact primarily at agency level
- Small business will have to:
  - Register at sbir.gov
  - Provide additional commercialization information
  - Additional information may be required from VC funded companies
- Commercialization database
  - Based on DoD commercialization index
  - Information will be confidential





## DO YOUR HOMEWORK



## SBIR/STTR Terminology

### "Solicitation"

- Funding Opportunity Announcement (FOA)
- Request for Proposal (RFP); Request for Application (RFA)

### "Submission"

- Proposal
- Application

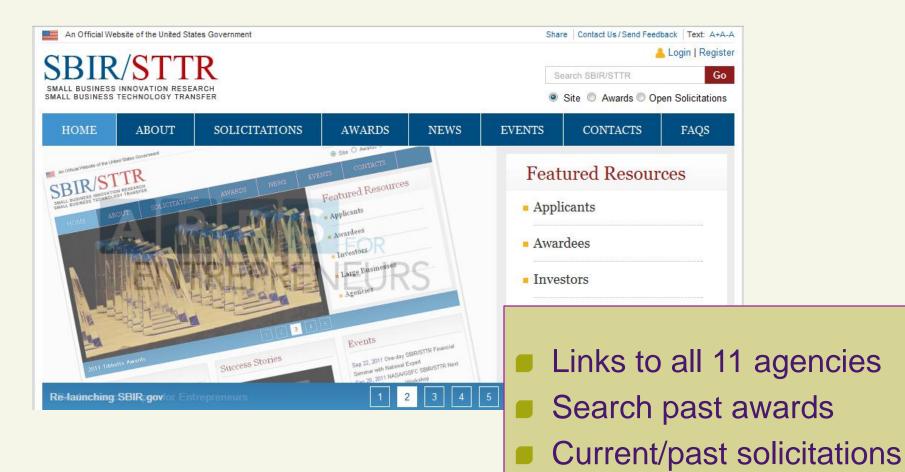
### "Award"

- Grant
- Contract
- Award mechanism





# SBIR Information: SBIR.gov



www.sbir.gov

# SBIR Informa

### sy to Use

#### SBIR Open Topic Search

GO

DoD Topics Currently Being Updated

#### Search Services

Open SBIR/STTR Solicitation Topics Select an Agency's Open SBIR Topics

Closed SBIR/STTR Solicitation Topics Topics often recycled for future solicitations

Past SBIR/STTR Awards SBIR/STTR Awards Databases

Federal Laboratory R&D Resources

Keyword search for federal tech resources

Solicitation deadlines
Search past solicitations
Subscribe to SBIR Insider Newsletter

www.zyn.com/sbir

#### SBIR Gateway

Resources

SBIR Insider Newsletter

Solicitation Dates

SBIR Agency Links

SBIR Events Calendar

SBA FAST Awardees

About SBIR Funding

Federal Laboratories

EPSCoR Program

Other Grant Info

SBIR Policy Directive

Contact Us

SBIR/STTR/CPP Reauthori: Programs reauthorized through

News Items

The Most

View Latest Solicitation New News Updated 6/15/12

New SBA Proposed Rule Requests your comments 5/15/12

USDA Opens FY-13 SBIR Opens 6/14/12 Closes 9/6/12

DHS DNDO Issues FY-12.1 S Opens 5/25/12 Closes 7/3/12

DHS S&T Issues FY-2012.2 S Opens 5/17/12 Closes 7/3/12

DoD Issues FY-2012.2 SBIR Opened 5/24/12 Closes 6/27/12

DOE Issues FY-2012 (R3) SBIR/STTR Toj Opens 5/1/12 Closes 7/3/12

National / Regional Conferences

SBIR & Global Trade Summit

## Agency Differences

- Receipt dates, number & timing of solicitations
- Type of award (grant or contract)
- Proposal review process
- R&D topic areas
- \$ of award (both Phase I and II's)
- Proposal success rates
- Profit or fee allowed



- Gap funding provided (competing continuation grants)
- Payment types & schedules



# **SBIR/STTR** Deadlines

HOME/WHAT WE DO/SBIR/STTR/OTHER RESEARCH GRANT ASSISTANCE/SOLICITATION DATES

### SOLICITATION DATES

Agency/Program	Release	Open	Close
Health & Human Services (NIH/CDC/ FDA/ACF) PHS 2013-2 Omnibus SBIR/STTR	25-Jan '13	5-Mar '13	5-Aug '13 5-Dec '13
National Science Foundation Ph 1 SBIR FY-2013-546	6-Mar '13	11-May '13	11-Jun '13
National Science Foundation Ph 1 STTR FY-2013-547	6-Mar '13	13-May '13	13-Jun '13
Dept. of Homeland Security Ph 1 SBIR FY 13.12	2-Apr '13	18-Apr '13	22-May '13
Dept. of Defense SBIR 2013.2	24-Apr '13	24-May '13	26-Jun '13
Environmental Protection Agency Ph 1 SBIR 2014	9-May '13	5 Jun '13	17-Jul '13
Dept of Defense SBIR 2013.3/STTR 2013.3B	26-Jul '13	26-Aug '13	25-Sep '13

**Open** = Earliest Submission Date **Close** = Final Submission Date

SPECIAL PROGRAMS
Michigan SBIR/STTR
MI FASTconnect
SBIR Impact NYC
iBIO/Propel
New Hampshire IRC
Delaware SBIR Gateway
SBIR/STTR BASICS
SBIR/STTR/Other Research Grant Assistance
Grant Assistance
SBIR/STTR FAQ
SBIR/STTR FAQ

SBIR/STTR Assessment

# Agency Differences -- Grants vs. Contracts

## **Grants**

- Assistance
- Project/proposal is welldefined, but no formal agreement
- Progress/final reports
- Broad topics funded
- Agency contact unlimited
- No Phase III opportunities

## **Contracts**

- Procurement
- Well-defined, legally binding statement of work, obligations, responsibilities
- Specific deliverables defined
- Topic Specific Response
- Agency contact limited
- Phase III opportunities



# Agency Differences -- Grants vs. Contracts

### Grants – Investigated Initiated Topics

- □ HHS (95% \$\$), NSF, USDA, DOE, ED
- □ Some agencies might have topic areas (aka "buckets")
- Open communications
- External peer review

### Contracts – Agency-specified topics

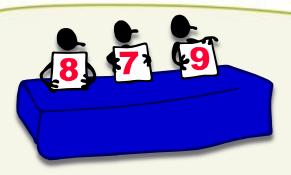
- □ DoD, NASA, DHS, EPA, DOT, DOC, ED, HHS (5% \$\$)
- Must respond to a topic
- □ Limited time to prepare (8-12 weeks)
- Limited communications during open solicitation
- Internal review





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# Agency Differences -- Review Process



- Internal Review
  - DoD, NASA, DHS
  - Review panels composed of Agency personnel

### External Review

- NIH, NSF
- Review panels composed of leading experts in the field
- Agency personnel do not score/rank applications, but manage the process



# REGISTRATIONS



All organizations submitting SBIR/STTR proposals must have the following:

- EIN Employee Identification Number (IRS)
- DUNS Data Universal Number (D&B)
- Bank Account
- SAM System for Award Management \*
- SBIR.gov Company registry (new 2013)
  - DoD requires SAM at time of award



## Registrations – DUNS #



## What is it?

Data Universal Number System (DUNS)

## Where do I get it?

- Dun & Bradstreet at <u>http://fedgov.dnb.com/webform</u>
- Use the page for US Federal Government Contractors and Grantees

## Why?

The federal government has adopted the use of DUNS numbers to track how federal grant money is allocated.

## How long will it take?

□ Same Day. You will receive DUNS # information online.



## System for Award Management – SAM

### What is SAM?

- SAM is a federal government owned and operated free web site that combines several procurement systems and the Catalog of Federal Domestic Assistance into one common system.
  - Central Contractor Register (CCR)
  - Federal Agency Registration (Fedreg)
  - Online Representation and Certifications Application (ORCA)
  - Excluded Parties List System (EPLS)



# Registrations – System for Award Management (SAM)

- You need a DUNS number to register at SAM.
  - □ www.sam.gov.
  - Designate an E-Business Point of Contact (E-Biz POC).
- How long will it take?Three to five days.
- SAM registration must be renewed annually





## Registrations – SAM.gov

Information needed to register:

- DUNS number
- EIN/TIN number
- CAGE code (if you don't have one it will be assigned to you)
- **General business information** (address, org structure, etc)
- Business financial information (bank acct no, EFT info)
- Executive Compensation (estimates if no history)







## **Company Registry**

### http://sbir.gov/registration

Who needs to register?	ALL applicants must register in the Company Registry and submit a .pdf document of the registration with its application.	
What do I need to register?	At least a DUNS number or EIN. Once registered, your company will be assigned a unique SBC Control ID and .pdf file to be used for the application process.	
When should I register?	Prior to submitting an application.	
How long will this take to complete?	Less than 15 mins for most companies.	

## SBIR.gov – cont.

### **How To Register**

- 1. Enter company name and/or EIN
- 2. New and existing firms
- 3. Basic Information Form
- 4. Eligibility Statement
- 5. PDF Copy



# Company Registry- Enter company name and/or EIN

#### Enter company name and/or EIN at http://sbir.gov/registration

Firm Registration Pa	ge   SBIR.gov +								
An Official We	ebsite of the United State	s Government			Sł	hare   Contact Us / Send Fee	dback   Text: A+A-A		
CDID		D				💄 Login   (	Company Registry		
	(STT]					Search SBIR/STTR	Go		
	TECHNOLOGY TRANS					Site O Awards O	pen Solicitations		
HOME	ABOUT	SOLICITATIONS	AWARDS	NEWS	EVENTS	CONTACTS	FAQS		
Home » Registration	on								
Participating Fed	eral Agency users de	ses to register and gain acc esiring UserID and access s our company by entering yo re than one field.	hould use the New	User link under the		ontract/grant number for	one of your		
Company Name	e:	EIN/Tax ID:	1	DUNS:		Existing Contract/Grant Number:			
If you have not p Why Registe		I in the SBIR/STTR program	n and are not in the	company registry,	click here to regist	ter	Search		

### **Company Registry- New or Existing**

- 1 You are a new firm, then Register as a New Company
- 2 You are an existing firm, then Register as your company in the search results

HOME ABO					Search SBIR/STTR	Go Open Solicitations	
	T SOLICITATIONS	AWARDS	NEWS	EVENTS	CONTACTS	FAQS	
lome » Registration							
Registration							
	ses matching the criteria you entere	d. Choose the compa	any for which you	want to register wit	h		
no small businesses mate	your criteria, you can begin a New	Search or a New Re	gistration using th	e buttons provided	below		
New Search						New Registration	
Title: Brien comment							E
Title: Brian company Address		EIN:				Register	
Address		DUNS: 14141	14141			Register	
Title: Brian company (	1						
Address		EIN: 9797979				Register	
		DUNS: 98989	98980				
Title: Brian company (	2	<b>FIN</b> 0005077					
Address		EIN: 2005277 DUNS: 12341				Register	
Title: Brian company							
Address		EIN: 2005277				Register	
		DUNS: 12341	12341				
Title: Brian company (	2						
Address		EIN: 2005277 DUNS: 12341				Register	



2.

### Company Registration – cont.

### **Provide basic information including:**

- I. Company Name
- 2. Mailing address
- 3. DUNS number
- 4. EIN number
- 5. Ownership information
- 6. No. of employees
- 7. Point of contact information (the email address provided should match one of the POC at SAM)



### How to be Competitive in SBIR/STTR

- Understand the philosophy of the Agency
- Understand the review process
- Understand the psychology of the reviewers
- Develop and follow a strategic plan
- Follow the rules
- Complete your registrations
- Submit Early!



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### **NSF SBIR Program**







The mission of The National Science Foundation is to promote the progress of science; to advance the national health, prosperity, and welfare; and to secure the national defense.



### What Does NSF SBIR Fund?

We fund <u>high-risk</u>, <u>high-payback</u> innovations

- With the potential for commercialization
- That demonstrate strategic partnerships with research collaborators, customers, industry partners, and equity investors
- We do NOT fund
  - Basic research
  - Evolutionary optimization of existing products and processes or modifications to broaden the scope of an existing product, process or application
  - Analytical or "market" studies of technologies

### **NSF SBIR Program Interests**

#### **Projects Considered Non-Responsive**

- Demonstrations of technology
- Technical assistance
- Literature surveys
- Market research
- Patent application or patent litigation costs



## NSF SBIR/STTR Deadlines

#### **SBIR** Deadlines:

- December 3, 2012 (NSF 12-605)
- □ June 11, 2013 (NSF 13-546)
- STTR Deadline
  - December 20, 2012 (NSF 12-592)
  - □ June 13, 2013 (NSF 13-547)
- Phase II Deadlines
  - Phase I Awards Expiring in December have submission opportunity dates of: January or July
  - Phase I Awards Expiring on June have submission opportunity dates of July or January







## www.nsf.gov/eng/iip/sbir



**IIP Home** 

SBIR/STTR Home

- Program Information & Requirements
- Phase I Information
- Phase II Information
- Post Award Activities
- Supplemental Funding Opportunities
- Review Process

FAQ

SBIR/STTR Forms

**Budget Preparation & Revisions** 

#### Small Business Innovation Research (SBIR) & Small Business Technology Transfer (STTR) Program

#### anding Opportunities

#### SBIR Solicitations

-Click here to be taken to the latest SBIR Solicitation (13-546)

#### STTR Solicitations

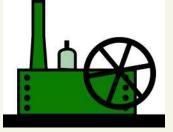
-Click here to be taken to the latest STTR Solicitation (13-547)

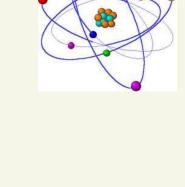
Program Information & Requirements	Phase I Program	Phase II Program
-Program Description -Program Definitions	-NSF SBIR/STTR Philosophy and General Information	Only Phase I Grantees can apply!
-Evaluation & Selection Criteria	- <u>SBIR Program</u>	- Phase II Information
More	- <u>STTR Program</u>	More

## FY 2013 Solicitation (NSF 13-546 & 13-547)

### Four Broad Topic Areas

- Biological and Chemical Technologies (BC)
- Education Applications (EA)
- Electronics, Information and Communication Technologies (EI)
- Nanotechnology, Advanced Materials, and Manufacturing (NM)











### **NSF** Subtopics

#### **Biological Technologies**

BT1 - Sustainable Biotechnology Applications: New approaches for meeting the world's future nutritional needs. Target areas for improvement may include (but are not limited to) drought tolerance, improved nutritional value, enhanced disease resistance, and higher crop yield. Proposers should give consideration to technologies that enhance biodiversity, produce less carbon dioxide, and use less water and fertilizer. (Cognizant Program Officers: Ruth Shuman; rshuman@nsf.gov, and Jesus Soriano; isoriano@nsf.gov).

BT2 - Biosensors: Biosensors are sensors that contain a biologically-based sensing element. Proposed projects might include but are not limited to real-time sensors, microbial component-based sensors, sensors for monitoring fluxes of metabolites, nanobiotechnology-based sensors, biomedical sensors, micro- or nanofluidic-based sensors, and disease and toxin monitoring. Other types of sensors should refer to the EI topic, (Cognizant Program Officer: Jesus Soriano; isoriano@nsf.gov)

BT3 - Life Sciences Research Tools: Developing novel technologies that will advance scientific research across the biological spectrum. This may include enabling technologies for drug discovery (high-throughput screening assays and platforms, and,

high-content screening assays and platforms; no based on characterization of physical properties Biomedical Technologies should focus primarily on the development of in

Shuman: rshuman@nsf.gov)



services where there is significant market opport BM1 - Materials for Biomedical Applications: Proposed projects might include but are not limited to biomaterials, bio-mimetic and bio-inspired materials, improved implants, bio-device coatings and anti-microbial coatings. Development of new nanomaterials should refer to the NM topic. (Cognizant Program Officer: Ruth Shuman; shuman@nsf.gov)

> BM2 - Diagnostic Assays and Platforms: Proposed projects should focus on transformational diagnostic technologies. Proposed projects might include but are not limited to non- or minimally-invasive disease diagnosis, detection, and monitoring, biomarker development, disease-specific assays, and point-of-care testing for diseases. (Cognizant Program Officer: Ruth Shuman; rshuman@nsf.gov)

> BM3 - Drug Delivery: Proposed projects might include but are not limited to new formulations, devices or methodology for the delivery of genes, biologics or small molecule drugs. Development of new nanomaterials for drug delivery should refer to the NM topic. (Cognizant Program Officer: Jesus Soriano; jsoriano@nsf.gov)

### Communicate with Program Officer

### Biological and Chemical Technologies (BC)

Proposal Due Date: December 03, 2012

Prakash Balan (<u>pbalan@nsf.gov</u>) Ruth Shuman (<u>rshuman@nsf.gov</u>) Jesus Soriano (<u>jsoriano@nsf.gov</u>)

#### Importance of Communication with Program Officer

A company considering a proposal submission is encouraged to communicate (via email) with the cognizant program officer to help gauge the responsiveness to the solicitation (see below for contact information). When contacting the cognizant program officer, please provide a brief 2-3 page executive summary with background on: 1) company/team including experience with previous SBIR awards, 2) market opportunity, 3) technology/innovation, and 4) competition. You may contact the program officer via email at any time before the submission deadline. Note, however, that communication with the program officer will become increasingly difficult as the deadline nears.



### Planning a June 2013 Submission?

#### **Priority Tasks**

- Read solicitation and the subtopic description
- Contact appropriate NSF Program Manager
   1-2 page Executive Summary of project
- Register in FastLane and with SBA
- Develop a preliminary project budget

<u>http://www.sbir.gov/</u> http://www.zyn.com/sbir/



### **NSF SBIR Project Attributes**

#### Proposers must:

- Provide evidence of a commercially viable product, process, or system
- Meet an important social or commercial need

#### Projects must:

- Show high potential commercial payback
- Show high risk effort

#### Projects may also address:

- Research tools which meet significant commercial market needs
- Applications that result in multipurpose commercially viable functions



### Executive Summary: Components

1 to 2 pages via email to program officer:

- 1) Company/Team
  - Include experience with previous SBIR awards
  - Emphasize commercialization experience
- 2) Market Opportunity
- 3) Technology/Innovation
- 4) Competition
  - Alternative approaches
  - Products & companies







### **Company/Team**

- What are the origins of the company/team?
- How many current employees are there?
- What is the revenue history, if any, for the past three years?
- Has the team previously taken similar products/services to market?
- How does the proposed research mesh with company objectives?
- Experience with previous SBIR awards?





### **Market Opportunity**

- Describe the anticipated target market or market segments
- Provide a brief profile of the potential customer
- What customer needs will be addressed with the innovation?
- What is the estimated size of the market being addressed?





### **Technology/Innovation**

- What is the technological innovation?
- Brief explanation of how the innovation is relevant to meeting a need described in the subtopic narrative
- Problem to be solved and its magnitude
- Gap in knowledge that your technology will fillWhat is the product?





### Competition

- How does your product or service sit within the competitive landscape?
- What is the main competition?





### NSF SBIR/STTR proposals



### PLEASE NOTE...

- Focus on near-term commercialization
- Letters of support from commercialization partners are required
- Communication with Program Officer is strongly encouraged
  - Provide a brief 1-2 page executive summary with background on the:
    - Company/team including experience with previous SBIR awards,
    - Market opportunity,
    - Technology/innovation and
    - Competition



## NSF SBIR/STTR Proposal Required Format

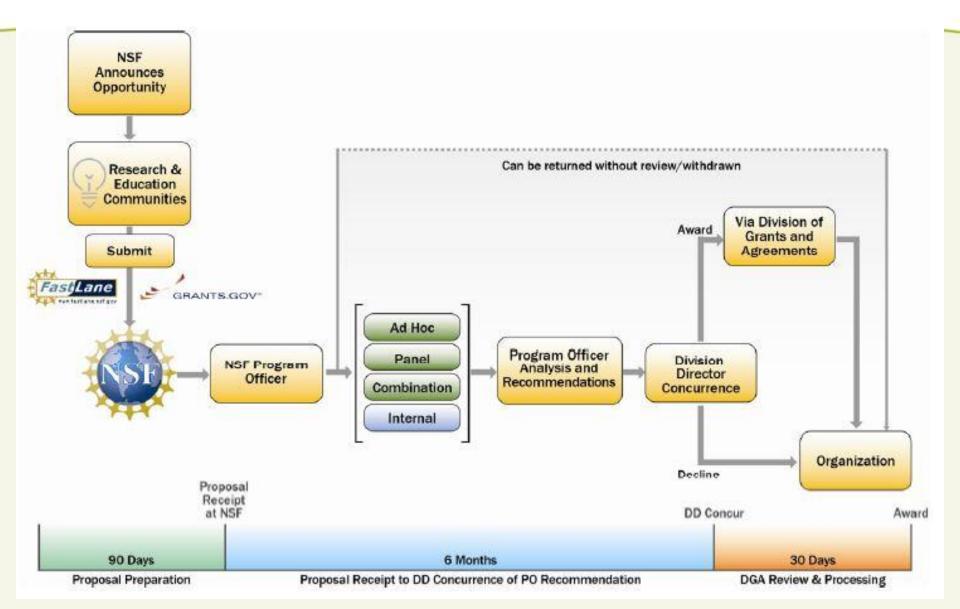
- 1) Cover Sheet and Certification
- 2) Project Summary (2 x 200 word paragraphs)
- 3) Table of Contents (automatically generated by FastLane)
- 4) **Project Description (maximum 15 pages)**
- 5) References Cited
- 6) Biographical Sketches
- 7) Budget and Budget Justification (also for each subaward)
- 8) Current and Pending Support of Principal Investigator and Senior Personnel
- 9) Facilities, Equipment and Other Resources
- 10) Supplementary Docs
  - 1) Letters of Support for Technology (3 max indicate market valication!)
  - 2) Company Commercialization History
  - 3) Cooperative Research Agreement (STTR only)
  - 4) Data Management Plan

## **NSF** Project Description

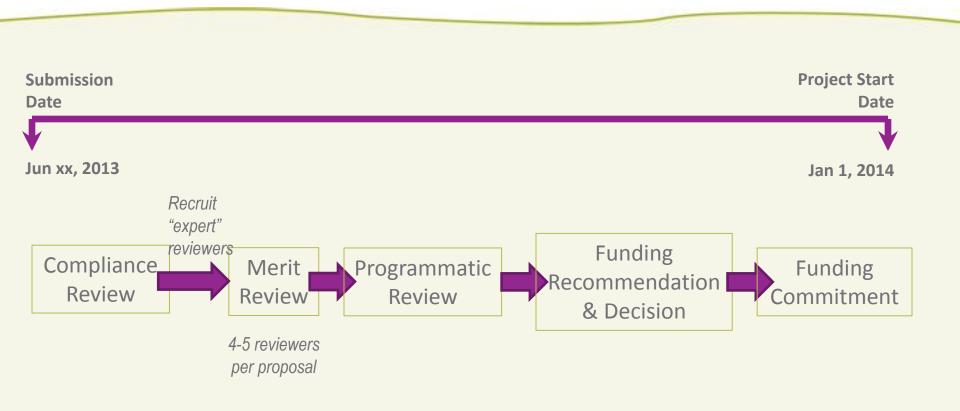
#### Limited to 15 pages

- 1) Identification and Significance of the Innovation
- 2) Background and Phase I Technical Objectives
- 3) Phase I Research Plan
- 4) **Commercial Potential (3-5 pages)** 
  - Market Opportunity
  - □ Company/Team
  - Product or Technology and Competition
  - □ Financing and Revenue Model
- 5) Consultants and Subawards/Subcontracts
- 6) Equivalent or Overlapping Proposals to Other Federal Agencies
- 7) Lineage of the Innovation

### **NSF** Application Review Process



### **NSF** Application Review Process



#### **Program Officers oversee the review process**

- Program Officer recruits peer reviewers
- Applicants can <u>suggest</u> names of well-qualified reviewers
- Applicants can <u>suggest</u> names of persons they prefer <u>not</u> to review the proposal
- Suggestions are adopted at discretion of Program Officer



#### **Program Officers oversee the review process**

- Compliance Review (program officer + senior advisor)
  - Sufficient technical and commercial potential to justify a review?
  - □ Falls within the scope of the solicitation topic?
  - Proposes research in science, engineering or education?
- Merit Review (peer reviewers)



#### **Program Officers oversee the review process**

- Programmatic Review
  - Program Officer formulates a recommendation after consideration of the scientific, technical, and other "appropriate factors"
  - Division Director accepts or declines the recommendation
- Proposals Recommended for Funding
  - Forwarded to Division of Grants and Agreements (DGA) for review of business, financial, and policy implications
  - Only DGA can make funding commitments for NSF



#### **Merit Review Criteria**

- What is the intellectual merit of the proposed activity?
- What are the <u>broader impacts</u> of the proposed activity?



#### **Intellectual Merit – Reviewer Instructions**

- Does the plan establish a sound approach for establishing technical and commercial <u>feasibility</u>?
- To what extent are <u>unique or ingenious</u> concepts or applications explored?
- How well-qualified is the <u>team</u> to conduct the project?
- Is there sufficient access to needed resources?
- Is <u>state-of-the-art</u> reflected in the proposed activities? Are advancements in state-of-the-art likely?



#### **Broader Impacts – Reviewer Instructions**

- What <u>may be</u> the commercial and societal benefits?
- Does the proposal lead to <u>enabling technologies</u> for further discoveries?
- Will the outcome lead to a <u>marketable product</u>?
- Evaluate the <u>competitive advantage</u> vs. alternative technologies
- Is the project positioned to attract further non-SBIR funding?
- Has the Company successfully commercialized previous SBIR technology?



### **Proposal Scoring**

#### **An Overall Rating from Each Reviewer**

- Excellent outstanding in all respects; highest priority for support
- Very Good high quality in nearly all respects; support if at all possible
- <u>Good</u> quality proposal; worthy of support
- Fair lacks one or more critical aspects; issues need to be addressed
- Poor has serious deficiencies



### Do Your Homework @NSF

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## **NSF** Registration

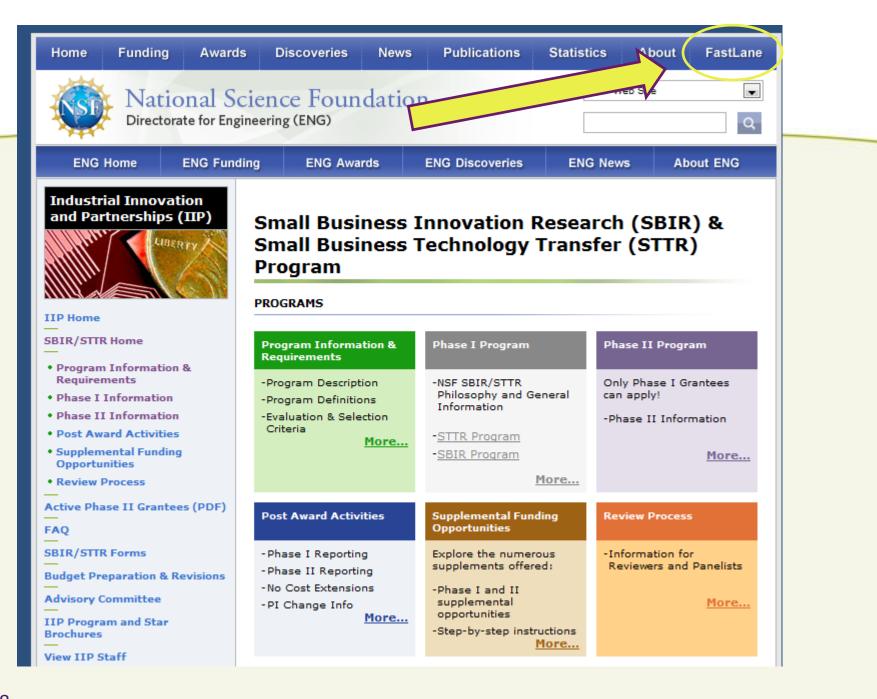




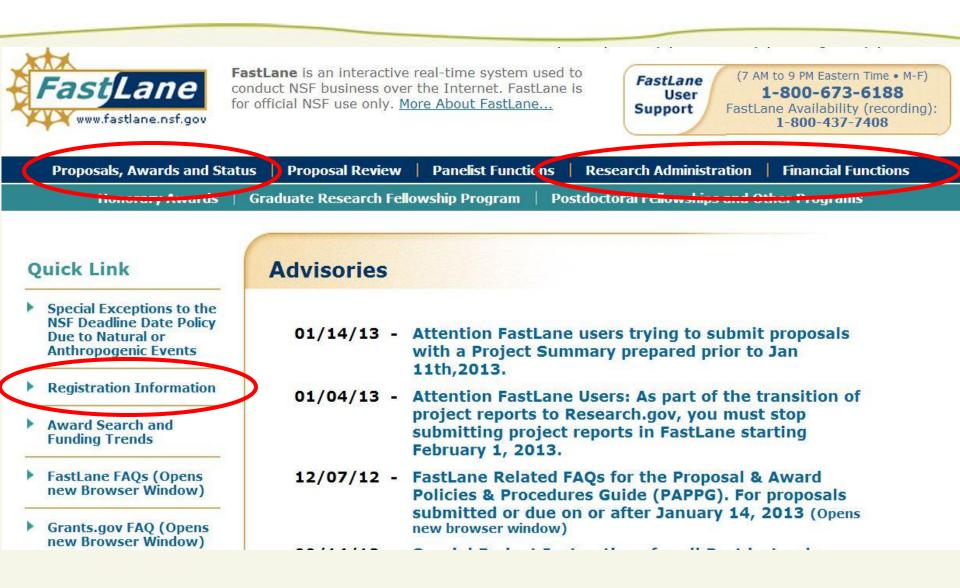
### **NSF Electronic Submission**

- Required to prepare/submit all proposals through FastLane
- Instructions for FastLane
  <u>http://www.fastlane.nsf.gov/a1/newstan.htm</u>
- Submission of Electronically Signed Cover Sheets
  - No paper copy necessary
- Submission by 5 p.m. (your time) on deadline date





## www.fastlane.nsf.gov



#### More Information

Organization **Registration - Why?** 

#### New Organization and FastLane Contact Registration

News

This application allows you to apply to register a new organization and its FastLane Contact

Before registering a new organization you must see if it already exists. Please enter your organization name in the text box and click the organization search button.

**Organization Name:** Contains

Home

Organization Search

•

#### National Science Foundation

4201 Wilson Boulevard Arlington, Virginia 22230, USA Tel: 703-292-5111 FIRS: 800-877-8339 TDD: 703-292-5090

Last Modified: Sept 10, 2005 (DS)





FastLane Comments nsf.gov

## FastLane Registration

### **Registration Information**

- Organization info (e.g., Name, Address, EIN, DUNS)
- Authorized Representative
- FastLane contact
- Principal Investigator

#### **Submission Process**

- Print & sign completed form
- Fax or email to NSF





# Department of Defense SBIR/STTR Contracts





Developing the Business of Technology

U.S. Department of Defense SMALL BUSINESS INNOVATION RESEARCH SMALL BUSINESS TECHNOLOGY TRANSFER

for Small Business



#### Get Started Now!

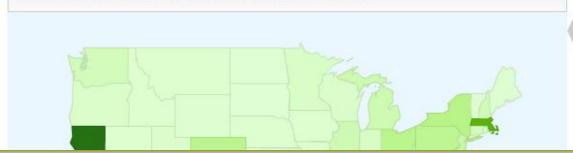
About

Home

Learn how to submit a proposal and receive R&D funding for your innovation ideas that support the Warfighter

for Government

DoD SBIR/STTR Awards by State - 2011



This graphic shows SBIR/STTR program results. Click on the tabs at the bottom of the graphic to view total Awards, Commercialization or Socioeconomic results by State or by Component. Commercialization results are the combined value of sales and additional non-SBIR investments, from either a federal or private entity, which result from, extend, or logically conclude any Phase II project. Click <u>here</u> to download the data for these graphics for FY 2009–2011.

Contacts

Awards

http://www.acq.osd.mil/osbp/sbir/



- Stimulate technological innovation in DoD's Critical Technology Areas,
- Strengthen role of small business in meeting DoD R&D needs,
- Encourage participation by minority and disadvantaged persons in technological innovation,
- Increase commercial application of DoD-supported R&D results.





# **DoD Critical Technology Areas**

- Air Platforms
- Chemical/Biological Defense
- Information Systems Technology
- Ground & Sea Vehicles Technology
- Materials / Processes
- Biomedical
- Sensors, Electronics, Electronic Warfare
- Space Platforms Technology
- Human Systems
- Weapons (Conventional, Directed Energy)
- Nuclear Technology
- Battlespace Environments



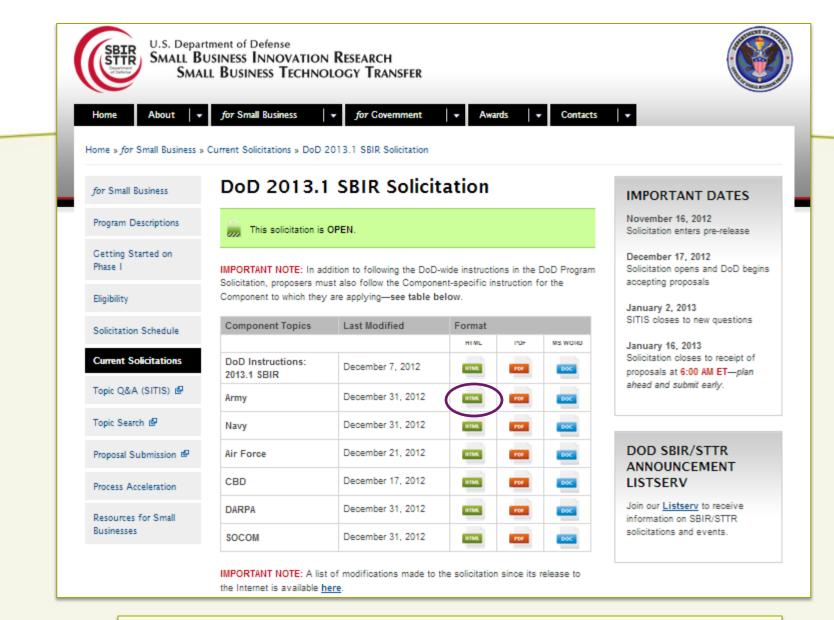


## **DoD Solicitation Schedule**

FY-2013 Schedule				
Solicitation	Pre-Release	Open	Close	
DoD SBIR 2013.1	16 Nov 2012	17 Dec 2012	16 Jan 2013	
DoD STTR 2013.A	25 Jan 2013	25 Feb 2013	27 Mar 2013	
DoD SBIR 2013.2	24 Apr 2013	24 May 2013	26 Jun 2013	
DoD SBIR 2013.3	26 Jul 2013	26 Aug 2013	25 Sep 2013	
DoD STTR 2013.B	26 Jul 2013	26 Aug 2013	25 Sep 2013	

You may communicate directly with the Topic Author or TPOC (Technical Point of Contact) ONLY during this window. After that, questions must be posted to DoD's SBIR/STTR Interactive Topic Information System (SITIS). www.dodsbir.net/sitis







#### http://www.acq.osd.mil/osbp/sbir/solicitations/sbir20131/index.shtml

Developing the Business of Technology



### Army

- A10-115 Manufacturing Development of Biomimetic Tissue Engineering Scaffolds
- A10-116 Miniaturized Fluidic Chip for Impedance Monitoring of Vertebrate Cells
- A10-119 Ultrafast Fiber Lasers Smart Surgical Tool Development
- A09A-T030: Incremental Learning for Robot Sensing and Control
- A10-074 Universal Bio-Sample Preparation Module

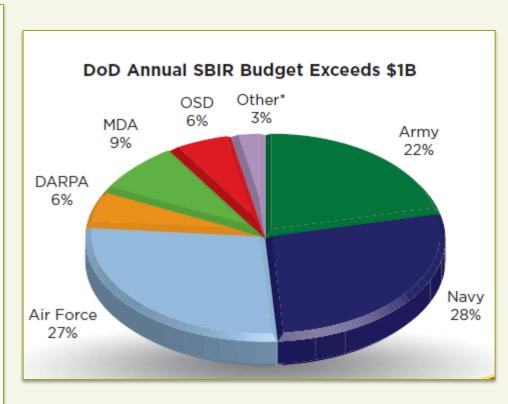


# DoD SBIR by Component



Component	SBIR Est. Budget	STTR Est. Budget
Army	\$265M	\$31M
Navy	\$332M	\$40M
Air Force	\$331M	\$40M
DARPA	\$70M	\$8M
MDA	\$111M	\$13M
OSD	\$74M	\$5M
Other*	\$36M	

\*Other includes DTRA, SOCOM, CBD, NGA, DLA and DMEA



http://www.acq.osd.mil/osbp/sbir/docs/SBIR\_Program\_Flyer.pdf

## **DoD Three Phase Program**



- Phase I awards (+ Phase I option)
  - Typically \$100,000 \$150,000
  - □ 6 to 12 months
- Phase II awards (\* Reauthorization Change- used to be by invitation)
  - Awarded on the basis of
    - results of Phase I
    - scientific, technical, and commercial merit of Phase II proposal
  - Typically \$1,000,000
  - Generally < 24 months (subject to negotiation)</p>
  - Expected to produce well-defined deliverable prototype

**Each Awarding Component Has Unique Guidelines & Rules!!** 



## DoD Three Phase Program

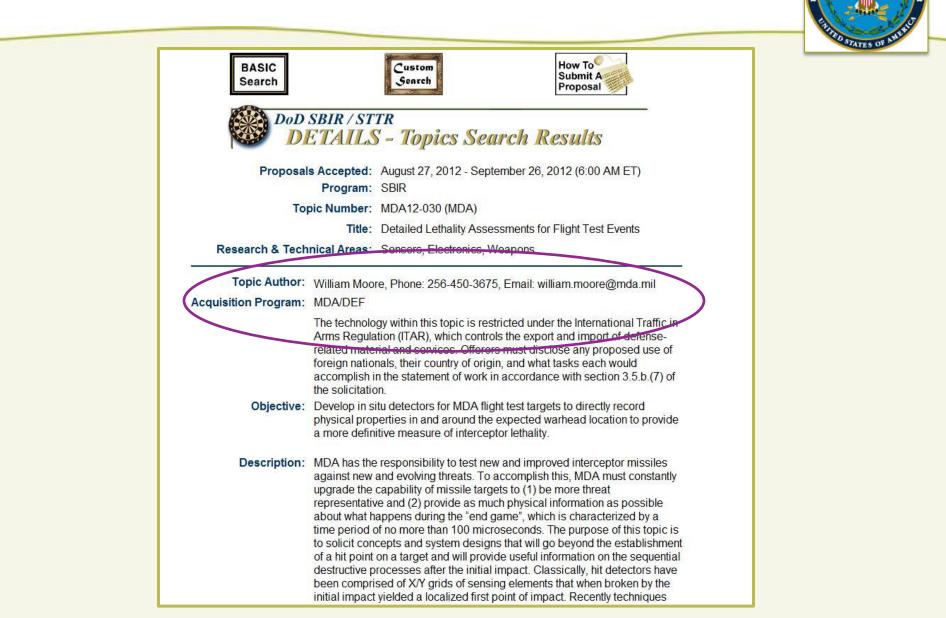


#### Phase III

- Obtain funding from the private sector and/or non-SBIR Government
- Develop prototype into viable product/service for sale in military and/or private sector markets
- DoD helps with commercialization

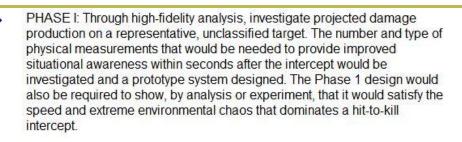


### **DoD SBIR Solicitation Topic Examples**



LENT OF

### **DoD SBIR Solicitation Topic Examples**



PHASE II: Realize a design of a prototype system that could be included on typical MDA target missiles. Component testing should be conducted to verify modeling and simulation results. Further analysis of the proposed flight test system design should be conducted. Component/sub-system testing using high-velocity impact ranges should be conducted to verify performance

PHASE III: Mature the prototype system toward flight-ready status and integration within MDA flight test articles. Full and sub-scale system tests should be conducted via ground (e.g. light gas gun, sled, etc.) and/or flight tests. Integration with existing MDA flight test articles should be pursued. COMMERCIALIZATION: The contractor will pursue commercialization of the various technologies developed in Phase II for additional DoD or commercial applications. Such applications could include weapons and armor development testing (i.e. lethality), rocket motor safety testing, and inflight monitoring of debris or other impact events for satellites and other orbiting spacecraft.

#### References:

1. Lloyd, R.M., "Physics of Direct Hit and Near Miss Warhead Technology", Progress in Astronautics and Aeronautics Vol 194, AIAA, 2001.

2. Vetrovec, John et. al., "Analysis and Testing of Rod-Like Penetrators in the 4-5 Km/s Velocity Regime", International Journal of Impact Engineering Vol. 26 (2001), pages 797-808.

3. Doup, P.W., "Endgame Analyses Against a Ballistic Missile: A



**DoD Solicitation Topics** 



- Only proposals submitted in response to topics in solicitation accepted!
- DoD scientists and engineers author solicitation topics
- Awarding Component
  - Component-specific instructions
  - Unique topics





Developing the Business of Technology



### **TPOC = Technical Point of Contact**

- Develop a brief nonproprietary white paper or quad chart that can be emailed to contacts that conveys the story
- Capture their interest because you can solve THEIR problem.



# DoD – Influencing Topics

Search past solicitation topics

- www.sbir.gov or www.zyn.com/sbir
- Locate topics in your space
- Call the topic author
  - Discuss your idea
  - Gauge DoD interest
  - Ask if accepting topic suggestions
    - Some awarding components have web links to submit ideas online





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Current Solicitation	Pre-release Date	Begin Accepting Proposals		Limit Search 1	-	,		Sort By	Scoop
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				SBIR 2012.1 and STTR 2012 searches using any field in the		-	Use the Custom Search feature (		

# Electronic Submission @ DoD



#### http://www.dodsbir.net/submission/SignIn.asp



Check the current solicitation for submission deadline!

Each proposal submission *must* include:

- ✓ Proposal cover sheets
- Technical Proposal
- Cost Proposal



Company Commercialization Report

Developing the Business of Technology

# **DoD Registration**



- Register your firm online: http://www.dodsbir.net/submission/SignIn.asp
- Other items:
  - ✓ Federal Tax ID
  - ✓ DUNS Number
  - ✓ CAGE Code (CCR)
  - ✓ NOTE: these three items are needed at time of award; NOT to submit a proposal
- Designate a Point of Contact (POC) for your firm
- Upon completion of the registration form, you

will receive an on-line confirmation page:

	DoD SBIR/STTR SUBMISSION	HELP	MAIN MENU			
irm						
	Thank You. Firm Registration is Complete.					
	Acme Company has been registered in our database.					
u	Please print this page for your records. You will need the following information to login to this site to prepare, edit, and print your Proposal Cever Sheets and Company Communicialization information in the future. (DO NOT bookmark this page because it will be unvailable after cicking the Centerior behavior)					
	Firm Name: Acme Company					
	Password: WIIe3C0y0te					
	Continue					

## **DOD SBIR Updates**



- Subscribe to the DOD SBIR/STTR Listserv
- Send an email to:
- sbirlist@listserv.dodsbir.net
- Put "SUBSCRIBE" in the subject line





# NIH SBIR/STTR Program



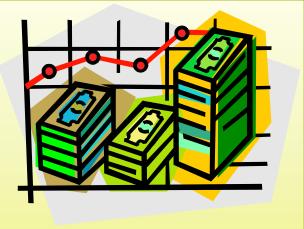


U.S.Department of Health & Human Services

**NIH Institutes Differ in Funding** 

20 institutes & 7 centers at NIH

24 of 27 make SBIR awards\*
Separate budgets (extramural funding)
Do your intelligence work first!
Target the \$





Developing the Business of Technology

# NIH is organized into:



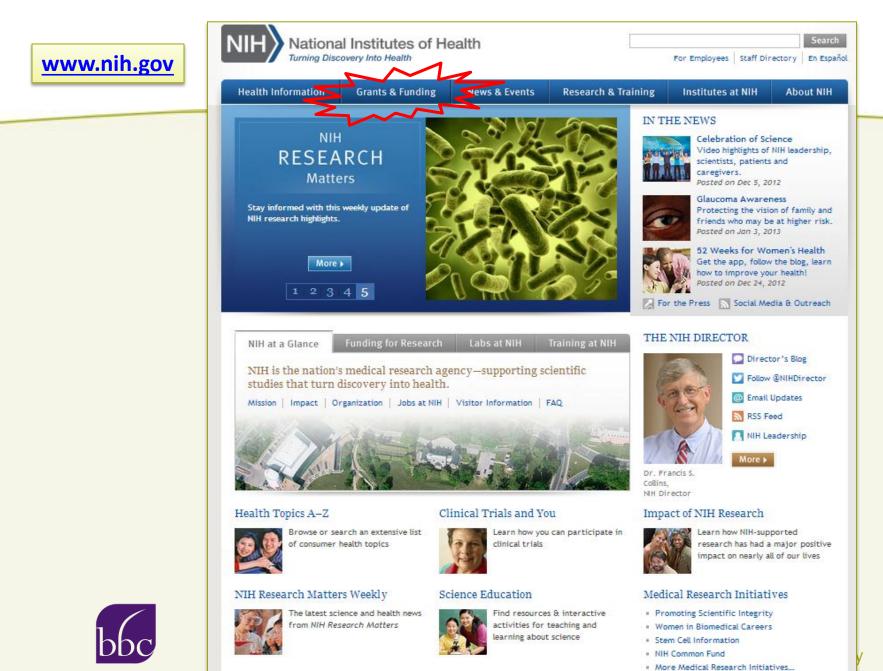
## Strategic Planning

### **BEFORE** you start to write your proposal:

- Understand NIH Structure
- Find a Solicitation
- Understand the Review Process
- Define your project
- Understand how to work with NIH





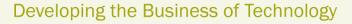


# Purpose of NIH SBIR/STTR Program

- Stimulate technological innovation
  - New technologies
  - Refinement of existing technologies
  - New applications for existing technologies
- Increase the commercial application of NIH supported research
  - New medical or biological products
    - Improved value
    - Improved efficiency
    - Improved costs









## NIH SBIR/STTR: 3 Phases



- Phase I (Feasibility Study)
  - □ Guideline = \$150k; Cap (NEW) = \$225k
- Phase II (Full Research R&D)
  - □ Guideline = \$1mil; Cap (NEW) = \$1.5mil
- PHASE II+ (Competing Renewal/R&D)
  - Clinical R&D; Complex Instrumentation/Tools
  - Many, but not all, ICs participate
  - \$1M/year; 3 years
- Phase III (Commercialization)



### http://report.nih.gov/



#### Research Portfolio Online Reporting Tools (RePORT)

In addition to carrying out its scientific mission, the NIH exemplifies and promotes the highest level of public accountability. To that end, the Research Portfolio Online Reporting Tools provides access to reports, data, and analyses of NIH research activities, including information on NIH expenditures and the results of NIH supported research.

News Updates

Biomedical Workforce Task Force Data is available. Thursday, June 14, 2012 View Details

Read More News Updates

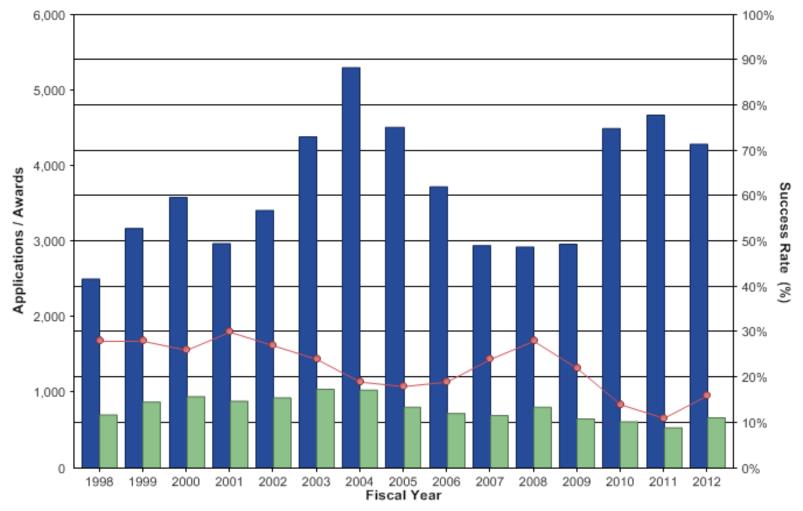
FY2012 Grants Subject to Executive Level I Salary Cap Read More...



#### SBIR grants, Phase I Applications, awards and success rates



Applications Awards / Success Rate (%)

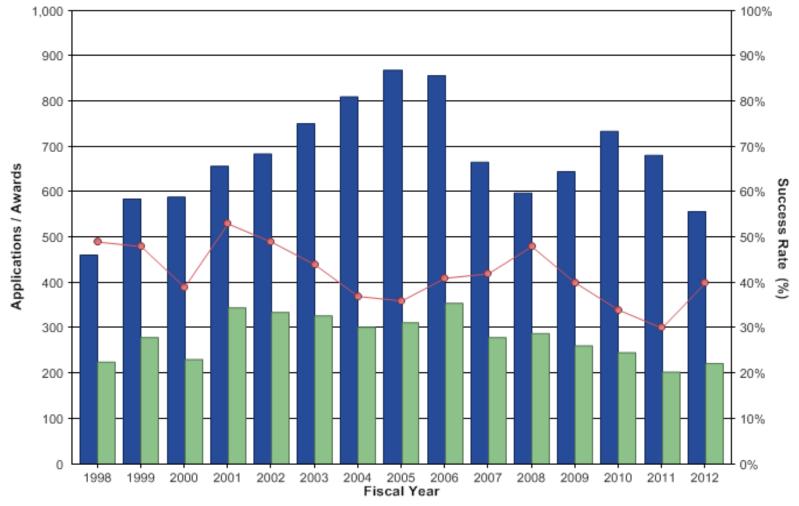




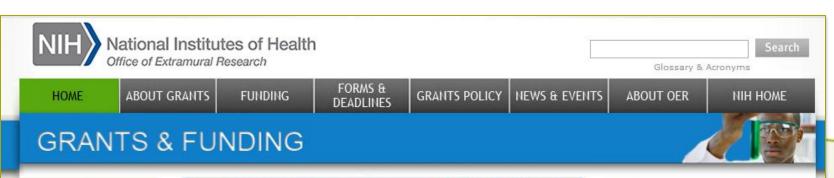
#### SBIR grants, Phase II Applications, awards and success rates



Applications Awards Success Rate (%)







#### About Grants

Grants Process Overview Grant Application Basics Types of Grant Programs How to Apply Peer Review Process Award Management Foreign Grants

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Funding Strategies

#### Electronic Grants

Electronic Research Admin (eRA)

eRA Commons

Applying Electronically

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Forms & Applications Due Dates & Submission

Policies

Submitting Your Application

#### **Grants Policy**

Policy & Guidance

Compliance & Oversight

Research Involving Human Subjects



#### FUNDING

Search NIH Guide for Grants and Contracts

Funding Opportunities & Notices Unsolicited Applications (Parent Announcements)

#### Recovery Act Research Training & Career Development Small Business (SBIR/STTR)

NIH Loan Repayment Programs New and Early Stage Investigators

Search

Stem Cell Information

NIH Common Fund

OppNet (Behavioral & Social Sciences)



New Resource on Scientific Research Integrity

NEW Two Years of Rock Talking!

Revisiting the Relationship Between Paylines and Success Rates

#### Latest News and Events

NEW Publications Report for PHS2590 Now Available with My NCBI

NEW Public Access Compliance Monitor: New Web-Based Tool Available

NEW Foreign Grantees: Changes to Payment Management System Registration



#### **Grants & Funding**





## **NIH SBIR/STTR Solicitation**

### **SBIR/STTR** *Omnibus* Solicitation

- Investigator Initiated Research
- 3 deadlines per year: April, August, December
- Unrestricted Grants
  - Phase I: \$150k \$225k, 6 months
  - Phase II: \$1 \$1.5 million, 2 years



## **NIH Review Process**

	3 1 2		
Application Receipt Dates*	National Technical Merit Review	Advisory Council Board Review	Estimated Award Date
April 5	June/July	Sept/Oct	November
August 5	Oct/Nov	Jan/Feb	March
December 5	Feb/March	May/June	July

# Components of an NIH SBIR/STTR

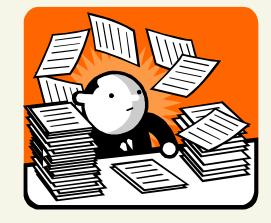
- 1. Introduction to Application (1pg)
- 2. Specific Aims (1 pg)
- 3. Research Strategy (6 or 12 pg)
  - □ Significance
  - Innovation
  - □ Approach
- 4. Inclusion Enrollment Report
- 5. Progress report/Publication List (Phase II proposals only)
- 6. Protection of Human Subjects
- 7. Inclusion of Women and Minorities
- 8. Targeted/Planned Enrollment Table
- 9. Inclusion of Children
- 10. Vertebrate Animals
- 11. Select Agents
- 12. Multiple PD/PI Plan

- 13. Consortium/Contractual Arrangements
- 14. Letters of Support
- 15. Resource Sharing Plans
- 16. Appendix
- Bibliography and Refs Cited
- Project Summary/Abstract (30 lines)
- Public Health Relevance Statement/Narrative
- Senior/Key Person Profiles
- Biographical Sketches (4 pg ea.)
- Facilities & Other Resources
- Equipment
- Project Budget
- Subaward Budget
- Cover Letter
- Commercialization Plan (12 pg; Ph II & Fast Track only)
- Forms

## **Commercialization Plan Elements**

#### **NIH Proposed Layout**

- Value of SBIR/STTR project
- Company information
- Market, Customer, Competition
- Intellectual Property Protection
- Finance Plan
- Production and Marketing Plan
- Revenue Stream



No more than 12 pages







Center for Scientific Review

# center for scientific review

- Single receiving point for all NIH applications
- Assigns applications to the Scientific Review Groups (aka Study Section)
- Assigns applications to the Institute/Center that is the potential funding component



national institutes of health center for scientific review		the measure and future of science and health	NIH Program Resources   Staff Directory   Contact   Press Kit         Search Words       Search this site		
About CSR	Applicant Resou	Irces Reviewer Resources	Study Sections	Rosters and Meetings	Employment

#### **NIH Peer Review Process Revealed**



The Center for Scientific Review (CSR) is the portal for NIH grant applications and their review for scientific merit. We receive all research grant applications sent to NIH and handle the review of more than 70% of those by organizing peer review groups (study sections) to evaluate research grant applications. Our mission is to see that NIH grant applications receive fair, independent, expert, and timely reviews – free from inappropriate influences – co NIH can fund the most promising

#### **Applicant Resources**

Resources to assist Planning, Writing and Submitting a successful application.

» More ...

#### **Reviewer Resources**

Tools and guidance for the successful reviewing, critiquing and scoring of applications.

#### CSR Newsletter

To keep informed about CSR activities and plans, please subscribe to our Listserv.

#### **Policy Changes**

- » Notice of the National Center for Advancing Translational Sciences and Anticipated Implementation Plan
- » Ruth L. Kirschstein National Research Service Awards (NRSA) and Other Fellowship Applications: New Policy on Post-Submission Information on Sponsor's Research Funding
- » NIH Research Involving Chimpanzees
- » New Dates for New Investigator A1 R01 Applications

# CSR – SBIR /STTR Study Sections

Review Group Descriptions

Study Section Rosters

Meeting Dates



Find a Study Section (Scientific Review Group) Applications are reviewed in Study Sections. Integrated Review Groups (IRGs) are clusters of Study Sections based on scientific discipline.

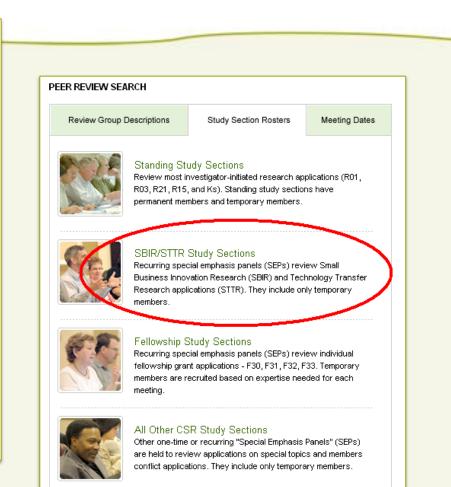
Search Integrated Review Group (IRG) / Study Group Using Keywords

Show Descriptions >

View Study Section Descriptions by Integrated Review Group (IRG)

AARR - AIDS and Related Research

Show Descriptions >



#### Other NIH Study Sections

NIH Institutes and Centers also manage many study sections that evaluate applications submitted in response to special solicitations and for unique programs.

H. Bradley Division of T	<b>Nuss, Ph.D.</b> ranslational and Clinical Sciences	CHAIRPERSON	CENTER FOR SCIENTIFIC REVIEW SPECIAL EMPHASIS PANEL ZRG1 CVRSN 10 11/15/2012-11/15/2012 MEETING ROSTER
Scientific Re Cardiovascu	view Officer lar and Respiratory Sciences(CVRS)	T RAJAGOPALAN, SANJAY, MD, FACC JOHN W. WOLFE PROFESSOR CARDIOVASCULAR MEDICINE AND RADIOLOGY WEXNER MEDICAL CENTER	
6701 Rockle Email: nusst Phone Numb	cientific Review, Room 4142 dge Dr. Bethesda, MD 20892 @csr.nih.gov er: 301-451-8754	OHIO STATE UNIVERSITY COLUMBUS, OH 43210 MEMBERS 	DGY
	eeting on that date. The most current and two prior rosters a ending any last minute changes. SRO	RE BOND, BRIAN ROBERT, PHD DIRECTOR OF PHARMACOLOGY CENTER FOR WORLD HEALTH AND MEDICINE ST. LOUIS UNIVERSITY ST. LOUIS, MO 63104	
IMST ZRG1 CVRS-N 1	D BRADLEY NUSS	11/15/2012 (Roster)	7/12/2012 (Roster)
IMST-L (11)	Smal » Brain Disorde Language, Con	mmunication and Rela	hip Study Section[F01]
IMST-M (13)	Small Business: Basic and Integrative Bioe	ngineering	Filpula, David
IMST-S (12)	Small Business: Basic and Integrative Bioe	ngineering	Sammak, Paul



Review panels are assembled on an ad hoc basis for each meeting; therefore designations and scientific emphasis may change with each review cycle.





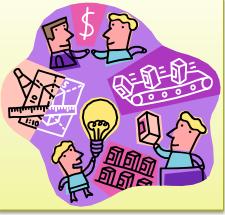
#### **Review Criteria**

- Significance
   Technical merit
   Commercial value
- Investigators
- Innovation
- ApproachEnvironment









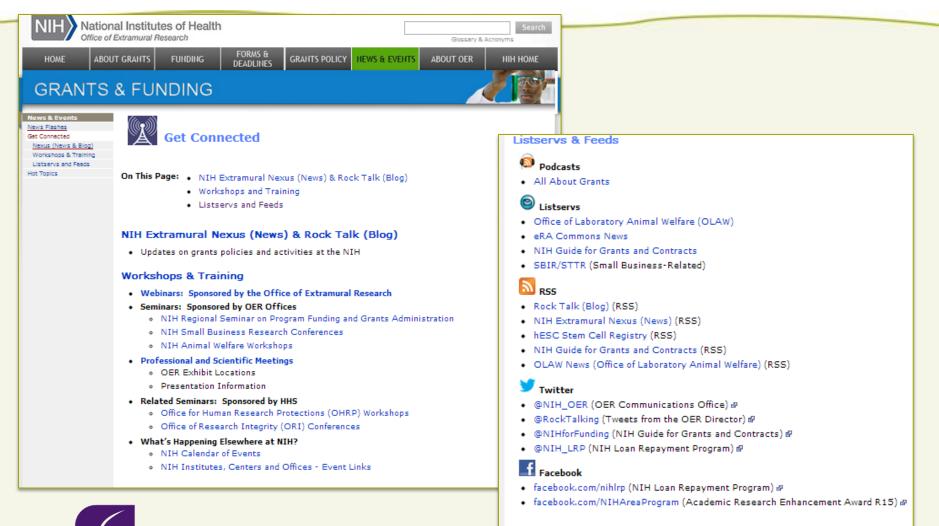


Developing the Business of Technology

# Do your homework @NIH (Reporter)

	te: ivew ennancements now available. View <u>Release ivotes</u> for i	more information.			
QUERY BROWSE NIH	IETA V				
	SUBMIT QUERY C	CLEAR QUERY			
NIH ARRA Projects Only:	SELECT	Fiscal Year (FY):	Active Projects	SELECT	
Text Search (Logic):	,	NIH Spending Category: 🧐		SELECT	
<u>And</u> <sup>O</sup> Or <sup>O</sup> Advanced					
Search in Projects  Publications		Agency/Institute/Center:		SELECT	
0	Project Title     Project Terms     Project Abstracts	Admin E Funding		00000	
Projects & Publications Limit Publication search to	E Projeci Absiracis	Funding Mechanism: 🤇		SELECT	
Start Year         End Year           2011         -         2012         -		Award Type: 🥝		SELECT	
Project Number: Format: 5R01CA012345-04	Use '%' for wildcard, e.g. %R21% Enter multiple project numbers	Activity Code: 🥝		SELECT	
		Exclude Subprojects: 🤇			
	1 R01 CA 811099 01 A1S1	Study Section: 🥝		SELECT	
Principal Investigator / Project Leader: (Last Name, First Name)	Use '%' for wildcard Enter several PI/Project Leader names	FOA: Format: RFA-IC-09-003 or PA-09-003	Standing CSR study sections only Use '%' for wildcard Funding Opportunities and Notices		
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DUNS Number: 🤇		Project Start Date: >= 🧉	mm/dd/sees		
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# NIH -- Get Connected



Developing the Business of Technology

## www.grants.gov



## Know your role - @ Grants.gov



- E-Business Point of Contact (POC)
  - responsible for the administration and management of grant activities in the organization.
- Authorized Organization Representative (AOR)
  - submits a grant application to Grants.gov on behalf of a company, or institution.
  - Authority to sign grant applications and the required certifications and/or assurances.
  - Equivalent to the Signing Official in eRACommons.





- Organizational AOR must register with Grants.gov
   This requires the SAM 'M-PIN' password
- Why?
  - This creates an account on Grants.gov that allows AORs to submit applications on behalf of the organization and track the status of submitted applications.
- How long will it take?
  - Same Day. AORs will be registered when they submit the information.



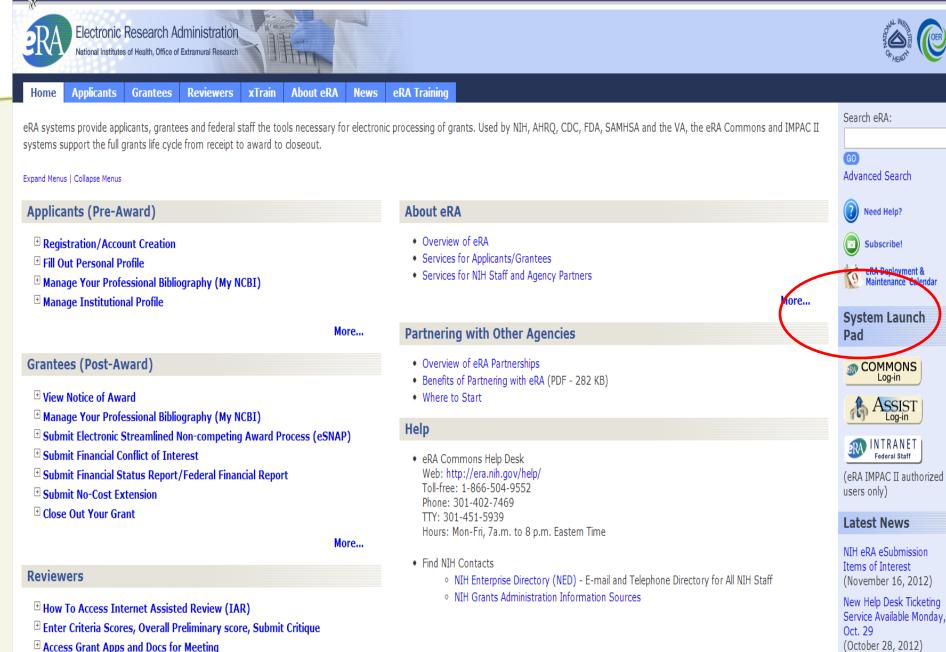


- AOR Authorization
  - The E-Business Point of Contact (E-Biz POC) at your organization must respond to the registration email from Grants.gov and login at Grants.gov to authorize you as an Authorized Organization Representative (AOR).
- Track AOR Status
  - Track your AOR status at the Applicant home page of Grants.gov.



#### U.S. Department of Health & Human Services

እ www.hhs.gov



# NIH - Know your role - @ eRACommons

#### The PI/Principal Investigator (PI)



- □ Directs the project or activity being supported by the grant.
- Accountable to the grantee for the conduct of the project or activity.
- □ Can view information for all their applications at NIH

#### The SI/Signing Official

- Authority to legally bind the institution in grants administration matters.
- □ May have any number of titles in the grantee organization.
- Can register the institution, and create and modify the institutional profile and user accounts.





- SO creates or affiliates the PI's Commons account
  - Only a signing official (SO) can create principal investigator accounts in NIH Commons.
  - For PIs new to the institution, the SO registers them.
  - For PIs registered at another institution, the SO must affiliate them with the SO's organization.
  - Note: If you are both the SO and a PI, you need a separate Commons account for each role.



# NIH SBIR/STTR Updates

Subscribe to the SBIR/STTR Listserv: Send an e-mail to: LISTSERV@LIST.NIH.GOV in the message body type "subscribe SBIR-STTR <your name>"

Subscribe to the NIH Guide to Grants and Contracts Listserv: Send an e-mail to: listserv@list.nih.gov in the message body type "subscribe NIHTOC-L <your name>"



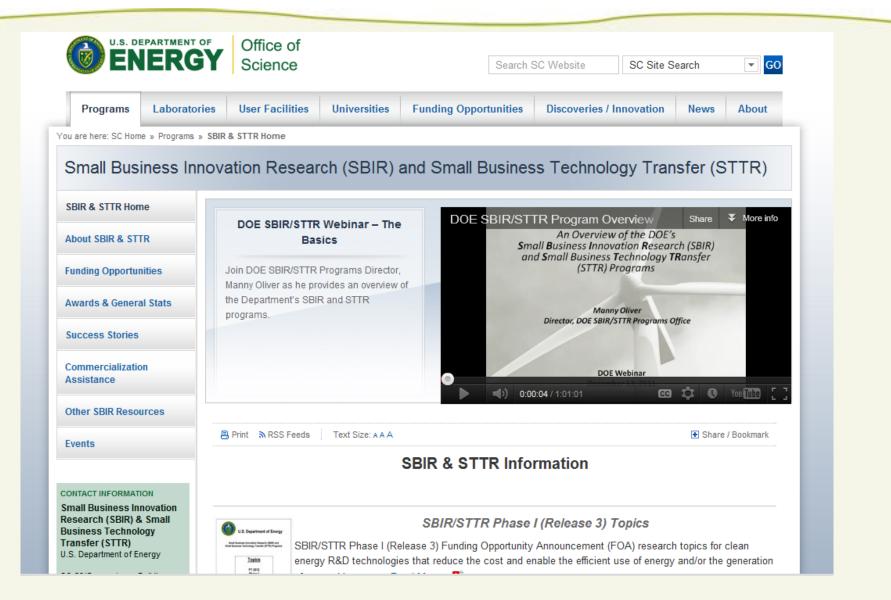
#### **DoE SBIR/STTR Program**





Developing the Business of Technology

# science.energy.gov/sbir/



## SBIR/STTR at DoE

#### Phase I: Feasibility of Idea

- □ 9 month duration, up to \$150,000
- □ On average, DoE funds 1 out of 10 proposals

# Phase II: Principal R&D Effort 2 years, up to \$1,000,000 Odds of winning: 1 out of every 2 to 3 Only DoE Phase I awardees may apply

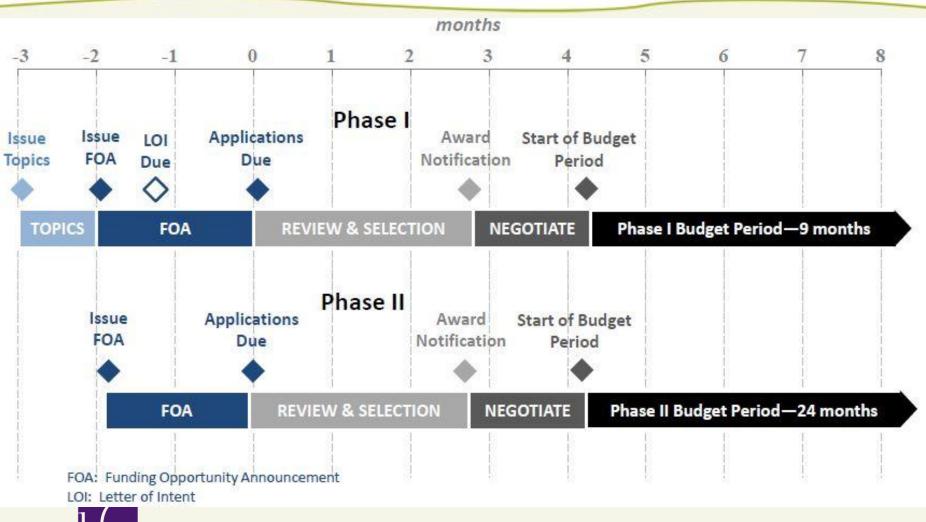


### **DoE Phase I Details**

#### **FY 2014 DoE Solicitation Schedule**

Phase I			
	Release 1	Release 2	
Topics Issued	Monday, July 15, 2013	Monday, October 28, 2013	
Webinar(s)	Week of July 22, 2013	Week of November 4, 2013	
FOA Issued	Monday, August 12, 2013	Monday, November 25, 2013	
Webinar(s)	Friday, August 16, 2013	Tuesday, December 3, 2013	
Letters of Intent (LOI) Due	Tuesday, September 3, 2013	Monday, December 16, 2013	
Applications Due	Tuesday, October 15, 2013	Tuesday, February 4, 2014	
Award Notification	Early January, 2014*	Late April, 2014*	
Grant Start Date	Late February, 2014*	Early June, 2014*	
*Preliminary dates subject to change			

# Phase I & Phase II Timelines



bbc

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## Topics

1\_

#### You must select a Topic and a sub-topic:

17.	Atmospheric Measurement Technology (Phase I, \$150,000/Phase II, \$1,000,000)	.48
	a. Instrument Package for Characterization of Aerosols, Turbulence, and Surface Characteristics in the Arctic	4
	b. Greenhouse Gas and Carbon Isotope Measurements from UAVs	4
	c. Measurements of the Chemical Composition of Atmospheric Aerosols	5
	d. Measurements of the Chemical Composition of Atmospheric Aerosol Precursors	5
	e. Aerosol Size Distributions	5
	f. Aerosol Scattering and Absorption (in situ)	
	g. Other	5
18.	Carbon Cycle Measurements of Processes in The Atmosphere and Biosphere (Phase I, \$150,000/Phase II,	
	\$1,000,000)	.53
	a. Novel Measurements of Carbon, CO2, and Trace Greenhouse Gas Constituents of Terrestrial and	
	Atmospheric Media	c
	b. Portable Technologies for Fast and Precise Measurements of Atmospheric Nitrogen, Argon, or Oxygen	5
	c. Innovation and Improvement for In Situ Fine Root Measurements	J
	a. Other	כ
19.	Enhanced Availability of Climate Model Output (Phase I, \$150,000/Phase II, \$1,000,000)	.60
	<ul> <li>Accessibility of Climate Model Data to Non-Researchers</li> </ul>	6
	b. Develop Modeling Capabilities and Tools that will Facilitate a Better Linkage Between Global and Regional	
	Climate Model Output and Wind-Energy Stakeholders	6
	c Other	6
20.	Technologies For Subsurface Characterization And Monitoring (Phase I, \$150,000/Phase II, \$1,000,000)	.62
100000	a. Mapping and Monitoring of Hydrogeologic Processes	6
	b. Real-Time, In Situ Measurements of Geochemical, Biogeochemical and Microbial Processes in the	
	Subsurface	6

#### Topics

#### ENHANCED AVAILABILITY OF CLIMATE MODEL OUTPUT (PHASE I, \$150,000/PHASE II, \$1,000,000)

Much of the nearly \$2 billion annual research budget for the U.S. Global Change Research Program supports research from the Department of Energy, National Aeronautics and Space Administration (NASA), National Oceanic and Atmospheric Administration (NOAA), and National Science Foundation (NSF). Studies supported by this research, include modeling and simulation of long-term climate change. Model output resulting from climate change projections is a valuable resource and the DOE has played a crucial role in providing such datasets to the research community. For example, the Program for Climate Model Diagnosis and Intercomparison (PCMDI) (<u>http://www-pcmdi.llnl.gov/ipcc/about\_ipcc.php</u>) makes available a subset of multi-model output from the Intergovernmental Panel for Climate Change (IPCC) Fourth Assessment Report to researchers for non-commercial purposes only. However, other users, particularly non-researchers that intend to use the data for commercial purposes, have been requesting access to the multimodel output. As the temporal and spatial resolution of models increase, vast amount of climate model output are generated; access and analysis of such data by non-researchers is a daunting challenge.

Grant applications are sought only in the following subtopics:

a. Accessibility of Climate Model Data to Non-Researchers

The purpose of this subtopic is to broaden the usage of federally-funded, long-term climate change simulations of high-end climate models, such as the Community Climate System Model, the NOAA Geophysical Fluid Dynamics Laboratory model, and the NASA Goddard Institute for Space Studies model.

Therefore, grant applications are sought to develop technology for making the output of these models more accessible to a variety of users. Approaches of interest include the development of (1) preferred data formats for users of climate model output in particular applications (e.g., agriculture, water resources, energy); (2) methods for converting the data from existing data formats to formats required by users in the application communities; and (3) improved software frameworks and prototypes for data access by distinct application communities. Applicants are expected to document lessons learned in the experience of providing climate model output data to the non-research community.

#### **Do Your Homework**

#### science.energy.gov/sbir/awards-and-general-stats

Small Business I	nnovation Research (SBIR) an	d Small Business Techno	blogy Transfer (STTR)
SBIR & STTR Home	Awards & General Stats		
About SBIR & STTR	🗏 Print 🔉 RSS Feeds 🛛 Text Size: 🗚 A		Share / Bookmark
Funding Opportunities	SBIR/STTR Awards and General Statistics		
Awards & General Stats	rds & General Stats This page supplies information about SBIR/STTR awards, statistics and R&D		s and R&D Awards
FY 2012 Awards	SBIR/STTR Awards	R & D 100 Award Recipients	Award Statistics
FY 2011 Awards			
ARRA Awards	SBIR/STTR Awards		
FY2010 Awards			
FY2009 Awards		Fiscal Year 2012 Awards	
	FY 2012 Release 1 Phase I Awards		
Success Stories	Sorted By Topic - PDF Version 🎒 (313KE		
	Sorted By State - PDF Version 🎒 (127KE	) HIML Version	
Commercialization Assistance		Fiscal Year 2011 Awards	
	FY 2011 Phase   Awards	Fiscal Teal 2011 Awards	
Other SBIR Resources	Sorted By Topic - PDF Version [4] (550KE	HTML Version	
	Sorted By State - PDF Version 4 (605KE	-	
Events	FY 2011 Phase II Awards		
	Sorted By Topic - PDF Version 🎒 (446KE		
	Sorted By State - PDF Version A (325KE Manufacturing Awards		
ONTACT INFORMATION	PDF Version 🎒 (126KB) HTML Version	1	

#### DoE Phase I

#### Letters of Intent (Release 1 & 2)

- Primary purpose
  - Begin reviewer assignment to reduce award cycle time
- Secondary purpose
  - Provide notification to applicants who appear to non-responsive; you may submit a formal application if you receive this notification

Limits

 Small businesses may submit only 10 letters of intent per solicitation

- Content:
  - Title
  - Topic and subtopic
  - Abstract (<500 words)</li>
  - List of collaborators
  - Small business information
    - Name, address
    - Business official and contact information
    - Principal investigator

# Merit Review Criteria

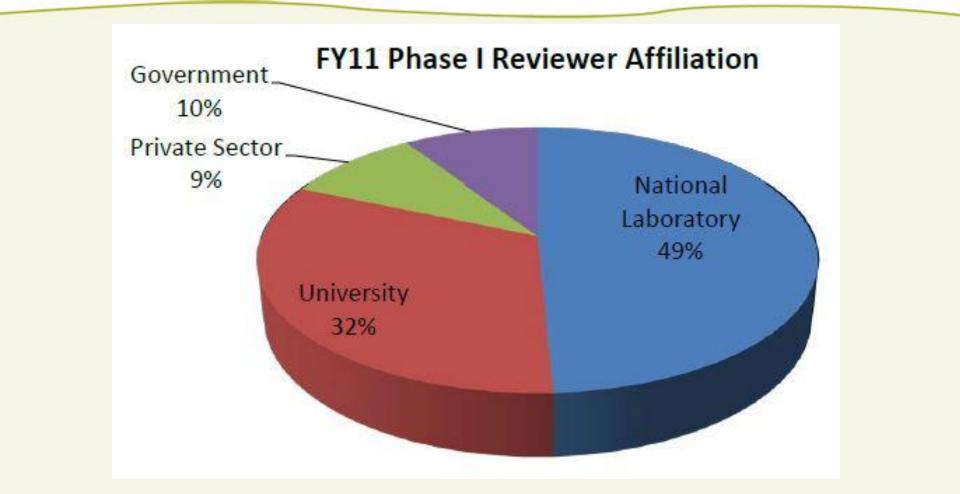
Equal weight to:

- 1. Scientific/Technical Approach
  - a. Innovativeness of the approach
  - b. Significance of the scientific challenge
  - c. Thoroughness of the presentation
- 2. Ability to Carry out the Project
  - a. Qualifications of PI and team
  - b. Soundness of work plan
  - c. Justification for DoE investment
- 3. Impact
  - a. Significance of the potential benefits
  - b. Likelihood of a marketable product
  - c. Potential for third-party funding





### Make-up of Review Panel





Developing the Business of Technology

#### **Project Summary (1-page maximum)**

- Company Name
- Project Title
- Principal Investigator
- Topic Number / Subtopic Letter (example: Topic 11, Subtopic b)
- Statement of the Problem or Situation that is Being Addressed –The DOE's and public's interest in the problem should be clearly stated (typically one to three sentences).
- Statement of How this Problem or Situation is Being Addressed The overall objective or approach of the combined Phase I and Phase II projects should be clearly stated (typically one to two sentences).
- Commercial Applications and Other Benefits Summarize the future applications and/or public benefits if the project is carried over into Phase II and beyond.
- Key Words Provide listing of Key Words that describe this effort.



#### **Project Summary**

- Summary for Members of Congress The DoE notifies members of Congress of awards in their respective districts. Therefore, please provide in clear and concise non-technical language, a very brief summary of the project, suitable for a press release from a Congressional office. (This summary should be a maximum of two (2) sentences and no more than 50 words.)
- As noted above, do not include proprietary, confidential information or trade secrets in the description section. If the application is funded, the Project Description will be entered into a DoE database and made available on the DoE public web site at www.science.doe.gov/sbir and will become public information.
- The attachment must be in PDF format.



#### **Project Narrative**

Limited to 15 pages; 7,500 words of text

- a. Cover Page
- b. Proprietary Data Legend
- c. Identification and Significance of the Problem
- d. Anticipated Public Benefits
- e. Technical Objectives
- f. Phase I Work Plan
- g. Phase I Performance Schedule
- h. Related Research or R&D
- i. Principal Investigator and Other Key Personnel
- j. Facilities/Equipment
- k. Consultants and Subcontractors



**Commercialization Plan** 

- Market Opportunity:
  - Must include expected revenues
- Intellectual Property (IP):
  - Describe status of patents, trade secrets, plans to protect IP
- Company/Team
  - Include current team's capabilities
  - Mention future additions



#### Mandatory Statement for Comm Plan

#### "ABC LLC estimates sales revenues of and licensing revenues of during the first 10 years of commercialization."

#### **DoE Commercialization Review Criteria**

1. **Company Information** – Describe core competencies, size, specialization areas, products with significant sales, and history of previous Federal and non-Federal funding, regulatory experience, or subsequent commercialization (see question 8 for specific information requested on the "SBIR/STTR Information" form).

2. **Market** – Analyses of market size and estimated market share after first year sales and after 5 years. We want to see if a small business applicant is aware of the general market characteristics for which its innovation or technology may apply.

3. Intellectual Property (IP) – Patent status, technology lead, trade secrets, or other demonstration of a plan to achieve sufficient protection to realize the commercialization stage. We want to see if a small business applicant is taking steps to protect its IP.



### What is SBIR/STTR?



SBIR/STTR is federal funding mechanism to support small business to:

- Stimulate technological innovation
- To develop products with commercial merit





## How to be successful in SBIR/STTR

# The Project

InnovationCommercial potential

#### The Company

- Eligible
- Qualified PI
- Excellent team
- Suitable facilities







Developing the Business of Technology

Grantsmanship

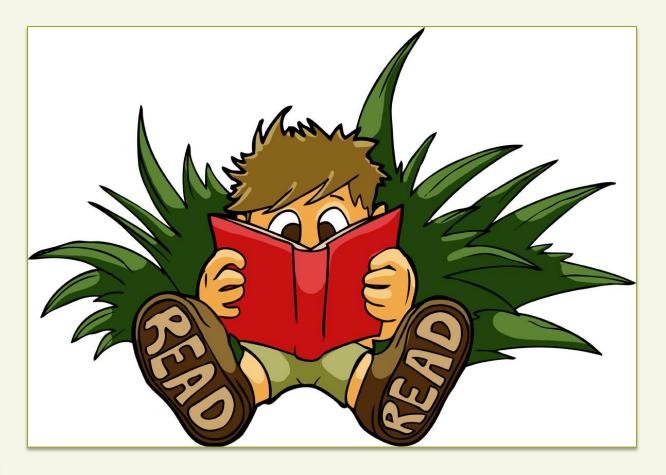
# "There is no grantsmanship that will turn a bad idea into a good one, but there are many ways to disguise a good one."





Developing the Business of Technology

# Read the Solicitation





Developing the Business of Technology

The quick brown fox jumps over the lazy dog" is a pangram that has been used to test typewriters and computer keyboards because it is coherent, short, and contains all the letters of the English alphabet. It was often used for testing the teletype services (a procedure known as "foxing") when these machines were still used.[citation needed] In the age of computers, it is often used as a sample text in font selection contexts. The phrase is frequently misquoted as "The quick brown fox jumped over the lazy dog", which does not contain all the letters of the alphabet since it lacks the letter "s". For this reason, the word "slow" or "sleeping" is sometimes inserted into the phrase, or the word "dog" is made plural. The quick brown fox jumps over the lazy dog" is a pangram that has been used to test typewriters and computer keyboards because it is coherent. short, and contains all the letters of the English alphabet. 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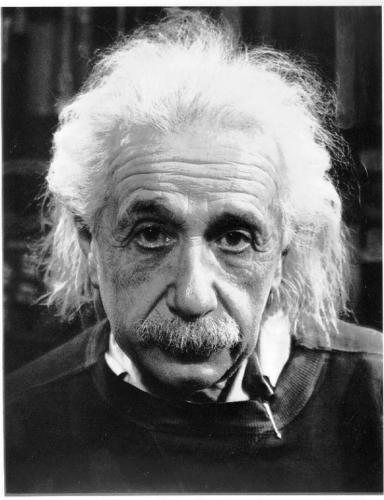


### Style tips...

- Be concise & precise
- No emotion or exaggeration
- Use proper technical writing
- Provide necessary detail
- Avoid jargon & abbreviations
- Keep it simple

	B		SX
•			
•	Ξ	H	
	3)		
			no





"If you can't explain it simply, you don't understand it well enough"

- Albert Einstein

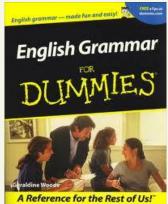




Get someone else to:
 Read for grammar
 Read for content



Make sure you have answered the following two questions:
 Technology: *How?* Commercialization: So what?





Deadline – definition



Dictionary.com Unabridged (v 1.1) dead-line

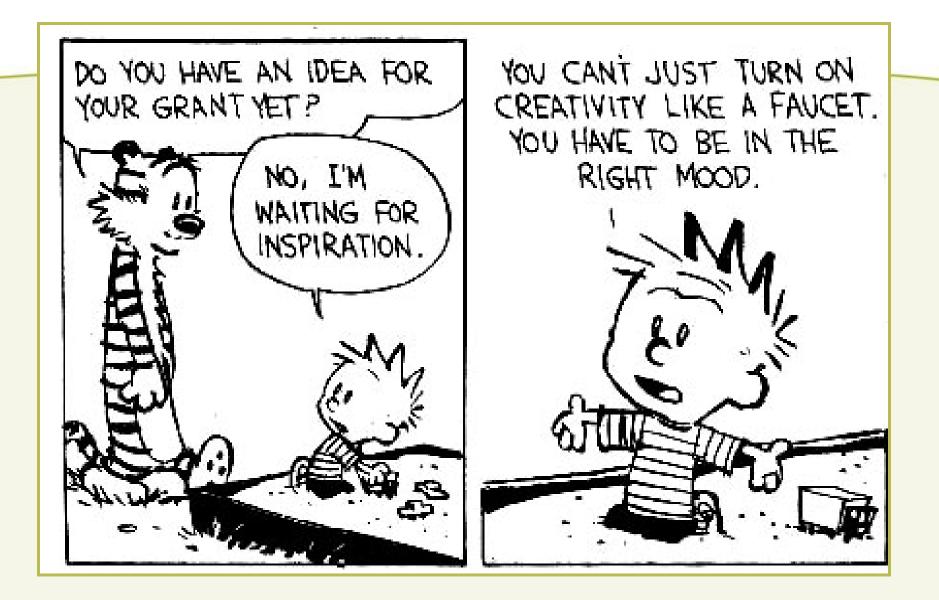
-noun

- 1. the time by which something must be finished or submitted; the latest time for finishing something: a five o'clock deadline.
- 2. a line or limit that must not be passed.
- 3. (formerly) a boundary around a military prison beyond which a prisoner could not venture without risk of being shot by the guards.

[Origin: 1855–60; dead + line1]

Dictionary.com Unabridged (v 1.1) Based on the Random House Unabridged Dictionary, Random House, Inc. 2006.









# Attend the National Spring 2013 SBIR Conference Washington DC area, May 14-16, 2013

- Co-located with TechConnect World & National Innovation Summit
- Attend the NIH SBIR/STTR Conference
  - October 28-30, 2013
  - Sioux Falls, SD





### SBIR/STTR Grants: Commercialization Plans





# Assumption #1:

# A good idea is necessary...



but not sufficient.

IT Sounded like A 900D IDea At the time

# Assumption #2:

#### SBIR/STTR does not fund "science fair projects"



Assumption #3

# You will need a combination of technical AND business expertise

# (e.g., "You can not possibly know everything")



Assumptions #4a and 4b:

# A Market Analysis is NOT a Commercialization Plan



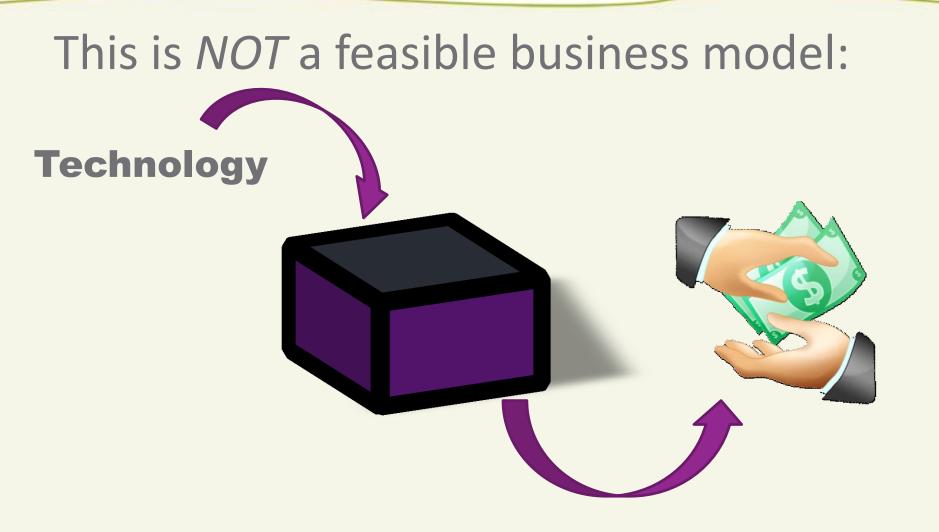
Large Market ≠ Commercialization

# Assumption #5:

# There is no such thing as the "Build it and they will come" Business Model



# Assumption # 6:



## What is Commercialization?

- Ability to provide a solution to a problem in exchange for money
  - Targeted and Differentiated Solution
  - Important Problem
  - Viable Business Model



# Most Common Pitfalls

	Year 1	Year 2	Year 3	Year 4
Product Development	$\longrightarrow$			
Business Development				

#### Naïve Planning process

	Year 1	Year 2	Year 3	Year 4
Product Development				
Business Development				

Product Development and Business Development go hand in hand

Knowing your customer helps develop both simultaneously

# **BBC's Grant Assistance**

- Assessment of competencies and capabilities
- Strategic planning
- Grant sourcing
- Training on all aspects of the process including in-depth proposal preparation
- Pre-submission review and editing
- Assistance with revision and resubmission
- Post-award administrative assistance and grant management







#### Developing the Business of Technology



#### **Technology Grants for Small Business**

- F.A.S.T. Federal State Technology Partnership
- SBIR Small Business Innovative Research
- STTR Small Business Technology Transfer

#### Part I: The ABCs of SBIR/STTR Part II – Walk Through The Application Process

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