



S MALL **B** USINESS

T ECHNOLOGY

T RANSFER **P** ROGRAM
(STTR)

ANNUAL REPORT - FY 2003

**Office of Technology
U.S. Small Business Administration**

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*I*ntroduction

This report is the tenth annual report presented by the U.S. Small Business Administration (SBA) pursuant to Public Law 102-564, the Small Business Research and Development Enhancement Act of 1992, as amended.

This report describes the operation and administration of the Small Business Technology Transfer program (STTR) for Fiscal Year (FY) 2003. This report also provides data on the results of the first 10 years of the STTR program, including the number of solicitations released, the number of proposals received and the number of awards resulting from those solicitations.



Summary of Legislation

Public Law 102-564, as amended

Title I of Public Law 102-564 amended the Small Business Act by reauthorizing the Small Business Innovation Research (SBIR) program. After extensive hearings by several committees and review of extensive testimony from numerous experts, Federal government officials, participating small businesses, beneficiaries, and oversight groups including the Government Accountability (GAO) Office, Congress passed P.L. 102-564. At the time it was reauthorized, the SBIR program had been in effect for a decade, during which it achieved remarkable success in its program goals of helping small businesses develop important technology and helping keep the Nation at the forefront of technological innovation.

Seeking to further expand small business opportunities in the technical

arena, Congress passed Title II of the Act establishing the STTR program.

The STTR program shares the underlying philosophy of the SBIR program. It recognizes Federally funded research and development as a base for technological innovation that will contribute to the growth and strength of the Nation's economy. It differs from the SBIR program in that STTR awards are made to small businesses that pursue technological innovation *through cooperative research and development with Federal laboratories and non-profit scientific and educational institutions.*

Duration of the Program

In October 1992, Congress enacted Public Law 102-564 which authorized the STTR program for FY 1994, 1995, and 1996. In September 1996, Public Law 104-208 reauthorized the STTR program through FY 1997. Public Law 105-135 reauthorized the program through September 30, 2003. In October 2003, Public Law 107-50 reauthorized the STTR program through FY 2009 and increased the program set-aside from .15 percent to .3 percent beginning in FY 2004.

The Small Business

Technology Transfer Program



Funding

Federal agencies that participate in the STTR program must have an extramural budget for research or research and development in excess of \$1 billion. Program guidelines established the following percentages of funds an agency could expend with small businesses in connection with the STTR program:

- Not less than 0.05 percent of such budget in fiscal year 1994;
- Not less than 0.1 percent of such budget in fiscal year 1995;
- Not less than 0.15 percent of such budget through fiscal year 2003; and
- Not less than 0.3 percent of such budget in fiscal year 2004 and each fiscal year thereafter.



Federal Agencies Participating

The five Federal agencies that meet the funding threshold and participate in the program are:

- Department of Defense
- Department of Energy

- Department of Health and Human Services
- National Aeronautics and Space Administration
- National Science Foundation



The Three-Stage STTR Process

Public Law 102-564 structured the STTR program as a three-phase process designed to identify and nurture promising research and development interests within the small business community. These phases are:

Phase I: Awards are made to determine, to the extent possible, the scientific, technical, and commercial merit and the feasibility of ideas submitted. Phase I awards generally will not exceed \$100,000 and are for a 1-year effort. Award amounts are set at the discretion of the participating agencies.

Phase II: In Phase II, Phase I projects with the most potential may be funded to further develop ideas to meet particular program goals. Phase II awards will generally not exceed \$500,000 for a 2-year effort. Specific amounts awarded are at the discretion of the awarding agencies.

Phase III: No Federal STTR funds are expended during this phase. In Phase III, program participants pursue commercial applications of the innovations developed in Phases I and II. However, in Phase III, program participants may receive additional non-STTR Federal funds to develop products and services for use by the Federal government. They may also receive awards from non-STTR Federal funding sources for continuation of competitively selected research and research and development.



Eligibility for Participation in STTR

The STTR program involves cooperative research and development performed jointly by a small business and a research institution. Thus, each STTR project involves at least two partners, each of which must meet eligibility criteria in order for the project to be funded.

To be eligible for an STTR award, a **small business** must have no more than 500 employees, be independently owned and operated, not be dominant in the field of operation in which it is proposing, have its principal place of business in the United States, be organized for profit, and be primarily owned by U.S. citizens.

To be eligible for participation in an STTR award, a **research institution** must be a non-profit institution as defined by the Stevenson-Wydler Technology Innovation Act of 1980, or a federally funded research and development center (FFRDC) as identified by the National Science Foundation in accordance with the Office of Federal Procurement Policy Act. Thus, most universities and colleges, non-profit research centers, and Federal government-owned, company-operated laboratories are eligible.

Small businesses interested in participating in the STTR program are required to find a research institution meeting this definition and to develop a working agreement before proposing to compete for an STTR award.



Distribution of Work

An STTR award is intended to be a true partnership venture for both the small business and the research institution. To ensure such a relationship, the program establishes minimum performance levels for each participant. Public Law 102-564, as amended, stipulates that under an STTR award, the small business must perform at least 40 percent of the work, and the research institution must perform at least 30 percent of the work.



Management of STTR Projects

Although the conduct of the project is a cooperative research and development venture, the small business exercises overall management, control, and responsibility for the project.

Participating agencies are required to ensure that the small business manages and controls the funding agreement pursuant to a business plan that provides for the commercialization of the technology being funded.



Continued Use of Federal Government Property

STTR guidelines also direct Federal agencies to allow small businesses that use Federal government equipment during the conduct of an STTR award to continue to do so for not less than 2 years after the beginning of Phase III.



Model Agreements

Public Law 107-50 directs SBA to establish guidelines for a model agreement to be used by all STTR participating agencies in allocating intellectual property rights and follow-on rights.

Representatives of each of the five participating agencies issued two model agreements: one published by the Departments of Energy and Health and Human Services, and the other published by the Department of Defense, the National Science Foundation, and the National Aeronautics and Space Administration.

The SBA is currently developing a single model agreement that can be used by all the participating agencies. SBA is reviewing current intellectual property rights issues that arise in the STTR program and is working with the agencies to develop the appropriate guidelines.

Small businesses are required to negotiate agreements with research institutions, but they are not required to use the model agreements. They are free to formulate and execute their own agreements or to use the models in whole or in part.



Rights to Data

A major concern of small, innovative firms is that data generated while performing research and development for the Federal government will be made public. Therefore, STTR legislation stipulates that the program provide for the small business to retain the rights to data it generates while performing in the STTR program. These retention rights remain effective for at least 4 years. The intent of this provision is to authorize the

participating agency to protect technical data generated under the STTR funding agreement and to refrain from disclosing such data to competitors of the small business. The STTR Policy Directive stipulates that the agency cannot use the information to produce future technical procurement specifications, thus protecting the participating small business until it has a reasonable chance to seek patent protection, if appropriate.

Therefore, the Policy Directive mandates that, except for program evaluation, participating agencies must protect technical data for at least 4 years from the completion of the project that generated the data. The Federal government, however, retains a royalty-free license for Federal government use of any technical data delivered under an STTR funding agreement, whether patented or not.



Follow-On Funding Agreements

Following completion of Federal research and development contracts, it is not unusual for the agency involved to have further research and development interests that result in a continuation of work. There have been numerous instances in which, following the completion of Phase II of STTR, agencies had chosen to continue development of an innovation to produce a product or service developed under the STTR award. To ensure smooth continuation of this work, protect the commercial rights to the innovation, and continue to employ the expertise of the originating small business, agencies are directed, to the degree practicable, to award any non-STTR, follow-on contracts or grants to the originating small business. To make this process more efficient, participating agencies have been advised that the competition for an STTR award serves as meeting the requirements of the Competition in

Contracting Act. This allows the agencies to award non-STTR, follow-on work to the small business without further competition.



Critical Technologies

STTR legislation requires agencies to give special consideration to broad research topics and to topics that further one or more critical technologies. These technologies are identified by the National Critical Technologies Panel (or its successor). To assist the agencies, SBA annually requests a complete listing of critical technologies from the National Critical Technologies Panel and the Office of the Secretary of Defense. These listings were sent to each participating agency.

*A*uthorities and *R*esponsibilities of the *P*articipants



Participating Agencies

The authorities and responsibilities of Federal agencies participating in the STTR program are to:

1. Unilaterally determine categories of projects to be included in its STTR program.
2. Issue STTR solicitations according to a schedule determined cooperatively with the SBA.
3. Unilaterally determine research topics within the agency's STTR solicitations, giving special consideration to broad research areas that further one or more critical technologies as identified by either the National Critical Technologies Panel or the Secretary of Defense.
4. Unilaterally receive and evaluate proposals resulting from STTR solicitations.
5. Unilaterally select awardees for its STTR funding agreements and inform each awardee, to the extent possible, of the allowable expenses under the funding agreement.
6. Administer its own STTR funding agreements.
7. Pay recipients on the basis of progress toward or completion of the STTR funding agreement requirements.
8. Submit an annual report on the STTR program to the SBA and the Office of Science and Technology Policy.
9. Develop a model agreement for approval by the SBA that allocates between small businesses' and research institutions' intellectual property rights and any rights to carry out follow-on research, development, or commercialization.
10. Develop procedures in consultation with the Office of Federal Procurement Policy and the Office of Federal Government Ethics to ensure that federally funded research and development centers that participate in STTR agreements:
 - A) Are free from organizational conflicts of interest relative to the STTR program.
 - B) Do not use privileged information gained through work performed for an STTR agency or private access to STTR agency personnel in the development of an STTR proposal.
 - C) Use outside peer review, as appropriate.

11. Develop procedures for assessing the commercial merit and feasibility of STTR proposals.
12. Implement an outreach program.
13. Collect and maintain information for a database.



Small Business Administration

Public Law 102-564 designated the SBA as the lead Agency to implement the program, govern its policy, and monitor and analyze its performance. As the lead Agency, the SBA's authorities and responsibilities are to:

1. Develop, coordinate, and issue a Policy Directive for the general conduct of the STTR programs.
2. Assist small businesses in obtaining Federal government contracts for research and development.
3. Assist small businesses in obtaining benefits of research and development performed under Federal government contracts or at Federal government expense.
4. Provide technical assistance.
5. Develop and maintain a source file and an information program to help ensure each qualified and interested small business the opportunity to participate in technology transfer pilot programs involving Federal agencies.
6. Coordinate with participating agencies a schedule for release of STTR solicitations and prepare a master release schedule that maximizes small business opportunities to respond to solicitations.
7. Independently survey and monitor the operation of STTR programs

within participating Federal agencies.

8. Report not less than annually to the Congress on the STTR programs and the Administration's information monitoring efforts related to the STTR program.
9. Consult, cooperate, perform studies, and make recommendations to Federal government agencies.
10. Consult with representatives of small business to assist and encourage such firms to undertake joint programs for research and development.
11. Develop, maintain and make available a database of the STTR program information.

As defined in Section 9 of the Small Business Act, the SBA has designed and implemented the Technology Resources Network (Tech-Net) to streamline and standardize the reporting of STTR awards and applicant information by the Federal agencies required to participate in the STTR program. This process involved the SBA establishing several working sessions with the agencies to define the input data fields and a core set of output reports to help facilitate the agencies administration of the program. The SBA incorporated the unique needs of each agency into the design of the database system to insure that the system would provide much needed award and applicant information. Information such as name, size, location, abstracts and identifying number of each small business concern that has received a Phase I or Phase II award is available in this database. Agencies now have the ability to review awards and applicant information, and edit previously reported data interactively through Tech-Net. The public version of this database can be accessed by visiting the website <http://tech-net.sba.gov>.

The SBA is currently developing the government database which will maintain information on all Phase II awards funded under the STTR program. This database will not be accessible by the public; therefore, any confidential information that is provided by the STTR Phase II awardees will not be disclosed to the public. A username and password will be required to access the database. The SBA will control the issuance of the username and passwords. Coordination with the participating agencies is critical in the development process to insure that the database data elements will capture sufficient information that will allow the SBA, each participating agency, GAO, the National Academy of Science and the Congress to effectively measure the impact and success of the program. The SBA intends to have the government database implemented and functional on or before October 1, 2005.



The STTR Program Policy Directive

Public Law 102-564 authorized the SBA to issue a Policy Directive to conduct the STTR Pilot Program within the Federal government. Before issuing this Policy Directive, the SBA consulted with the heads of the two Federal agencies participating in the formulation of the program: the Commissioner of Patents and Trademarks and the Administrator of the Office of Federal Procurement Policy.

The SBA met with the representatives of each of these organizations, and after significant discussion and modifications, finalized the Policy Directive effective October 1, 1993.

The Policy Directive guides participating agencies in the operation of the STTR programs. It provides simplified, standardized, and timely solicitations and funding processes. It

also directs the participating agencies to reduce regulatory burdens associated with participation in STTR programs. In addition, the directive also provides guidelines for a model agreement to be used by all agencies for allocating intellectual property and other rights between small businesses and research institutions. It also provides procedures to ensure that recipients of STTR awards meet eligibility requirements as small businesses and that they manage and control the performance of the STTR funding agreement.

Finally, the directive instructs the participating agencies to develop procedures to ensure follow-on, non-STTR funding agreements with the small business when appropriate.

Pursuant to Public Law 107-50, the current policy directive is being revised. See 68 Fed. Reg. 35748 (June 16, 2003)



Surveying, Monitoring, and Reporting

Pursuant to the legislation, the SBA is required to independently survey and monitor the operation of the STTR programs within participating Federal agencies. The law directs SBA to report not less than annually to the Committee on Small Business of the Senate and the House of Representatives and to the Committee on Science of the House of Representatives on the STTR programs of the Federal agencies.

STTR—The

Program's 10th Year - FY 2003

Public Law 102-564, as amended, provided both general guidance and specific instructions concerning the implementation of the STTR program. To ensure a successful implementation, the law specifically directed several important actions and established completion dates. All mandated actions were implemented in a timely manner.



Solicitation Schedule

STTR policy directs each Federal agency participating in the program to issue STTR solicitations in accordance with a schedule determined cooperatively with the SBA. After approval of SBA's master schedule, these agencies issued solicitations early in fiscal 2003 to invite small business to propose STTR projects.

After approval of its solicitation schedule, each participating agency provided SBA with information necessary to publish a pre-solicitation announcement. The announcements provided interested small businesses with information on forthcoming opportunities in the STTR program, as well as basic information on program requirements, opening and closing dates of solicitations, and agency contact points for further information.

For FY 2003, the participating agencies had the following solicitation periods:

- Department of Defense - January 2, 2003, through April 16, 2003.
- Department of Energy – October 15, 2002, through January 14, 2003.
- Department of Health and Human Services - January 2003 with closings April 1, August 1 and December 1, 2003.
- National Aeronautics and Space Administration – July 7, 2003, through September 9, 2003.
- National Science Foundation – October 1, 2002, with closing January 22, 2003.



Award Obligation Requirements

Program policy required participating agencies to expend on STTR awards not less than 0.15 percent of their fiscal year 2003 extramural budget for R/R&D. In fiscal year 2003, \$97,656,929 should have been obligated program-wide to meet this requirement; however, actual obligations were \$96,665,553.



Small-Business Participation

During FY 2003, small businesses submitted 2,040 proposals under the STTR program, including 1,808 Phase I proposals and 232 Phase II proposals. A total of 508 awards were made,

including 397 Phase I awards and 111 Phase II awards. Awards were made to 414 small businesses. In FY 2003, total STTR program obligations were \$96,665,553. Small business received \$63,231,013 or 65 percent of total funding. Research institutions received \$41,225,194 or 42 percent.



Minority and Disadvantaged Firms

Of the 414 firms that successfully competed for STTR awards, 42 or 10.1 percent were firms owned by minority or disadvantaged persons. They received \$4,943,286 or 5 percent of the \$96,665,553 total obligated.

HUBZone Small Business Concerns

The participating agencies made one Phase I award totaling \$69,985 to a HUBZone certified small business concern.



Research Institutions

Small businesses interested in participating in the STTR program must find a research institution that meets the program's definition and develop a working agreement before proposing to compete for an STTR award.

The statistics available at the end of the fiscal year indicate that 414 firms collaborated with 205 research institutions. Of contracts and grants awarded during the year, 472 were made to universities and colleges, 19 to Federally funded research and development centers, and 50 to other non-profit research institutions. The research institutions were located in 46 states, the District of Columbia and Puerto Rico.

Table 1: Number of STTR Awards – FY 1994 through FY 2003

Fiscal Year	Phase I	Phase II	Totals
94	198	0	198
95	238	22	260
96	238	88	326
97	260	89	349
98	208	109	317
99	251	78	329
00	233	95	328
01	244	93	337
02	356	114	470
03	397	111	508
Total	2,623	799	3,422

Table 2: Value of STTR Awards-- FY 1994 through FY 2003 (In millions of dollars)

Fiscal Year	Phase I	Phase II	Totals
94	\$18.9	\$	\$ 18.9
95	23.0	10.8	33.8
96	22.7	41.8	64.4
97	24.1	44.8	69.0
98	19.7	45.1	64.8
99	24.3	41.0	*65.0
00	24.0	46.0	*70.0
01	25.4	46.0	*71.4
02	36.3	55.3	*91.6
03	41.1	51.0	*92.1
Total	259.5	381.8	*641.3

*Does not include modifications

Highlights of Cumulative Data

The STTR program continues to receive recognition for quality performance. The following highlights accomplishments of the STTR program since it began in FY 1994:

- More than \$645 million has been awarded.
- Participating agencies have received a total of 13,906 Phase I and Phase II proposals in response to 50 STTR solicitations. A total of 3,422 Phase I (2,623) and Phase II (799) awards have been made.
- Minority/ disadvantaged firms have received 354 awards, representing

10.3 percent of all STTR awards. The value of these awards is \$68.3 million, representing 10.5 percent of all dollars awarded under the program.

- Awards have been made to firms in all 50 states, Puerto Rico and the District of Columbia.

FY 2003 STTR Research Institutions

State	RI Type	RI Name
Alabama	University	University of Alabama (7)
Arkansas	University	University of Arkansas
Arizona	University	University of Arizona
	University	Arizona State University
California	University	University of California (29)
	University	Stanford University (11)
	University	California Institute of Technology (3)
	FFRDC	Jet Propulsion Laboratory (4)
	FFRDC	Lawrence Berkley National Laboratory (4)
	FFRDC	Lawrence Livermore National Laboratory (2)
	Other	Stanford Research Institute (3)
	Other	Children's Hospital
	Other	Stanford Linear Technology
	Other	La Jolla Bioengineering Institute
Colorado	University	University of Colorado (7)
	University	Air Force Academy (2)
	University	Colorado School of Mines
Connecticut	University	University of Connecticut
	University	Yale University (2)
	Other	Institute for Community Research
Delaware	University	University of Delaware (5)
	Other	Alfred I. Dupont Hospital for Children
District of Columbia	University	Georgetown University (2)
	University	George Washington University
	Other	Federation of American Scientists
Florida	University	University of Florida (9)
	University	University of Central Florida (6)
	University	Florida Institute of Technology (3)
	University	University of South Florida (2)
	University	Florida International University
	University	Florida State University
	Other	Foundation for Applied Molecular Evolution
	Other	Florida Environmental Research Institute
Georgia	University	University of Georgia (2)
	University	Emory University (3)
	University	Georgia Institute of Technology (11)
Iowa	University	University of Iowa (3)
	University	Iowa State University
Idaho	University	University of Idaho
Illinois	University	University of Illinois (6)
	University	Illinois Institute of Technology
	University	Northern Illinois University (6)
Indiana	University	University of Indiana (3)
	University	University of Notre Dame (2)
	University	Purdue University
Kansas	University	University of Kansas
	University	Wichita State University
Kentucky	University	University of Kentucky (4)
Louisiana	University	Louisiana State University (3)

	University	University of New Orleans (2)
	University	Southeastern Louisiana University
	University	University of Louisiana Lafayette
	University	Tulane University
Massachusetts	University	University of Massachusetts (6)
	Other	McLean Hospital (2)
	University	Boston University (6)
	University	Massachusetts Institute of Technology (10)
	University	Harvard (2)
	Other	Massachusetts General Hospital (3)
	Other	Brigham and Women's Hospital
	Other	Dana-Farber Cancer Institute
	Other	Forsythe Institute
	Other	Whitehead Institute for Biomedical Research
	University	Tufts University (3)
	University	Wheaton College
	University	Springfield College (2)
	Other	Marine Biological Laboratory
	University	Worcester Polytechnic Institute (3)
Maryland	University	Johns Hopkins University (10)
	University	University of Maryland (6)
	Other	Battelle Memorial Institute
Michigan	University	University of Michigan (4)
	University	Michigan State University (2)
	University	Oakland University
	Other	Michigan Molecular Institute
Minnesota	University	University of Minnesota (8)
	Other	Adventum Laboratories
Missouri	University	University of Missouri (2)
	University	St. Louis University
Mississippi	University	University of Mississippi (2)
Montana	University	University of Montana
	University	Montana State University (4)
North Carolina	University	University of North Carolina (3)
	Other	Carolinas Medical Center
	University	Duke University (2)
	University	North Carolina State University (4)
	University	Wake Forest University
North Dakota	University	North Dakota State
	University	University of North Dakota
Nebraska	University	University of Nebraska (2)
	Other	Boys Town National Research Hospital
New Hampshire	University	Dartmouth (3)
New Jersey	Other	Stevens Institute of Technology
	University	Rutgers University (2)
	University	New Jersey Institute of Technology
	University	University of Medicine & Dentistry of New Jersey
	University	Stevens Institute of Technology (2)
	University	Princeton (4)
New Mexico	University	University of New Mexico (4)
	FFRDC	Sandia National Laboratories (2)
	FFRDC	Los Alamos National Laboratory
	University	New Mexico State University
New York	University	State University of New York (6)
	University	University of Buffalo
	University	Cornell University (4)
	Other	New York State Psychiatric Institute

	Other	New York Eye and Ear Infirmary
	Other	American Council for Drug Education
	University	University of Rochester
	University	Syracuse University (5)
	University	Pace University
	University	United States Military Academy
	University	Rensselaer Polytechnic Institute (4)
	FFRDC	Brookhaven National Laboratory
Ohio	University	University of Akron
	University	Ohio University (2)
	Other	Cleveland Clinic Foundation
	Other	Edison Welding Institute
	University	Case Western Reserve (2)
	University	Ohio State University (9)
	University	Kent State University
	University	University of Dayton (5)
	University	Wright State University (4)
	University	Cleveland State University
	University	University of Toledo
	University	University of Cincinnati
Oklahoma	University	University of Oklahoma
	Other	Oklahoma Medical Research Foundation
	University	Oklahoma State University (2)
Oregon	University	Oregon State University (3)
	University	Oregon Health and Science University (4)
Pennsylvania	University	Lehigh University (3)
	University	University of Pennsylvania (7)
	Other	Fox Chase Cancer Center
	University	University of Pittsburgh (5)
	University	Carnegie-Mellon University (6)
	University	Antelope Valley College
	University	Pennsylvania State University (15)
Rhode Island	University	University of Rhode Island (2)
South Carolina	University	Clemson University (5)
	University	University of South Carolina
South Dakota	University	University of South Dakota
Tennessee	University	Tennessee Technological University
	University	University of Tennessee (3)
	University	Vanderbilt University (4)
	FFRDC	Oak Ridge National Laboratory (4)
Texas	University	University of Texas (14)
	University	Texas A&M University (5)
	University	Rice University (4)
	University	Baylor University (2)
	University	Texas Tech
	Other	Southwest Research Institute
Utah	University	University of Utah (2)
	University	Brigham Young University
Virginia	University	Virginia Tech (14)
	University	University of Virginia
	University	George Mason University (4)
	University	Old Dominion University (3)
	University	Virginia Commonwealth University (3)
Vermont	University	University of Vermont
Washington	University	University of Washington (3)
	FFRDC	Battelle Pacific Northwest National Laboratory (2)
West Virginia	Other	Institute for Scientific Research

Wisconsin	University	University of Wisconsin (9)
Wyoming	University	University of Wyoming (3)

FY 2003 STTR Phase I Awardees

Alabama

Alabaster

Avanti Polar Lipids, Inc.

Birmingham

Tranzyme, Inc.

Huntsville

Plasma Processes, Inc.
Phase IV Systems, Inc.
CFD Research Corp. (5)

Madison

John Tiller

Arizona

Chandler

Crawdad Technologies, L.L.C.

Phoenix

Lytek Corp.

Scottsdale

Zona Technology Inc.

Tucson

Ogden Engineering & Assoc., LLC
Advanced Ceramics Research, Inc. (2)
Materials&Electrochemical Research Co. (3)
Niadyne, Inc.
Acenta Discovery, Inc.

Arkansas

Fayetteville

Vegrandis, LLC
Nanomech Corporation

California

Altadena

Parasym

Apple Valley

Eddy Company

Brea

Paulsson Geophysical Services, Inc. (2)

Costa Mesa

AVYD Devices, Inc.
Irvine Sensors Corp.

Davis

Net Squared, Inc.

Hercules

HTD Biosystems, Inc.

Inglewood

Foam Matrix, Inc.

Irvine

Waveband Corp.

La Jolla

Seashell Technology LLC (2)
Applied Tissue And Materials, Inc.
Ansata Therapeutics, Inc.

Los Angeles

IA Tech, Inc.
Hexagon Interactive, Inc.

Moffett Field

Realtime Methods

Monrovia

Cal Nova Tech, Inc.

Mountain View

Nielsen Engineering & Research, Inc.

Pasadena

Cyrano Sciences, Inc.

Emerald Events, Inc.

Pomona

Sysense Corp.

Redwood City

Realistic Dynamics, Inc.
Panomics, Inc.

Richmond

Microassembly Technologies, Inc.

Rolling Hills Estates

Advanced Engineering Solutions

Rosamond

W. E. Research LLC (2)

San Diego

Mitokor, Inc.
Surface Optics Corp.
Quantum Applied Science & Research, Inc.
Ultraviolet Sciences, Inc.

San Francisco

International Frontier Science Organization

San Jose

Immersion Corp.

Santa Clara

HPS Simulations
Altex Technologies Corp.

Saratoga

Calabazas Creek Research, Inc.

Sherman Oaks

Arete Assoc.

South San Francisco

Biospect, Inc.

Stanford

Ophus

Sun Valley

Powdermet, Inc.

Sunnyvale

Intelligent Inference Systems Corp.
SC Solutions
Cepheid
Advanced Genetic Systems
Picarro, Inc.
Memx, Inc.

Torrance

ACTA, Inc. (2)
Nextgen Aeronautics

Victorville

Exquadrum, Inc.

Colorado

Boulder

Extreme Diagnostics, Inc.
Knowledge Analysis Technologies, LLC.
Optek Systems, Inc.
Develosoft Corp.
Droplet Measurement Technologies
Vexcel Corp

Colorado Springs

Navsys Corp.
DES

Denver

Vescent Photonics

Fort Collins

Kaufman & Robinson, Inc.

Lafayette

Composite Technology Development, Inc.

Littleton

Perceptek
ITN Energy Systems Incorporated

Louisville

RxKinetix, Inc.

Westminster

ALD Nanosolution, Inc. (2)

Wheat Ridge

TDA Research, Inc. (2)

Connecticut

Danbury

Fuelcell Energy, Inc.

Monroe

Materials Technologies Corp.

New Haven

L2 Diagnostics, LLC

Shelton

Medergy, Inc.

Waterford

Sonalysts, Inc.(2)

Delaware

Newark

EM Photonics, Inc.
Agoranet, Inc.

District of Columbia

Synergene Therapeutics, Inc.

Florida

Alachua

Somatocor Pharmaceuticals, Inc. (3)

Gainesville

Interdisciplinary Consulting Corp.
Hypercube
New Era Technology

Melbourne

AET, Inc.
Security Innovation, LLC

Orlando

Rini Technologies, Inc.

Sarasota

Guardian Solutions

St. Petersburg

Custom Manufacturing & Engineering, Inc.

Tampa

Saneron Ccel Therapeutics, Inc.

Georgia

Atlanta

Microcoating Technologies, Inc.
Cermet, Inc.(2)
Innovative Fluidics, Inc.
Global Technology Connection, Inc.
Microcoating Technologies, Inc.
VT Silicon, Inc.
Vivonetics

Decatur

Virtually Better, Inc.

Dunwoody

Transfusion and Transplantation Technology

Idaho

Troy

Manning Applied Technology

Illinois

Batavia

Muons, Inc.

Champaign

Ini Power Systems, Inc.
Computerized Medical Systems, Inc.

Evanston

Ziena Optimization Inc.

Rosemont

IBEX Healthdata Systems

Urbana

CU Aerospace LLC

Indiana

Bloomington

Parttec, Ltd.

West Lafayette

In Space, L.L.C.
Endocyte, Inc.

Iowa

Webster City

Interactive Medical Development, LLC

Kentucky

Lexington

Cardiojustable, LLC
Naprogenix, Inc.

Louisiana

New Orleans

Omni Technologies, Inc.

Maryland

Annapolis

Embedded Research Solutions, LLC

Arnold

Info-Ops / Infoassure, Inc.

College Park

Anthrotronix, Inc.

Havre De Grace

CCL Biomedical, Incorporated

Lanham

Techno-Sciences, Inc. (3)

Rockville

Intelligent Automation, Inc. (5)

Silver Spring

Simquest International, Inc.

Timonium

Biomed Innovations, LLC

Massachusetts

Andover

Physical Sciences, Inc. (2)
Research Support Instruments

Bedford

Eukarion, Inc. (2)

Belmont

Praxis, Inc.
Natural Pharmacia International, Inc.

Beverly

Seafire Micros, Inc.

Boston

Nanopharma, Corporation

Brookline

Boston Array Technology

Burlington

Mayflower Communications Company, Inc.
Alphatech, Inc.

Cambridge

Charles River Analytics, Inc. (2)
Metis Design Corp. (2)
Genetix Pharmaceuticals, Inc.
Molecular Insight Pharmaceuticals, Inc.
Biostream Therapeutics, Inc.

Chelmsford

Lutronics Inc.
Triton Systems, Inc. (2)

Framingham

GTC Biotherapeutics, Inc.

Lexington

EXA Corporation

Mansfield

Boston Applied Technologies, Inc.

Natick

Busek Co., Inc.

Newton

Gene Regulation Laboratories

Norwood

EIC Laboratories, Inc.

Somerville

Sensimetrics Corp.
Science Research Laboratory, Inc.

Walpole

Migma Systems, Inc. (2)

Waltham

Foster-Miller, Inc. (3)

Watertown

Energid Technologies

Wilbraham

Virtual Brands (2)

Woburn

Magnolia Optical Technologies, Inc.
Scientific Systems Company, Inc.
Agiltron Corp.
Aptima, Inc.
Kazak Composites, Inc.
Boston Applied Technologies, Incorporated
Scientific Systems Co Inc

Woods Hole

Biocurrents Research, Inc.

Michigan

Ann Arbor

Electrodynamic Applications, Inc.
Intelligent Prosthetic Systems

Ferndale

Thermal Wave Imaging, Inc.

Grosse Ile

The Technology Partnership

Minnesota

Arden Hills

Audiology, Inc.

Eden Prairie

Architecture Technology Corp.

Minneapolis

Red Wing Technologies, Inc.

Mississippi

Oxford

Elsohly Laboratories, Inc.

Starkville

MPI Software Technology, Inc.

Missouri

Columbia

Renewable Alternatives, LLC

St. Louis

Virrx, Inc.

Montana

Bozeman

Golden Helix, Inc.
Hylitech
ADVR Inc

Butte

MSE Technology Applications, Inc.

Nebraska

Omaha

Sonicom, Inc.

Nevada

Carson City

Sierra Engineering, Inc. (2)

Las Vegas

First American Scientific Corporation

New Hampshire

Nashua

Create, Inc.

Hanover

Scientific Solutions, Inc.

New Jersey

Monmouth Junction

Princeton Scientific Instruments, Inc. (2)

Newark

Nanomedica, Inc.

North Brunswick

Access Bio, Inc.

Parsippany

Mechanical Solutions Inc

Pine Brook

CF Technologies, Inc.

Piscataway

Structured Materials Industries, Inc.

Princeton

Sovoz, Inc.

New Mexico

Albuquerque

Management Sciences, Inc.
Dominca
TPL, Inc.

Ranchos De Taos

Nukove Scientific Consulting, LLC

Santa Fe

Southwest Sciences, Inc.

New York

Albany

Precision Magnetic Bearing Systems, Inc.

Brewster

Nano Science Diagnostics, Inc.

Clifton Park

Kitware, Inc.

Cortland

Ithaca Mechanical Systems Corp.

Glen Head

Nirx Medical Technologies, LLC

Harford

Clear Science Corp.

Hauppauge

Advanced Acoustic Concepts, Inc.

Hawthorne

Anvik Corporation

Ithaca

-9 2 -6.LLC

Long Island City

Voicemethods LLC

New York

Callisto Pharmaceuticals, Inc.

Rochester

Impact Technologies, LLC (2)

Stony Brook

Vitatex, Inc.

Syracuse

Orthosystems, Inc.
Advanced Resonance Technologies, Inc

Tonawanda

Integument Technologies, Inc.

Westbury

Ala Scientific Instruments, Inc.

North Carolina

Brevard

Pharmagra Labs, Inc.

Cary

Engineous Software

Charlotte

Breathquant Medical Systems, Inc.

Durham

Nekton Research LLC
Williams Lifeskills, Inc.
Pyramis Studios, Inc.

Greensboro

Tanglewood Research, Inc. (2)

Raleigh

Center Line Productions

North Dakota

Grand Forks

Denet Labs LLC

Ohio

Akron

Creative Action, Inc.

Beavercreek

Thot, Ltd.
Defense Research Assoc., Inc.

Cincinnati

Pegasus Technical Services, Inc.
Technosoft, Inc.

Clayton

Faraday Technology Inc

Cleveland

Ridgeway Biosystems, Inc.

Columbus

Srico, Inc.
Aetion Technologies LLC
Deca-Medics
Oncoimmune, Ltd
Sensirox, Inc.

Dayton

UES, Inc.
Innovative Scientific Solutions, Inc.
MTL Systems, Inc.
Innovative Scientific Solutions, Inc.
Cornerstone Research Group, Inc.

Dublin

Applied Engineering Solutions, LLC

Euclid

Powdermet, Inc.

Rocky River

Sensor Development Corporation

Springfield

Cobalt Solutions, LLC

Troy

Hyper Tech Research, Inc. (2)

Washington Township

Automation, Integration of Information & Sy

Oklahoma

Oklahoma City

JK Autoimmunity, Inc.

Stillwater

Nomadics, Inc.

Oregon

Tigard

Sunset Laboratory, Inc.
Virogenomics, Inc. (3)

Wilsonville

Chinook Power Technologies LLC (2)

Pennsylvania

Allison Park

Pulsemetrics, LLC

Bethel Park

Digimmune Corporation

Blue Bell

Imaging Microsensors, Inc.

Collegeville

Advanced Fibers & Powders, LLC (2)

Huntingdon Valley

Immunicon Corporation

Irwin

Extrude Hone Corp.

Lower Gwynedd

Chi Systems, Inc. (2)

McMurray

Biosafe, Inc.

North Huntingdon

Nanomat, Inc.

Philadelphia

Integral Molecular

Pittsburgh

Agentase LLC
Fluorous Technologies, Inc. (2)

Radnor

Yaupon Therapeutics, Inc. (2)

State College

KCF Technologies, Inc.
TRS Ceramics, Inc.

Williamsport

Qortek, Inc.

Rhode Island

Middletown

KVH Industries, Inc.
Marine Acoustics, Inc. (2)

South Carolina

Columbia

Sensor Electronic Technology, Inc.

South Dakota

Sioux Falls

South Dakota Health Technology
Innovations, Inc.

Tennessee

Cookeville

Flexial Corp.

Franklin

Arthrochip, LLC

Memphis

Greystone Medical Group, Inc.
GTX, Inc. (2)

Texas

Austin

Nanohmics, Inc.(2)
Innovalight, Inc.
Koo & Assoc. International, Inc.

College Station

Lynntech, Inc. (2)

Dallas

Marlow Industries, Inc.
Custom Scientific

Fort Worth

Williams-Pyro, Inc. (2)

Houston

GTL Technologies, Inc.
Nanospectra Biosciences, Inc.(3)
Inflame Therapeutics, Inc.

Lasergen
Atactic Technologies, Inc.

Missouri City

General Vortex Energy, Inc.

Palestine

Product Concept Development, Inc.

Plano

Asier Technology Corp.

Rockwall

Global Contour, Inc. (2)

San Antonio

E-Spectrum Technologies, Inc.

Smithville

Dermigen, Inc.

Utah

Orem

Apollo Light Systems, Inc.

Provo

Larson Davis, Inc.

Virginia

Arlington

Management Communications & Control
Inc.
Information Extraction & Transport, Inc.

Ashburn

Aeroastro Corp

Blacksburg

Luna Innovations, Inc. (2)
Technology in Blacksburg, Inc.

Charlottesville

Barron Assoc., Inc. (2)

Christiansburg

Nanosonic, Inc.

Dulles

Cigital, Inc.
Edenspace Systems Corporation

Fairfax

Center for Remote Sensing, Inc.
Materials Modification, Inc.
Microwave Technologies, Inc.
Materials Modification, Inc.

Glen Allen

Sentor Technologies, Inc.

Herndon

21st Century Systems, Inc.
Focus/MRL, Inc.-MRL Pharmaceutical Svcs

Radford

Brontek Delta Corp.

Reston

Objectvideo
Planning Systems, Inc.

Roanoke

Blue Ridge NCA Corp.

Sterling

Astron Antenna Co.

Vienna

Tecsec, Inc.

Washington

Bothell

Aculight Corp.

Kennewick

Vista Engineering Technologies, LLC

Kirkland

Stirling Dynamics Inc

Lynnwood

Tethers Unlimited

Olympia

Barlow Scientific, Inc.

Richland

Yahsgs LLC

Seattle

Isotron Corp.
Dentigenix (2)
Insilicos LLC

Wisconsin

Madison

Stratatech Corporation

Virent Energy Systems LLC
Stress Photonics Inc
Genetic Assemblies, Inc.
Orbital Technologies Corp (2)

Wyoming

Laramie

Firehole Technologies
CC Technology, Inc.

Powell

Drakon Energy LLC

FY 2003 STTR Phase II Awardees

Alabama

Huntsville

CFD Research Corp.

Arizona

Tucson

Advanced Ceramics Research, Inc.

California

Berkeley

Imagize LLC

Carlsbad

Luxtera, Inc.

Fountain Valley

Hybrid Plastics

Glendale

Physical Domains

Goleta

Toyon Research Corp.

La Jolla

Molsoft, LLC

Mojave

Xcor Aerospace, Inc.

Mountain View

CSA Engineering, Inc.
Fakespace Labs, Inc.

Pacoima

Ultramet

San Diego

Sabia, Inc.

Sequoia Sciences

Santa Ynez

Pacific Advanced Technology

Tarzana

IRI Computer Communications Corp.

Thousand Oaks

Monopole Research

Torrance

DBC Technology Corp.

Colorado

Centennial

Seakr Engineering, Inc

Connecticut

Danbury

Fuelcell Energy, Inc. (2)

East Hartford

Advanced Fuel Research, Inc.

Florida

Gainesville

New Era Technologies, Inc.

Sarasota

Medical Education Technologies, Inc.

Georgia

Atlanta

Cermet, Inc.

Dunwoody

Transfusion and Transplantation Technology

Illinois

Batavia

Muons, Inc.

De Kalb

Psytec Corporation

Evanston

MP Technologies, LLC

Niles

Microlink

Kansas

Lawrence

K. Wetzel & Company

Louisiana

New Orleans

St. Charles Pharmaceuticals

Maine

Freeport

Sea Run Holdings, Inc.

Maryland

Bethesda

Bio-Brite, Inc.

Columbia

Interface & Control Systems, Inc

Rockville

Intelligent Automation, Inc.

Silver Spring

Simquest International LLC

Massachusetts

Belmont

Praxis, Inc.

Billerica

Aerodyne Research, Inc.

Cambridge

Crosslink Genetics Corporation
Charles River Analytics, Inc.

Chelmsford

Triton Systems, Inc.
Sensera, Inc.

Lexington

Nascent Technology Corp.

Lowell

Konarka Technologies, Inc.

Newton

Giner Electrochemical Systems, LLC

North Falmouth

Benthos, Inc.

Norwood

EIC Laboratories, Inc.

Waltham

Foster-Miller, Inc.

Woburn

Kazak Composites, Inc.

Worcester

Insight Neuroimaging Systems, Inc.

Michigan

Ann Arbor

MC3, Inc.
EMAG Technologies, Inc.

Midland

Oxazogen, Inc.

Port Huron

Tel Med Technologies

Minnesota

Arden Hills

Audiology, Inc.

Brooklyn Center

Polychrome Medical, Inc.

Eden Prairie

NVE Corp.

Northfield

Speechgear, Inc.

Montana

Belgrade

Transwesttech

Townsend

PFM Manufacturing, Inc.

New Hampshire

Hanover

Creare, Inc.

Manchester

Cryo Industries of America, Inc.

New Jersey

Berkeley Heights

RJM Semiconductor, L.L.C.

South Plainfield

PTC Therapeutics, Inc.

New Mexico

Albuquerque

Intellite
Management Sciences, Inc.

New York

Albany

Mohawk Innovative Technology, Inc.

Clifton Park

Simmetrix, Inc.

Dix Hills

Bethpage Technologies, Inc.

Harford

Clear Science Corp.

Lansing

Advanced Design Consulting, Inc.

Middle Island

Heat Wise Inc.

New York

Opticology, Inc.

Schenectady

Solidus Biosciences, Inc.

Setauket

Pixon LLC

Vestal

Soft Sight, Inc.

North Carolina

Charlotte

Flying Bridge Technologies

Raleigh

Geophex Ltd.
Barr-Mullin Inc.

Ohio

Bay Village

Millennia Ceramics, Inc.

Columbus

Weldware, Inc.

Dayton

IAP Research, Inc.
Cornerstone Research Group, Inc.

Dublin

Applied Engineering Solutions, LLC

Oklahoma

Stillwater

Nomadics, Inc. (3)

Pennsylvania

Pittsburgh

Maya Viz

Tennessee

Knoxville

RIS Corp.

Texas

Austin

Xidex Corp.

Houston

Mecom, Inc.
Introgen Therapeutics, Inc.

Sweetwater

Ludlum Measurements, Inc.

Utah

Salt Lake City

Axon Medical Inc

Vermont

Burlington

Healthsim, Inc.

Virginia
Alexandria

Mirum Corp.

Blacksburg

Luna Innovations, Inc. (4)
Techsburg, Inc.

Christiansburg

Nanosonic, Inc.

Fairfax

Cougaar Software, Inc.

Manassas

Airak, Inc.

McLean

Innovative Concepts, Inc.

Reston

Nvis, Inc.

Williamsburg

Tao of Systems Integration, Inc.

Washington

Kennewick

Vista Engineering Technologies, LLC

Vancouver

Microenergy Technologies, Inc.

West Virginia

Triadelphia

Touchstone Research Laboratory, Ltd.

STTR Program Data - Fiscal Year 2003

AGENCY OBLIGATIONS	DOD	NSF	DOE	NASA	HHS	TOTAL
AGENCY EXTRAMURAL BUDGET	33,039,916,901	3,430,000,000	3,768,058,000	4,179,000,000	21,003,000,000	65,419,974,901
AGENCY STTR BUDGET	48,946,842	5,147,000	5,652,087	6,400,000	31,511,000	97,656,929
DOLLARS OBLIGATED	47,554,105	6,134,634	5,659,135	6,321,102	30,996,577	96,665,553
% OF EXTRAMURAL BUDGET	0.14%	0.18%	0.15%	0.15%	0.15%	0.15%
DEFICIT/SURPLUS	-1,392,737	987,634	7,048	-78,898	-514,423	-991,376
STTR AWARD PROFILE - COMMITMENTS						
TOTAL PHASE I AWARDS	225	31	12	25	104	397
MINORITY DISAD. PHASE I AWARDS	32	2	1	3	1	39
TOTAL PHASE II AWARDS	67	6	11	9	18	111
MINORITY/DISAD. PHASE II AWARDS	2	0	0	1	0	3
TOTAL PHASE I DOLLARS AWARDED	19,128,592	3,092,467	1,180,995	2,497,748	15,235,425	41,135,227
MIN/DISAD. PHASE I DOLLARS AWARDED	2,714,074	199,985	100,000	299,932	158,980	3,472,971
TOTAL PHASE II DOLLARS AWARDED	23,571,414	3,042,167	4,478,140	3,823,354	15,761,152	50,676,227
MIN/DISAD. PHASE II DOLLARS AWARDED	970,398	0	0	499,917	0	1,470,315
TOTAL PHASE I & II AWARDED	42,700,006	6,134,634	5,659,135	6,321,102	30,996,577	91,811,454
AVERAGE AMOUNT PHASE I AWARDS (\$)	85,016	99,757	98,416	99,909	146,494	103,615
STTR SOLICITATION PROFILE						
NO. OF SOLICITATIONS RELEASED	1	1	1	1	1	5
NO. OF RESEARCH TOPICS	92	4	47	9	120	272
NO. PHASE I PROPOSALS RECEIVED	997	151	225	45	390	1,808
NO. PHASE II PROPOSALS RECEIVED	130	14	16	18	54	232
RESEARCH INSTITUTION PROFILE						
NUMBER OF FFRDCS	8	0	9	2	0	19
NUMBER OF UNIVERSITIES	273	37	14	30	118	472
NUMBER OF OTHER NON-PROFIT	11	0	0	2	37	50

STTR Program Data - Fiscal Year 2003

	DOD	NSF	DOE	NASA	HHS	TOTAL
COOPERATIVE RESEARCH PROFILE						
TOTAL DOLLARS OF AWARDS	42,700,006	6,134,634	5,659,135	6,321,102	30,996,577	91,811,454
DOLLARS TO SMALL BUSINESS	33,480,193	3,651,890	4,881,723	4,247,972	16,969,235	63,231,013
DOLLARS TO RESEARCH INSTITUTION	20,118,288	2,224,244	2,490,914	2,732,722	13,659,026	41,225,194
NO. OF AWARDS TO UNIVERSITIES	273	37	14	30	118	472
DOLLARS TO UNIVERSITIES	18,364,385	2,224,244	1,670,168	2,326,165	10,230,121	34,815,083
NO. OF AWARDS TO FFRDCS	8	0	9	2	0	19
DOLLARS TO FFRDCS	861,086	0	820,746	269,251	0	1,951,083
NO. OF AWARDS TO OTHER NON-PROFITS	11	0	0	2	37	50
DOLLARS TO OTHER NON-PROFITS	892,814	0	0	137,306	3,428,905	4,459,025
PHASE I						
NUMBER OF FFRDC AWARDS	6	0	6	1	0	13
NUMBER OF UNIVERSITY AWARDS	212	31	6	24	80	353
NO. OF OTHER NON-PROFIT AWARDS	7	0	0	0	24	31
TOTAL DOLLARS OF AWARDS	19,128,592	3,092,467	1,180,995	2,497,748	15,235,425	41,135,227
DOLLARS TO SMALL BUSINESS	11,221,311	1,776,943	778,581	1,423,716	8,053,181	23,253,732
DOLLARS TO RESEARCH INSTITUTIONS	7,451,110	1,115,566	402,414	1,074,032	7,099,510	17,142,632
NO. OF AWARDS TO UNIVERSITIES	212	31	6	24	80	353
DOLLARS TO UNIVERSITIES	7,019,148	1,115,566	215,168	1,034,032	5,463,896	14,847,810
NO. OF AWARDS TO FFRDCS	6	0	6	1	0	13
DOLLARS TO FFRDCS	215,616	0	187,246	40,000	0	442,862

	DOD	NSF	DOE	NASA	HHS	TOTAL
NO. OF AWARDS TO OTHER NON-PROFITS	7	0	0	0	24	31
DOLLARS TO OTHER NON-PROFITS	216,345	0	0	0	1,635,614	1,851,959
PHASE II						
NUMBER OF FFRDCS	2	0	3	1	0	6
NUMBER OF UNIVERSITIES	61	6	8	6	38	119
NUMBER OF OTHER NON-PROFIT	4	0	0	2	13	19
TOTAL DOLLARS OF AWARDS	23,571,414	3,042,167	4,478,140	3,823,354	15,761,152	50,676,227
DOLLARS TO SMALL BUSINESS	22,258,882	1,874,947	4,103,142	2,824,256	8,916,054	39,977,281
DOLLARS TO RESEARCH INSTITUTIONS	12,667,178	1,108,678	2,088,500	1,658,690	6,559,516	24,082,562
NO. OF AWARDS TO UNIVERSITIES	61	6	8	6	38	119
DOLLARS TO UNIVERSITIES	11,345,237	1,108,678	1,455,000	1,292,133	4,766,225	19,967,273
NO. OF AWARDS TO FFRDCS	2	0	3	1	0	6
DOLLARS TO FFRDCS	645,470	0	633,500	229,251	0	1,508,221
NO. OF AWARDS TO OTHER NON-PROFITS	4	0	0	2	13	19
DOLLARS TO OTHER NON-PROFITS	676,469	0	0	137,306	1,793,291	2,607,066

FY 2003 dollars obligated include modifications to previous year's awards for DOD (\$4,854,099)