

August 2005 SBIR Newsletter Material

Bill would make venture capital-owned firms eligible for grants

<http://milwaukee.bizjournals.com/milwaukee/stories/2005/07/11/newscolumn3.html>

Department of Homeland Security -- FY05.2 HSARPA SBIR Solicitation Released

The Homeland Security Advanced Research Projects Agency (HSARPA) FY05.2 SBIR Program Solicitation is now available. HSARPA will begin accepting proposals on July 29, 2005. The deadline for receipt of proposals is August 29.

The FY05.2 Topics Areas are listed below:

H-SB05.2-001 Handheld Biological Detection System
H-SB05.2-002 Uncooperative Vehicle Stopping Using Non- Lethal Methods
H-SB05.2-003 Distributed Buoy Vessel Detection System
H-SB05.2-004 Hardware-Assisted System Security Monitor
H-SB05.2-005 Methods To Determine Structural Stability
H-SB05.2-006 Portable/Transportable Directional Gamma Ray and/or
Directional Neutron Detectors

The HSARPA SBIR website <http://www.hsarpasbir.com> offers electronic access to the SBIR solicitation, submission of frequently asked questions (FAQs), answers to FAQs, and hyperlinks to other useful information. All Phase I and Phase II proposals must be submitted via the website.

Before July 29, 2005, you may call or email topic questions to the Technical Point of Contact for the topic, before you prepare a proposal for the FY05.2 solicitation. Technical questions will be researched and answers provided in a timely manner. Contact with HSARPA after the prerelease closing date, is restricted for reasons of competitive fairness, and therefore, all written questions submitted to faq@hsarpasbir.com will be answered and posted electronically for general viewing to the HSARPA website, <http://www.hsarpasbir.com>.

For more information call the Help Desk toll free number: 1-800-754-3043. General questions pertaining to the HSARPA SBIR program should be submitted to faq@hsarpasbir.com or call the HSARPA SBIR Program Manager, Mr. Tim Sharp, SBIR Program, at 202-254-6105.

Reprinted from SBIR/STTR ALERTING SERVICE

Assessing Small Business Research Programs

The Government Accountability Office (GAO) has recently released its latest look at the federal Small Business Innovation Research (SBIR) program – which requires large federal agencies to devote a portion of their R&D budgets to small businesses – and the grades are pretty good. Since the program was started in FY 1983, the SBIR program has invested more than \$15 billion in roughly 76,000 research projects undertaken by small businesses. GAO finds that the SBIR program has generally met its stated goals. It has funded high-quality research, stimulated competition, and promoted commercialization of research.

But, the picture isn't all positive. GAO also notes that it has been difficult to develop comprehensive metrics for SBIR performance. In particular, much debate still arises over what is meant by "commercialization." The SBIR statute does not define commercialization, so each agency uses a slightly different approach. Moreover, GAO evaluators also warn against a total reliance on commercialization as a measure of program success. If funds are only provided to products and ideas with immediate commercial market value, much high risk and high value-added research could be underfunded.

The June 2005 Government Accountability Office report (GAO-05-861T), *Federal Research: Observations on the Small Business Innovation Research Program*, is available at <http://www.gao.gov/new.items/d05861t.pdf>

Reprinted from the GAO Report GAO-05-861T

Partnering possibilities with RTI

Does your Small Business pursue SBIR and STTR opportunities?
Do you need a premier non-profit research institution to improve your win rates?
Top Ten Reasons to Partner with RTI's Center for Advanced Network Research for your next proposal!

- 10) We have collaboration relationships with NC based universities.
- 9) We have a track record with federal R&D funding agencies. (DoD, NSF, DoE, etc.)
- 8) We are a small research group that operates much like a small business.
- 7) We provide research related support services for your SBIR proposal.
- 6) We help provide and/or develop technologies for your STTR proposal.
- 5) We can take the lead on the proposal process for STTR.
- 4) Our researchers have advanced degrees (Masters, PhDs) with industry recognition in networking and information assurance.
- 3) We have "Top Secret" level cleared personnel.
- 2) There is no monetary cost to your small business for our proposal effort.
- 1) We are enthusiastic and motivated because our success comes from your success.

Overview

The RTI International Center for Advanced Network Research has an experienced team of cleared professionals with a range of skills covering chip, hardware, and software design of experimental and proof of concept systems for DoD customers including DARPA, ARDA and the NSA. We have a strong track record of innovation, publication and technology transfer. Technology transfer has ranged from insertion of systems into government lab use and insertion of systems in theater, to commercialization of research results. Our R&D efforts have tended to

center around two themes, information assurance solutions and applications of communications protocols.

Our information assurance research and development experience includes intrusion detection systems, intrusion tolerant systems, insider attack detection, cryptographic applications, distributed systems, identity management and access control.

Our work in communications protocols research and development has emphasized Internet and optical network applications, including connection control, ad hoc systems, fault tolerant communications, secure transactions, distributed systems and high performance (hardware and software) wire-speed solutions.

The skill set for the team is wide ranging and includes: 1) full custom chip design with emphasis on hybrid digital analog systems, high voltage, MEMS drivers and logic, 3D stack up applications, 2) full custom hardware design and development including network systems and interfaces, including fiber optic systems, and performance acceleration devices for security functions, such as intrusion detection algorithms, and 3) software design and development in Linux environments with substantial depth in C++, Java, hardware-software interfaces, embedded systems and real time systems.

Form more information, please contact:

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SBIR Success Story – Mariner Container

Big Chance

Start-up company wins grant to develop 'smart' shipping containers

By John Dayberry
Hickory Record Business Editor

June 19, 2005
Granite Falls, NC

After an uncertain year, a start-up business in Caldwell County has gained forward momentum courtesy of the U.S. government.

The Department of Homeland Security Advanced Research Projects Agency has awarded Granite Falls-based Mariner Container Crop. A \$100,000 grant for the development of a "smart" container system.

The Phase I Small Business Innovation Research grant is funding a feasibility study of mariner's proposal to build high-tech, largely recyclable shipping containers that could be used for military and commercial purposes.

A Phase II grant, if awarded, will provide Mariner with up to \$750,000 for the development of a prototype.

Phase III is commercial application of the research and development, and in Mariner's case would likely include contracts with the Department of Defense and/or the Department of Homeland Security, said Mariner founder Rick Lampe.

If Mariner gets to the third phase, it could also mean hundreds of new manufacturing jobs for the area.

"After a year of two steps back for every step forward, this program has kicked us about five steps ahead," Lampe said.

Early last year, Lampe introduced Mariner and its container-manufacturing process to the area, hoping to attract private investors.

The process involves melting, mixing and molding recycled plastics into high-volume forms.

To get the company started and to generate operating revenue, Lampe equipped an 8,000-square-foot industrial facility on U.S. 321-A with a huge rotational mold.

Starting with a small staff, Mariner used the mold to create 1,000-gallon, plastic septic tanks. The company is now awaiting state approval to sell the tanks.

Mariner's original business plan called for the company to reach its initial venture-capital and public-funding goals, then begin producing 40-foot-long, collapsible plastic containers for the merchant-shipping trade.

Lampe planned to build a new production facility in increments, with the first coming as soon as funding was in place and Mariner was ready to produce the shipping containers.

Employees were to be added as the operation expanded, with at least 1,000 jobs being created within 10 years.

Lampe courted venture-capital funding for the project for nearly a year, assisted by the Caldwell County Economic Development Commission.

He spoke to more than a dozen investment groups, but all of them wanted to see a 40-foot, completed shipping container before committing.

"The government understand that it takes a lot of money to produce such a prototype," Lampe said.

"And that's partially what this program does."

Lampe was steered toward the Small Business Innovation Research program by Steve Bumgarner, manufacturing and technology counselor with the N.C. Small Business and Technology Development Center.

All federal agencies with an annual, outside research and development budget exceeding \$100 million are required to participate in the SBIR program.

Participating federal agencies include the departments of agriculture, commerce, defense, education, energy, health and human services, homeland security and transportation, and the Environmental Protection Agency, National Aeronautics and Space Administration and National Science Foundation.

In 2004, North Carolina small businesses received more than \$23 million in grant money from the program.

On average, one in six companies that apply for the grants receive them, Bumgarner said.

Acceptance by SBIR lends much credibility to a proposed project, and should help Mariner attract funding sources, he said.

“Qualifying – even for Phase I – shows a great deal of merit,” Bumgarner said.

Mariner’s container system would have plenty of commercial applications, but should hold special interest for the Department of Defense and the Department of Homeland Security, Lampe said.

The steel-framed containers, up to 53 feet long, will be manufactured of recyclable plastic embedded with electronic sensors that can detect gamma radiation, temperature changes or the presence of human cargo.

They will also be quipped with global positioning systems and could be easily X-rayed.

Such containers will save shippers money not only by preventing cargo from being lost, but by facilitating one-way shipping, Lampe said.

“The frames can be dismantled and the plastic recycled,” he said. “In a world of trade imbalances, that could greatly help U.S. companies, and the environment.”

Lampe has spent the last three years designing and building the prototype system, but he said it has really been in the works for three decades.

A graduate of the U.S. Merchant Marine Academy with a degree in mechanical engineering, he also has a master’s degree in business administration from the

University of North Carolina at Chapel Hill, and is a retired commander with the U.S. Naval Reserve.

Before founding Mariner, Lampe started, developed and sold two other businesses. One of his ideas started what is now Pactiv Corp., a worldwide leader in the plastics industry.

Lampe hopes to know by late fall if Mariner's application for Phase II funding will be approved. The Small Business and Technology Development Center, offered through the University of North Carolina System, is providing continued assistance.

"I was really discouraged, but I have renewed hope," Lampe Said.

"As one door closes, another opens."