

SBIR/STTR

Application Strategies: Tips & Mistakes

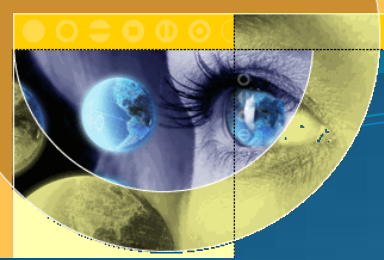
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June 2011

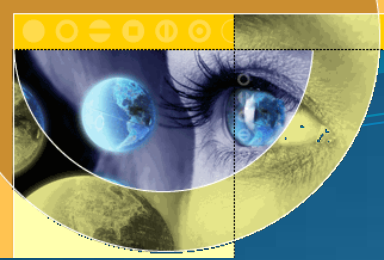
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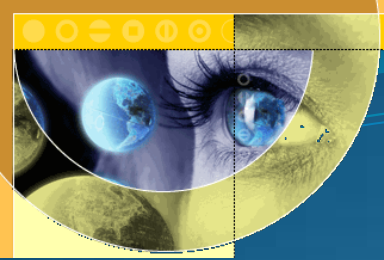
Background Concepts

- What is Intellectual Property?
 - Not all novel ideas are valuable
 - Patents \neq Profits
- ‘Innovator’ versus ‘entrepreneur’
 - Think like an investor, because you are
- Protect Your IP with.....
 - Patents, Copyrights, Trademarks
 - The Feds and Your Patent...what you should know...



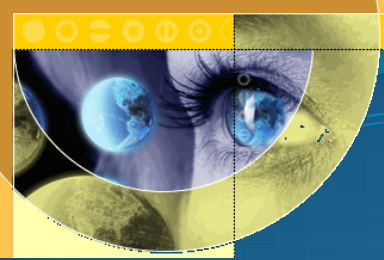
What Will Your IP Do?

- What is the problem/challenge faced by your customers?
- What joins this group?
 - Is it a common problem faced by all? OR
 - Different problems that can be met by a common solution?
- If you cannot crystalize this, drop it!

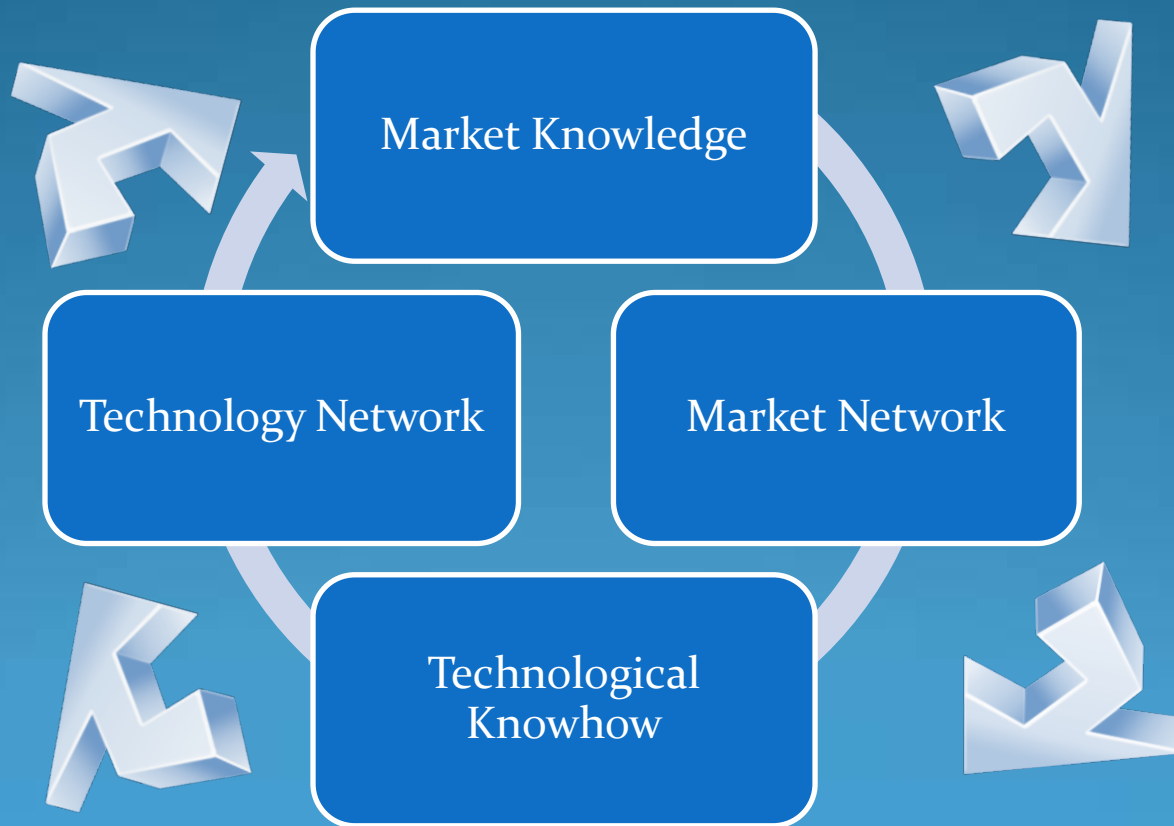


Successful SBIR's

- Address how their product/service will SELL
 - ✓ To whom, when, how often
 - ✓ They do this early and often throughout the process
 - ✓ They recognize that markets/plans change and they ADAPT
 - ✓ They target the finish line before they enter the starting blocks.
- If you cannot figure out how to monetize your product/service....kill it quickly. It will not be worth your time and effort.



Looking Around a Good Idea





SBIR/STTR Concepts -1

- SBIR = Small Business Innovation Research
- STTR = Small Business Technology Transfer

This is a legislated program to fund early stage R&D at for-profit small businesses (funded until ???).

- ✓ To stimulate technological innovation
- ✓ To increase small business participation in Federal R&D
- ✓ To foster participation by minorities and dis-advantaged in technology R&D
- ✓ To create jobs that will pay taxes



SBIR/STTR Concepts - 2

- SBIR

- A set-aside program for small business to participate in federal research and development – with the potential for commercialization.

- STTR

- A set-aside program to facilitate cooperative research and development between small businesses and non-profit research institutions – with the potential for commercialization.



SBIR/STTR Concepts - 3

Federal Agencies that expend > \$100 million in extramural R&D must set aside 2.5% of their budget for SBIR's. 11 participate....

Agriculture

Defense

Energy

HHS

NASA

Transportation

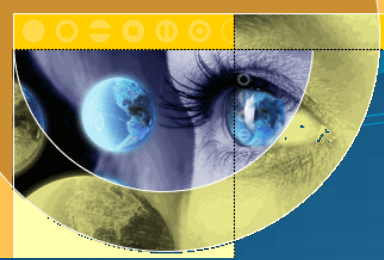
Commerce

Education

EPA

Homeland Security

NSF



SBIR/STTR Concepts – 4

Federal Agencies that expend > \$1 billion in extramural R&D must also set aside 0.3% for STTR. 5 participate....

Defense

Energy

HHS

NASA

NSF



SBIR/STTR Concepts - 5

Agency	SBIR (MM)	STTR (MM)
DoD	\$1,230.0	\$141.0
HHS (NIH/CDC/FDA)	\$600.0	\$72.0
DOE	\$138.0	\$17.0
NASA	\$113.4	\$13.6
NSF	\$97.0	\$13.0
Homeland Security	\$20.5	---
Agriculture	\$18.3	---
Education	\$9.9	---
Transportation	\$8.0	---
Commerce (NOAA/NIST)	\$8.0	---
EPA	\$5.0	---

Note: There is nothing preventing you from applying for same grant from multiple agencies BUT...you can only win one award.



SBIR/STTR Specifics - 1

- Phase I
 - ✓ **Proof-of-concept / feasibility study**
 - ✓ Up to \$150,000 for a 6 month project (SBIR) or
 - ✓ Up to \$100,000 for 12 month project (STTR)
- Phase II
 - ✓ **Full Research / R&D effort**
 - ✓ Up to \$1 million for a 2 year project (SBIR)
 - ✓ Up to \$750,000 for STTR
 - ✓ You must win a Phase I award before applying for Phase II
- Phase III
 - ✓ **Commercialization phase**
 - ✓ Requires the use of NON-SBIR/STTR \$\$\$
 - ✓ Can lead to a contract with DOD



SBIR/STTR Specifics - 2

Who is Eligible to Apply?

- ✓ Small business must have fewer than 500 employees, including affiliates
- ✓ Must be organized for profit
- ✓ Must be >51% US-owned by individuals and individually operated OR at least 51% owned and controlled by another for-profit business concern that is at least 51% owned and controlled by one or more US individuals
- ✓ All work must be performed in the US



SBIR/STTR Specifics - 3

- ✓ Who is Eligible to Apply (cont.)
- ✓ Principal Investigator (PI) must be employed (>50%) by the small business for SBIR; for STTR - DOD, NIH, and NASA permit PI to be employed (>50%) by the non-profit partner
- ✓ SBIR company must perform at least 66% of the effort for Phase I projects and at least 50% of Phase II
- ✓ STTR company must perform at least 40% of the effort for an STTR project
- ✓ Requirements apply “at the time of award and for the duration of the project”



SBIR/STTR Specifics - 4

What is the Difference?

- SBIR: *Permits* research institution partners
 - ✓ (Outsource ~ 33% Phase I and 50% Phase II R&D)
- STTR: *Requires* research institution partners
 - ✓ Universities or other NON-profit entities
 - ✓ 40% small business concern (for-profit) and 30% U.S. research institution (non-profit), 30% balance can be done by either .

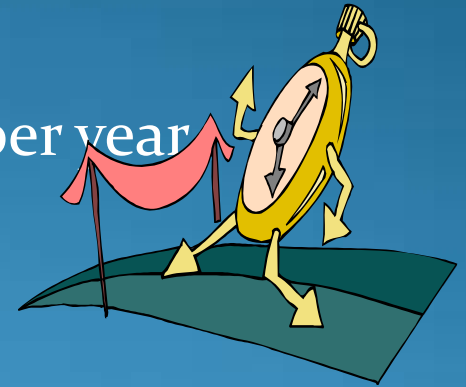
\$\$\$\$ is always awarded to the small business



SBIR/STTR Specifics - 5

Differences between agencies is large...with regard to:

- ✓ Topic areas
- ✓ Number and timing of solicitations
 - ✓ Some agencies have multiple deadlines per year
 - ✓ Some Agencies have only one
- ✓ Proposal preparation instructions
- ✓ Submission process
- ✓ Type of award
- ✓ Review process
- ✓ Odds of receiving funding





SBIR/STTR Specifics - 6

Contracting Agencies

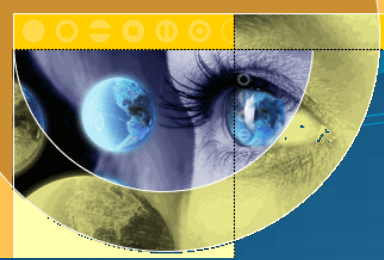
- ✓ Agency establishes plans, protocols, and requirements
- ✓ Highly focused topics
- ✓ *Procurement mechanism for DOD and NASA*
- ✓ More fiscal requirements

DOD, NASA, EPA, DOC,
HHS/NIH, DOT, ED, DHS

Granting Agencies

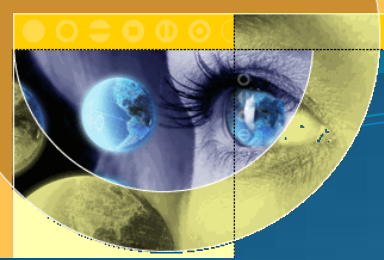
- ✓ Investigator initiates approach
- ✓ Less-specified topics
- ✓ Assistance mechanism
- ✓ More Flexibility

HHS/NIH, ED, NSF, USDA, DOE



SBIR/STTR – Improve Your Odds -1

- ✓ Need an innovative idea – What is your ‘secret sauce’
- ✓ Match your idea to the appropriate Agency/topic
- ✓ Need credibility as a researcher and as a company
- ✓ Understand the Federal Agency’s mission and needs
- ✓ Respond to the appropriate solicitation or topic
 - unsolicited proposals are not accepted



SBIR/STTR – Improve Your Odds - 2

- ✓ Follow the rules
- date/time deadlines
- Page and word limitations
- Font sizes
- Specified elements (in order)
- Technical merit
- “Responsiveness”
- Need intellectual merit and broader impact



SBIR/STTR – Improve Your Odds - 3

Read:

- ✓ EPA's White Paper (as an example)
- ✓ Prior solicitations and awards
- ✓ Attend conferences, network, research existing patents

Meet Agency Priorities:

- E.O. 13329 “Encouraging Innovation in Manufacturing”
 - ✓ SBIR/STTR PM's are instructed to give priority to manufacturing-related R&D...this is a priority for all agencies
- Energy Independence and Security Act of 2007 (P.L. 110-140)
 - ✓ Directs SBIR Programs to give high priority to small business concerns that participate in or conduct energy efficiency or renewable energy system R&D projects.

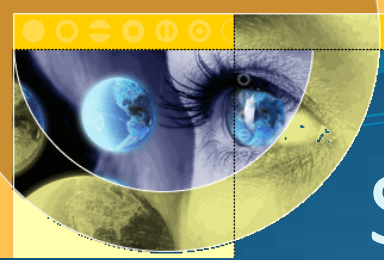


SBIR/STTR – Improve Your Odds - 4

Call the program manager prior to the application due date and discuss your idea.

- ✓ Prepare your ‘elevator speech’ and white paper
- ✓ Use email to send your summary and schedule ‘talk time’.
- ✓ Call with a list of prioritized questions , plan to spend 10-15 minutes on the phone.





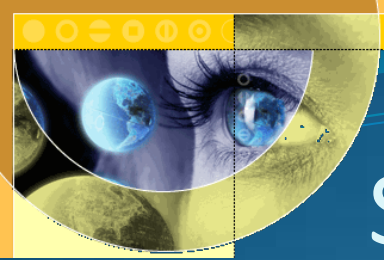
SBIR/STTR – Improve Your Odds - 5

Recognize that \$\$\$ is

- ✓ NOT for going into business, applying for patents, outfitting your lab or buying ‘stuff’
- ✓ NOT for EXISTING Products
- ✓ NOT for Marketing

Do Not Expect....

- ✓ An NDA from any Agency...but there is a work around.
- ✓ And never say ‘we can get 5% of this \$1 billion market’



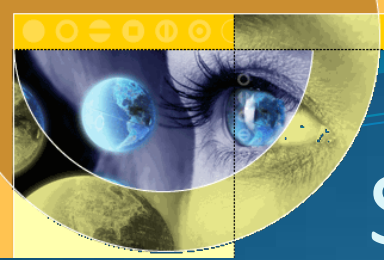
SBIR/STTR – Improve Your Odds - 6

What is expected in the proposal?

- ✓ An extensive 25-page proposal with solid technical and commercial background and strong grantsmanship.
 - ✓ Focus on one main idea or concept

- ✓ State of the Art business knowledge, clearly expressed.
 - ✓ An advanced concept related to an important scientific problem or opportunity

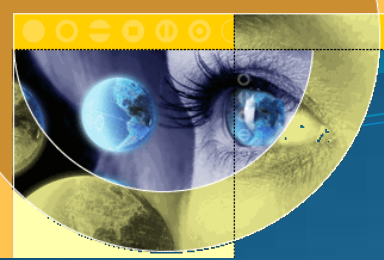
- ✓ Significant commercial potential
 - ✓ Those that penetrate many markets are best
 - ✓ Electronics, software, batteries, etc.



SBIR/STTR – Improve Your Odds - 7

What is expected in the proposal (cont.)

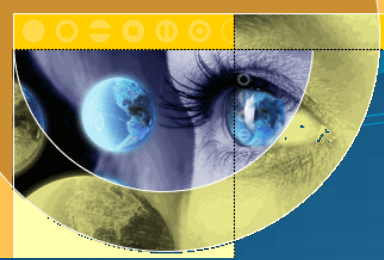
- ✓ A strong principal investigator – credentialed and/or with a proven track record (hopefully both).
- ✓ A realistic and accurate budget
- ✓ A projected time line to commercialization



SBIR/STTR – Mistakes - 1

The top 10 reasons proposals are rejected.....

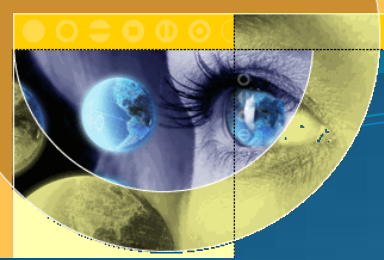
- 1) Lack of technical detail in the work plan
- 2) Did not adhere to proposal guidelines
- 3) Perceived lack of innovation
- 4) Too ambitious
- 5) Lack of knowledge of prior work or state-of-the-art ‘no competition’
- 6) Lack of credibility
- 7) Poorly written
- 8) Missed a deadline
- 9) Not “responsive” to topic
- 10) Inadequate Phase II or Phase III potential



SBIR/STTR – Mistakes - 2

Lack of due diligence

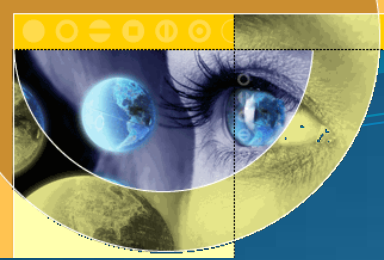
- ✓ SBIR Solicitation – not read or digested completely
- ✓ No Competition?... Yes, you have it and you must tell reviewers about it
- ✓ No current research – not proving you are leading-edge
- ✓ Misunderstand your customer... is a Federal agency
- ✓ Not determining who your end user/purchaser is



SBIR/STTR – Mistakes - 3

Failing to communicate with the Program Manager

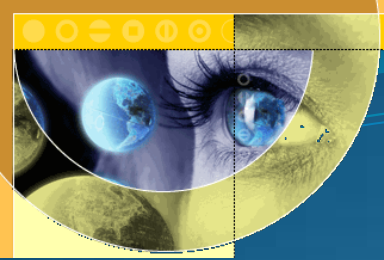
- ✓ Not doing your homework before you step into the contact process
- ✓ Not knowing if the solicitation is released or “pre-released” (missing “details”)
- ✓ Not having defined objectives for communication (“responsiveness”, innovation)
- ✓ Not expressing the strengths of your business (people/products/history) to the agency you will work with (build credibility)
- ✓ Having questions that are too general (strategic, not those that are obvious in the solicitation)
- ✓
- ✓ Failing to communicate prior to solicitation release or use networking opportunities at conferences, industry days or even direct contact
- ✓ Failing to create an opportunity to submit ideas and topics to agency



SBIR/STTR – Mistakes - 4

Underestimating the commercialization plan

- ✓ A lack of commercial potential will doom your proposal in Phase I
- ✓ You need a commercialization plan BEFORE you start Phase I app.
- ✓ You need to demonstrate commercial pull for your technology
- ✓ You need to demonstrate you understand the market space and have realistic expectations for sales and growth
- ✓ You need to know how your technology fits into a larger system
- ✓ You need resources beyond SBIR to finance commercialization



SBIR/STTR – Mistakes - 5

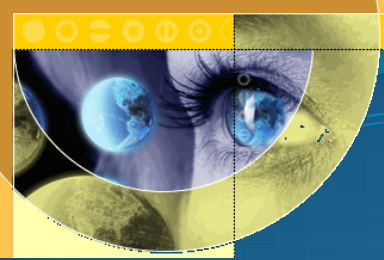
A lack of attention to detail.

- ✓ Does your proposal have spelling and grammar errors?
 - Did you fail to use key words?
 - Did you fail to refer to the topic in the Agency solicitation?

- ✓ Did you ignore page limits and do you know what the page limits are?

- ✓ Did you fail to address all the items specified in the solicitation?

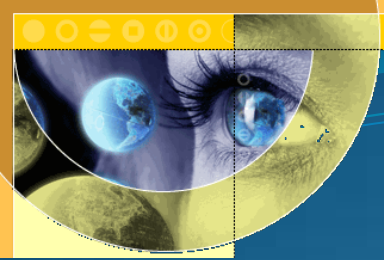
- ✓ Did you fail to submit on time?



SBIR/STTR – Mistakes - 6

Portraying a lack of credibility

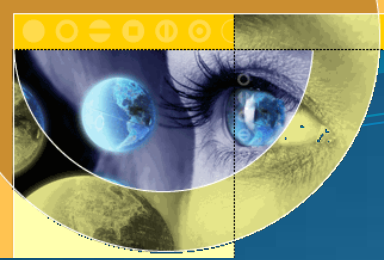
- ✓ No business expertise in the company or no scientific collaborators to round out the team – a weak PI will doom the proposal.
- ✓ No letters from collaborators, consultants or potential customers
- ✓ Facilities that are going to be inadequate for the scope of the project
- ✓ Actual Reviewers Comment.....*“While the researchers appear to have good engineering experience for tackling the design challenges presented by this project, a major weakness of the proposal is that the company lacks expertise in manufacturing, sales, and marketing...”*



Getting You Set-Up For Success -1

Think about protecting your IP with a Provisional Patent Application

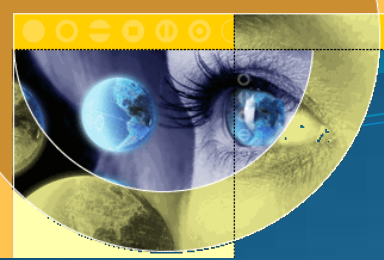
- ✓ Can use the term 'patent pending'.
 - Use www.uspto.gov
- ✓ Requires drawings, abstract, and specification.
- ✓ No claims required! (no legal language needed).
- ✓ Commercial reviewers like protected IP.



Getting You Set-Up For Success -2

Things You Need....

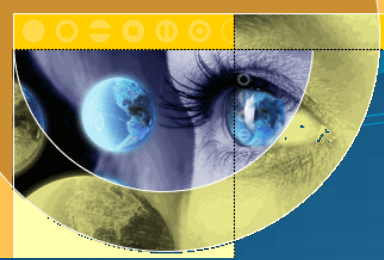
- ✓ To be incorporated....LLC, S or C-Corp...
- ✓ A business checking account
- ✓ A DUNS #: Free from Dun & Bradstreet at 1-866-705-5711
- ✓ Register in the **Central Contractor Registry (CCR)**
 - ✓ This can take some time....days, weeks!
- ✓ Need a Taxpayer Identification Number (TIN)



Getting You Set-Up For Success -3

Things You Need (Cont.)....

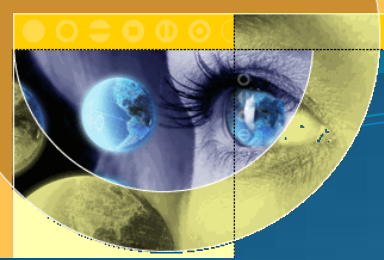
- ✓ Need statistical information about your company
- ✓ Need electronic funds transfer information
- ✓ Assign an eBusiness Point of Contact (EPOC)
- ✓ Must renew/validate your registration once a year



Getting You Set-Up For Success - 4

The SBIR programs requires registrations and they all take time. Start early.

- ✓ A corporation needs an EIN number.
<https://sa2.www4.irs.gov/modiein/individual/index.jsp>
- ✓ DUNS numbers are Free for Government Grants.
<http://fedgov.dnb.com/webform/pages/CCRSearch.jsp>
- ✓ CCR –register for grants and contracts.
 - <https://www.bpn.gov/ccr/NewRegistration.aspx>
- ✓ If you are going to apply to NSF –register with FastLane.
<https://www.fastlane.nsf.gov/n1/N1AddInst.html>
- ✓ The PI must also be registered at FastLane.
- ✓ Can register trademark with USPTO –Cost \$275.
 - www.uspto.gov



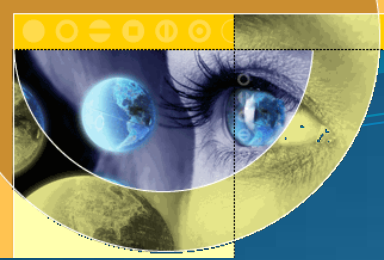
Getting You Set-Up - 5

Register on Grants.gov

- ✓ View tutorial to preview steps:
 - http://www.grants.gov/tutorials/organization/Animate_d2009/OrgGetRegistered.htm

- ✓ Make sure you have an Authorized Organizational Representative (AOR) registered in Grants.gov. There are several screens to go through, be sure to complete the process

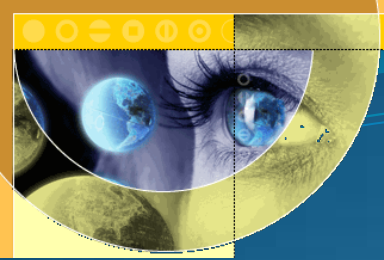
- ✓ Your AOR must be authorized to submit grants by your E-Business Point of Contact (they can be the same person!)



SBIR – Final Point on Budgets

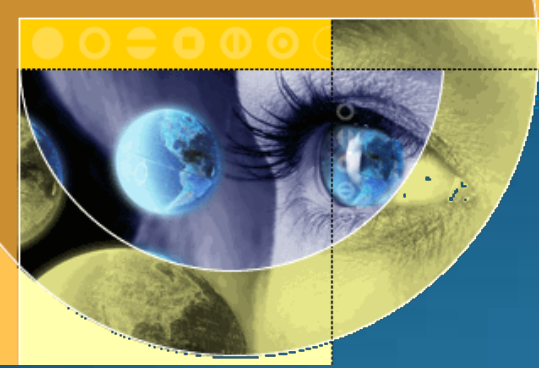
(Your Budget)

- ✓ Based upon calendar months
- ✓ Includes wages for all project workers
- ✓ Indirect expenses are a % of salaries
- ✓ Can include ‘unique equipment’ but NOT standard equipment
- ✓ Subcontracts listed as ‘Sub-awards’ (in total \$)
- ✓ Some Agencies require travel to award ceremony – add it to the budget
- ✓ You can and should include PROFIT (Fee)
- ✓ VERY IMPORTANT: Expect your actual expenses to be audited...
- ✓ With...implications....it can result in a Stop Work Order



Wrapping it Up...

- ✓ Find a topic FIRST...or if it is DOD, etc. create the topic with them
- ✓ Think it ALL through before you spend \$\$\$
- ✓ Plan, research, and plan to adapt your business to the project
 - Ask yourself, can we handle it?
- ✓ Document, re-write and re-write again –
 - Boil it down to it's essence, eliminate adjectives and how wonderful you are...
- ✓ Treat the Government Agency as a customer
 - Establish rapport and credibility
- ✓ Follow ALL the requirements and meet ALL the deadlines
- ✓ Submit and then keep your fingers crossed....



SBIR/STTR

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??? QUESTIONS ???

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