SBIR/STTR: The Big Challenges with Small Businesses - A University Perspective

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SBIR/STTR
What Are They?
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Small Business Innovation Research (SBIR)
Small Business Technology Transfer (STTR)
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**Small Business Innovation Research (SBIR)**

**Small Business Technology Transfer (STTR)**

- Allow US-owned and operated small businesses to
- engage in federal research and development
- that has a strong potential for commercialization
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**Small Business Innovation Research (SBIR)**

**Small Business Technology Transfer (STTR)**

- Allow US-owned and operated small businesses to engage in federal research and development that has a strong potential for commercialization.

- Program makes up one of the largest source of early-stage capital for technology commercialization in the United States.
Participating Agencies

*STTR

Department of Agriculture (USDA)
Department of Commerce (DoC)
Department of Defense (DoD)
Department of Education (ED)
Department of Energy (DOE)
Department of Health and Human Services (HHS)
Department of Homeland Security (DHS)
Department of Transportation (DOT)
Environmental Protection Agency (EPA)
National Aeronautics and Space Administration (NASA)
National Science Foundation (NSF)
Separate Phases

Generally: Each phase is a separate project. Awarded under a separate prime contract.
Similarities

• Promote Small Business
  • Innovation
  • Technology
• Commercialization
Differences

Basic Requirements

**SBIR**
- **MAY** Partner (subcontract) with Research Institution (RI)
- PI employed primarily with SBC

**STTR**
- **MUST** Partner (subcontract) with Research Institution (RI)
  - SBC: at least 40% of work
  - RI: at least 30% of work

**Allocation of IP Rights**
*may be incorporated into subcontract

**PI employed primarily with SBC or RI**

Small Business Concern (SBC)
- For-profit business
- Located in U.S.
- 500 or fewer employees
- At least 51% owned and controlled by one or more U.S. Citizens or business

Research Institution (RI)
- Non-profit
- Located in U.S.
- Owned & Operated for scientific or educational purposes
Key Considerations

- Business Size/Resources/Knowledge
- Financial Interests / Conflicts of Interest
- Solvency / Ability to Pay
- IP Ownership / Government Rights
Business Size / Resources/ Knowledge

- SBC = 1 to 500 employees
- RI Counsel or Contract Negotiator Assistance
- Prime Contract
- Flow downs
  - Export – EAR/ITAR
  - Foreign National / Publication Restrictions
  - Cybersecurity (SSP) DFARS 252.204-7012

- Not adversarial
  Everybody on the Hook
Hypothetical:

- **DoD STTR Phase II**
  “Verification and Validation of Algorithms for Resilient Complex Software Controlled Systems”

- **SBC**: Globex Inc. Startup in Alameda.
- **RI**: Pac Tech (fictional)

- Last minute Proposal
- Submit proposal

- PacTech OSP standard SBIR/STTR subcontract
  - minimal flow down clauses
  - very in favor of university.
Business Size / Resources/ Knowledge

Hypothetical:

• Three months later – Notice of Award.
• Globex receives Phase II award for $800,000 – RI will receive $500,981
• Crystal Clear Signs subcontract – no negotiation.
• Export control office reviews the SOW/RFP/Subcontract
• No publication, foreign national, or cybersecurity restrictions in subcontract.
• The CO requests a copy of the Prime Contract
  • Publication Restriction (DFARS 252.204-7000)
  • Cybersecurity (DFARS 252.224-7012)
  • Foreign National Restrictions
Business Size / Resources/ Knowledge

Hypothetical:

Risk Mitigation:

• Document the File
  • Advise PI of duties obligations

• Export Control drafts Technology Control Plan (TCP) to cover technology

• Cybersecurity creates a System Security Plan (SSP) and Report on Compliance (ROC)
Financial Interest / Conflict of Interest

- Project PI employed primarily with SBC
- SBC = 1 to 500 employees

- Start up
- Business Incubator
- Potential Conflicts of Interest:
  - RI faculty member or any member of the RI research team has a financial interest in the SBC applying for the funding
    - Use of RI lab, students, staff, funds or other school resources to support enterprise
    - Use of RI’s tax-exempt facilities to benefit small business
    - Motivated by advancing company’s financial interest

- IP licensing to SBC
  - Potential conflict over whether the RI stood to profit financially
Financial Interest / Conflict of Interest

Hypothetical:

• Globex was Dr. Cleare’s company.
• Wife, Dr. Crystal Cleare.
• Met as colleagues at UK Based R&D Company in 2015
• Dr. Lowden Clear - Still remains contract employee.
• Co Authored several articles on Guidance Navigation and Control system design
Recent Case

- Former Virginia Tech professor Yiheng Percival Zhang
- Guilty: Conspiring to commit federal grant fraud, making false statements and obstruction by falsification

- Zhang Created small business while at VT
- Also Remained Employed by Chinese research organization
- Applied and received SBIR/STTR grants for work already done in China.
- Intended to use the grant funds for other U.S. small business projects rather than for the projects for which the funds were requested.

FRAUD: Any intentional deception designed to unlawfully deprive the United States of something of value or to secure from the United States for an individual a benefit, privilege, allowance, or consideration to which he or she is not entitled.
Financial Interest / Conflict of Interest

Red Flags

- Company contact information
- Size and history with RI
- Statement of work
- Budget compared to overall Award amount
- Secretary of State Business/Corporation Search

Course of Action
- Contact COI Office
- COI Management Plan

Even the Appearance of Impropriety can be Problematic
Financial Interest / Conflict of Interest

Risk Mitigation Strategies

• COI Review / Approval—Routing Process
• COI Management Plan
• COI Questionnaire
Financial Interest / Conflict of Interest

- Statutes / Institution Policies

...employee or the employee’s spouse, partner, parent, child, sibling, and any in-laws of any of the foregoing ... USG BOR 8.2.18.2.5 Disclosure

Statutes
"Family" means spouse and dependents  O.C.G.A. 45-10-20(4)
Solvency/Ability To Pay

SBIR-STTR Purpose
Promote Small Business
Innovation
Technology
Commercialization

• Agency Selection based on:
  • Technical merit and innovation
  • Qualifications and experience
  • Potential for commercialization

• Agency Selection NOT based on:
  • Adequate capital
  • Credit history
Solvency/Ability To Pay

Prompt Payment Act
31 U.S.C. §3905(b)(1)-(2)
FAR 52.232-27

- Mandatory for Construction Contracts
- Applicable to other federal service contracts
- Requires prime contractors to pay subcontractors within 7 days of receipt of payment from government 52.232-27 (c)(1)
- Also provides for interest for late payment
- State variations (generally for time)
- Limited recourse
Solvency/Ability To Pay

Risk Mitigation Strategies

- Pre-payment terms or separate agreement
- No “paid when paid” terms
- Clause allowing RI to stop work for nonpayment
- Require performance by both parties
- Disputes clause
- PI personal responsibility – from discretionary/departmental funds

Remember:
- You are providing resources and expertise for zero profit. You are entitled to on time payment.
IP Ownership / Government Rights

Bayh Dole Act

• Allows universities to retain title to inventions resulting from federally-funded research.

• Applies even if federal government is not the sole source of funding for the invention

• Federal government granted a nonexclusive, nontransferable, irrevocable, paid-up license

• Required to report inventions to sponsoring agency within 60 days of initial disclosure
IP Ownership / Government Rights

Avoiding Potential IP Conflicts

- RI Policy on IP
- Clearly Define: Project IP * Background IP * RI Project IP * SBC Project IP * Joint IP
- Project IP is for research and development purposes only.
- Commercial use should always be subject to licensing

License Terms

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<tr>
<th>Agency</th>
<th>YES</th>
<th>NO</th>
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<tbody>
<tr>
<td>OK per 37 CFR 401.14 (Bayh Dole/Patent Rights)</td>
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<table>
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<tr>
<th>SBC</th>
<th>YES</th>
<th>NO</th>
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<td>Only option to commercialize subject to government rights</td>
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2019 ANNUAL MEETING
OCTOBER 19 - 23
IP Ownership / Government Rights

Avoiding Potential IP Conflicts

STTR Allocation of IP Rights

• Terms Required
• Separate agreement NOT required
• IP Terms may be incorporated into subcontract.
• Some sponsors prefer separate agreements.
• Agencies have model agreements
• Model agreements not mandatory
• Review agreement and negotiate/incorporate specific terms
  Specifically: Definitions, publication terms, expenses
• Should not Delay Project
FINALLY

• SBIR – STTR : Promote Small Business
• Research Institution: Valuable Resource
• Each Entity Bears Responsibility
Questions?

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