Research Opportunities for Small Companies

by Jill Dickman

Abstract: The SBIR/STTR federal programs provide a substantial opportunity to Texas small technology companies. At a time when early-stage investment capital is hard to obtain, these two programs offer low-risk capital and substantial assistance to small companies.

The SBIR/STTR[i] Program is a $3 billion source of funding for small firms conducting research. Eleven federal agencies participate and make awards for a broad range of research. This money benefits both the federal agencies and the small business awardees; it also is important to states as it provides a significant pot of money to develop their research communities and enhance their economies.

The small businesses compete for Phase I awards, which are $100,000 for concept feasibility, and almost 50% go on to Phase II which is a more substantial award for research, development, prototyping and testing. Phase II is generally $500-750,000, but can go to $1 million. The National Institutes of Health (NIH) and Department of Defense (DOD) and all its branches often exceed that limit. The SBIR/STTR reauthorization that being considered in Congress would increase these award amounts by 50% and double the set-aside. That is, if the R&D budget remained at its current level in 2008, the first year of the reauthorization, the budget would be over $5 billion. Not only would that allow a greater number of awards, it would also provide more dollars for "plus-ups" and "enhancements" which can significantly increase the size of the award in Phase II.

The end goal of all SBIR/STTR projects is commercialization. At the end of Phase II, the small business does not have to pay this money back; it is not a loan. The federal government does not take any equity from the small business as a venture capitalist would. Yet the small business retains the intellectual property (IP) and is encouraged to commercialize the SBIR-funded technology.

Federal agencies, such as NIH and DoD, have even arranged commercialization conferences with the end goal of providing networking opportunities for the SBIR awardees to make connections with DoD prime contractors and private-sector investors and buyers. Agencies and individual DoD services have also instituted programs specifically geared to the needs of small businesses attempting to market their technologies. For example, the Navy offers assistance through its Transition Assistance Program (TAP), which provides each SBIR company with a business counselor to help develop their transition strategy and coach them through the process. The National Science Foundation's Matchmaker database helps its grantees find commercialization partners.

The Commercialization Pilot Program (CPP) is the newest effort by DoD to transition successful SBIR technologies to their acquisition programs. CPP was mandated in the 2006 Defense Bill and is now being set up and its operations defined. The goals will be to identify the SBIR Phase II programs that are ready for rapid transition, that meet high-

priority military requirements in the acquisition programs, and that have the best methods of tying these together. CPP encourages the incorporation of SBIR in the planning, budgeting, and requirements process; and it highlights the importance that DoD places on the accelerated transition of SBIR technologies into the acquisition process.

SBIR has been a highly successful federal program for the last quarter of a century. STTR was added 15 years ago and has enjoyed equal success. STTR was modeled after SBIR but allows universities and other research institutes (RI) to play a more significant role in the projects. For SBIR, RIs can do up to 33% of the work in Phase I and up to 50% in Phase II, but they are not allowed to act as the principal investigator (PI). For STTR, the RI must do at least 30% of the work or as much as 60% for Phases I and II. Most importantly, the PI can be employed by the RI. This allows, and even encourages, the RI to initiate the STTR effort in order to get its own technology to market.

The SBIR/STTR Program has been successful on several different levels. First, the federal government has seen economic success by supporting small high technology businesses and providing a way for them to develop their technologies and introduce them to the public and private marketplaces. The individual federal agencies have seen success in that they are able to get research results considerably faster that are less expensive and more innovative. If the technology resolves specific problems, and the government wishes to buy the product or service, the agency can purchase it using a simple "sole-source" contract, which is awarded without delay or competition.

In addition, the small businesses are successful in that they receive sizable awards to pay for research that is usually too risky for a VC firm to consider. Ideally, at the end of Phase II, the small company will have developed a usable prototype, and the federal government will help them in many ways to commercialize the technology. If the government agency plans on using it for its own purposes, the law mandates that the technology be purchased from the small business that developed it. Furthermore, the SBIR company will have earned a great deal of credibility in the banking/investment community by the fact that they have been evaluated in the SBIR/STTR process by the lead scientists and engineers in the government and, perhaps, the world. Should the SBIR winner want venture capital, many venture capitalists regard the SBIR program as an effective vetting process and are often more willing to review a company's business idea and sometimes give better terms than otherwise.

The states that are successful in this arena are able to pull in federal dollars that can serve to support the state's economy, aid in the development of an enhanced research community, and pay constituent small businesses to innovate and grow. For these reasons many states have attempted to help their small businesses become successful in the SBIR/STTR Program by providing assistance in proposal writing, commercialization counseling, or matching funds. States that help their small R&D firms win SBIR/STTR awards, bridge between Phase I and Phase II, and/or supplement the size of these awards make an investment in their technology base and see a high rate of return.

Texas has put the Emerging Technology Fund (ETF) into effect, which, among other things, serves this purpose. ETF considers SBIR/STTR to be matching funds. The reverse is also true; the ETF awards act as substantial supplements to the SBIR projects. In the long run this will serve to attract scientists, engineers, and high-tech businesses to Texas; it will cause the infrastructure to be built up around the needs of the technology community; and it will mean that a greater number of SBIR/STTR awards will be made to Texas small businesses, bringing a larger portion of the federal dollars into the State.

Texas has also made the commitment to host the 2007 SBIR/STTR National Conference. The national conferences were previously underwritten and arranged by the National Science Foundation (NSF) and DoD. However, the last federally funded conference will take place in the fall of 2006. Texas will offer the first state-led conference to fill the void. It will be geared to both companies that have not yet won an SBIR or STTR award and businesses that have had a number of awards. Seminars will be held on: state programs, such as ETF; the participation of prime contractors, including training and networking opportunities; information on the SBIR Reauthorization; the CPP and its impact on the DoD SBIR/STTR Program; and STTR and the necessary STTR agreement. For further information on this event, go to http://www.sbirtexas.com.

Jill Dickman managed the Air Force SBIR and STTR Programs from 1988 until she retired in 1999. Previous positions included Program Manager for Foreign Military Sales and Program Manager for the B-1 contractor support. Since 2002 she has been working in the Technology Center hosted by UT- San Antonio as a Senior Business Development Specialist. She advises small businesses and research institutes on R&D and other funding opportunities that are available through the federal government, especially SBIR and STTR. Ms. Dickman also assists small companies by reviewing proposals, helping with the transition from Phase I to Phase II, and starting them in the commercialization process. She has a BA from Michigan State University and an MPA from Western Michigan University. She can be contacted at (210) 458-2458, jdickman@utsa.edu.

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[i] Small Business Innovation Research Program and a subsequent companion program the Small Business Technology Transfer Program.