

SBA

U.S. Small Business Administration

S MALL **B** USINESS

T ECHNOLOGY

T RANSFER **P** ROGRAM

(STTR)

ANNUAL REPORT - FY 2002

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

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*I*ntroduction

This is the ninth 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 2002.



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 General Accounting Office, Public Law 102-564 was passed by the Congress. 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, Title II of the Act established the STTR program.

The STTR program shares the underlying philosophy of the SBIR program. It targets 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 authorizing the STTR program for fiscal years 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, 2002. In October 2002, Public Law 107-50 reauthorized the STTR program through FY 2009 and increased the program set-aside from .15 to .30 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; and
- Not less than 0.15 percent of such budget through fiscal year 2003.
- 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 approved both model agreements.

Small businesses are required to negotiate agreements with research institutions, but they are not required to use the model agreements. Rather, 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 statute also 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

As set forth in Public Law 102-564, 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.



Small Business Administration

Public Law 102-564 designates 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. 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.
5. 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.
6. Independently survey and monitor the operation of STTR programs within participating Federal agencies.
7. Report not less than annually to the Congress on the STTR programs of the Federal agencies.
8. Consult, cooperate, perform studies, and make recommendations to Federal Government agencies.

9. Consult with representatives of small business to assist and encourage such firms to undertake joint programs for research and development.



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.



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 9th Year - FY 2002

Public Law 102-564, as amended, provides 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 2002 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.

In fiscal year 2002, the participating agencies had the following solicitation periods:

- Department of Defense - January 2, 2002, through April 17, 2002.
- Department of Energy – October 15, 2001, through January 15, 2002.
- Department of Health and Human Services - January 2002 with closings April 1, August 1 and December 1, 2002.
- National Aeronautics and Space Administration – June 6, 2002, through August 21, 2002.
- National Science Foundation – March 1, 2001, with closings June 12, 2001, and January 17, 2002.



Award Obligation Requirements

Program policy required participating agencies to expend on STTR awards not less than 0.15 percent of their fiscal year 2002 development. In fiscal year 2002, \$87,469,433 should have been obligated program-wide to meet this requirement; however, actual obligations were \$95,806,429 exceeding the requirement by 1.09 percent.



Small-Business Participation

During FY 2002, small businesses submitted 1,523 proposals under the

STTR program, including 1,289 Phase I proposals and 234 Phase II proposals. A total of 470 awards were made, including 356 Phase I awards and 114 Phase II awards. Awards were made to 375 small businesses. In FY 2002, total STTR program obligations were \$95,806,429. Small business received \$55,415,501 or 57 percent of total funding. Research institutions received \$38,004,766 or 39 percent.



Minority and Disadvantaged Firms

Of the 375 firms that successfully competed for STTR awards, 42 or 11.2 percent were firms owned by minority or disadvantaged persons. They received \$8,404,053 or 9 percent of the \$95,806,429 total obligated.



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 375 firms collaborated with 158 research institutions. Of contracts and grants awarded during the year, 399 were made to universities and colleges, 28 to federally funded research and development centers, and 30 to other non-profit research institutions. The research institutions were located in 44 states, the District of Columbia and Puerto Rico.

**Table 1: Number of STTR Awards --
FY 1994 through FY 2002**

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
Total	2,226	688	2,914

**Table 2: Value of STTR Awards--
FY 1994 through FY 2002
(in thousands 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
Total	218.4	330.8	*549.2

*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 \$549 million has been awarded.
- Participating agencies received a total of 12,098 Phase I and Phase II proposals in response to 45 STTR solicitations. A total of 2,914 Phase I (2,226) and Phase II (688) awards have been made.

- Minority/ disadvantaged firms have received 312 awards, representing 10.7 percent of all STTR awards. The value of these awards is \$63.5 million, representing 11 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 2002 STTR Research Institutions

State	RI Type	RI Name
Alabama	University	University of Alabama (6)
	University	Auburn University (2)
	Other	Southern Research Institute
Arizona	University	University of Arizona (7)
	University	Arizona State University (3)
Arkansas	University	University of Arkansas (2)
California	University	Stanford University (5)
	University	University of California (36)
	FFRDC	Jet Propulsion Laboratory (7)
	FFRDC	Lawrence Berkeley Lab (2)
	Other	Pacific Northwest National Lab
	Other	Sri International (4)
	University	California Institute of Technology (3)
	University	Keck Graduate Institute (2)
	University	Naval Postgraduate School (3)
Colorado	University	University of Colorado (9)
	Other	National Renewable Energy Labs
	University	Colorado State University (2)
Connecticut	University	University of Connecticut (6)
	University	Yale University (2)

	University	Illinois Institute of Technology (3)
	University	University of Illinois (9)
	University	Rehabilitation Institute of Chicago
Indiana		
	University	University of Notre Dame (3)
	University	Indiana University (3)
	University	Purdue University (2)
Iowa		
	University	University of Iowa (2)
Kansas		
	University	Wichita State University
	University	Kansas State University (2)
Kentucky		
	University	University of Louisville (2)
	University	University of Kentucky
Louisiana		
	University	University of New Orleans
	University	Southeastern Louisiana University
Maryland		
	University	University of Maryland (7)
	University	Johns Hopkins Hospital (3)
	Other	Southern Research Institute
Massachusetts		
	University	MIT (2)
	University	Worcester Polytechnic Institute (2)
	University	Tufts University
	University	Harvard University (3)
	University	Boston University (4)
	University	Northeastern University
	University	University Massachusetts (3)
	Other	Beth Israel Deaconess Medical Center (2)
	University	Natural Pharmacia International
Michigan		
	University	University of Michigan (9)
	University	Wayne State University (3)

	University	Michigan Technological University
	University	Kettering University
Minnesota		
	University	University of Minnesota (8)
	Other	Mayo Clinic (2)
Mississippi		
	University	Mississippi State University
	University	University of Mississippi (2)
Missouri		
	University	University of Missouri (2)
	University	St. Louis University
Montana		
	University	Montana State University
New Hampshire		
	University	University of New Hampshire
	Other	Autonomous Undersea Sys., Inc.
New Jersey		
	University	Princeton University (4)
	University	University of Medicine & Dentistry (3)
	University	New Jersey Institute of Technology
	University	Rutgers University
New Mexico		
	FFRDC	Los Alamos National Laboratory (2)
	University	University of New Mexico
	FFRDC	Sandia National Laboratories
New York		
	University	University of Rochester (4)
	Other	Roswell Park Cancer Institute (2)
	University	Rensselaer Polytechnic Institute (2)
	University	Alfred University
	University	Weill Medical College-Cornell University
	University	SUNY (3)
	University	Cornell University (7)
	FFRDC	Brookhaven National Laboratory
North Carolina		
	University	North Carolina State (7)

University	Clemson University (3)
University	North Carolina A&T State University
University	University of North Carolina (5)
University	East Carolina University
University	Duke University

Ohio

University	Ohio State University (6)
University	University of Cincinnati (4)
University	Case Western Reserve University (3)
University	Youngstown State University
University	University of Dayton (5)
Other	Cleveland Clinic Foundation
University	University of Akron
Other	Children's Hospital Medical Center
Other	National Composite Center

Oklahoma

University	University of Oklahoma
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Oregon

University	Oregon State University
University	Oregon Health & Science University
University	Oregon Research Institute
University	University of Oregon

Pennsylvania

University	Carnegie Mellon University (2)
University	University of Pittsburgh (3)
Other	Concurrent Technologies Corporation
University	Lehigh University (2)
Other	Rockland
University	Penn State University (6)
Other	Western Pennsylvania Hospital
University	University of Pennsylvania (4)
University	Thomas Jefferson University
University	Villanova University

Rhode Island

University	Brown University (2)
University	University of Rhode Island (2)

South Carolina

University

University of South Carolina (3)

South Dakota

University

S.D. School of Mines & Technology (2)

University

University of South Dakota

Tennessee

FFRDC

Oak Ridge National Laboratory (6)

University

University of Memphis

University

University of Tennessee (4)

University

Vanderbilt University (3)

Texas

Other

M.D. Anderson Cancer Center (2)

University

University of Texas (11)

University

Texas A&M University (5)

University

Baylor College of Medicine (2)

Other

Southwest Research Institute

University

Texas Engineering Experiment Station

Other

Foundation for Responsible Citizens

Utah

University

University of Utah (2)

University

Brigham Young University

Vermont

University

University of Vermont (2)

Virginia

University

Virginia Tech (14)

University

Eastern Virginia Medical School

University

University of Virginia (3)

University

Virginia Commonwealth University

Other

Old Dominion Research Foundation

University

College of William & Mary

University

George Mason University

Washington

FFRDC

Pacific Northwest National Laboratory (3)

University

University of Washington (4)

Wisconsin

FFRDC

Wisconsin Center for Space Automation

University

University of Wisconsin (10)

FY 2002 STTR Phase I Awardees

Alabama

Birmingham

Vaxin, Inc. (2)

Huntsville

CFD Research Corporation (2)
Shearwater Polymers, Inc.
Erc, Inc.

Arizona

Paradise Valley

Phoenix Biotech, Inc.

Phoenix

Ocis Technology

Scottsdale

Azerx, LLC

Tempe

Scientific Monitoring, Inc.

Tucson

Materials & Electrochemical Research Corporation (2)
Advanced Ceramics Research, Inc. (5)
Medical Directions, Inc.

Arkansas

Fayetteville

NanoMmaterials and NanoFabrication Laboratories

California

Agoura Hills

First Point Sci. Inc.

Altadena

Ionfinity, LLC (2)

Anaheim

RST Scientific Research, Inc.

Berkeley

Imagize LLC

Aerosol Dynamics, Inc.

Burlingame

Intermune Pharmaceuticals, Inc.

Carlsbad

Ormet Circuits, Inc.

City of Industry

Maxwell Sensors Corp.

Costa Mesa

Irvine Sensors Corp.

Dublin

Supergen, Inc.

Folsom

Wilson Composite Technologies

Glendale

Physical Domains

Goleta

Frontier Technology, Inc.
Toyon Research Corp.

Huntington Beach

Integrated Coating Solutions, Inc.

La Habra

Aeropath

Lawndale

Language Weaver

Livermore

The Fox Group, Inc.

Los Alamitos

Proactive Oral Solutions, Inc.

Los Angeles

Pivotal Biosciences

Mojave

Xcor Aerospace, Inc.

Mountain View

Fakespace Labs, Inc.
Csa Engineering, Inc. (2)
Concentric-Medical

Newport Beach

SRS Technologies

Northridge

Chemat Technology, Inc. (2)

Pacoima

Ultramet

Palo Alto

ILT Corporation DbA Think Composite

Pasadena

Tanner Research, Inc.

Luxtera, Inc.

Redwood City

CBL Technologies, Inc.

San Diego

V System Composites, Inc.

Polexis, Inc.

Information Systems Laboratories, Inc.

Surface Optics Corp.

Sabia, Inc.

Androscience Corporation

Pixon LLC

Call/Recall, Inc.

Vical, Inc.

San Dimas

Maxdem, Inc.

San Jose

Atlas Scientific

Santa Ana

Qflex, Inc.

Santa Barbara

Computational Sensors Corp.

Mission Research Corp.

Brandes Assoc., Inc.

Santa Clara

Silvaco Data Systems, Inc.

Santa Ynez

Pacific Advanced Technology

Santee

Rainmaker Technology

South San Francisco

Parallele Bioscience (2)

Sun Valley

Powdermet, Inc.

Sunnyvale

Intelligent Inference Systems Corp.
Cepheid

Tarzana

Iri Computer Communications Corp.

Thousand Oaks

Shape Change Technologies

Torrance

Opto-Knowledge Systems, Inc. (OKSI)
Waveband Corp.

Chan & Associates (2)

DBC Technology Corp.

Woodland Hills

Language Systems, Inc.

Colorado

Boulder

Gonex, Inc.

Astralux, Inc.

Tech-X Corp.

Denver

MBC Research, Inc.

Englewood

SEAKR Engineering Inc

Lafayette

Composite Technology Development, Inc.

Littleton

ITN Energy Systems, Inc.

Microsat Systems

Longmont

Nanomaterials Research Corp

Displaytech, Inc.

Westminster

Ald Nanosolutions, Inc.

Connecticut

Danbury

Fuelcell Energy, Inc. (2)

Farmington

Argus Vr International

Mystic

Madison Technology International, Ltd.

Storrs/Mansfield

Opel (2)

Delaware

Newark

EE Solutions, LLC

Wilmington

Analytical Biological Services, Inc. (2)

District of Columbia

Synergene Therapeutics, Inc.

Florida

Coral Gables

RMR Technologies, LLC

Gainesville

Sinmat, Inc.

Interdisciplinary Consulting Corp.

Lauderhill

Cyclotec Advanced Medical Technologies

Melbourne

Interface & Control Systems, Inc

Miami

New Span Opto-Technology, Inc.

Orlando

Zaubertek, Inc.

Sarasota

Medical Education Technologies, Inc.

Tampa

Micromaterials, Inc.

Titusville

Command and Control Technologies Corp.

Georgia

Atlanta

Cermet, Inc. (2)

Microcoating Technologies, Inc. (3)

Decatur

Virtually Better, Inc.

McDonough

Guided Systems Technologies, Inc.

Tucker

Pharmasset, Inc.

Hawaii

Mililani

Rainbow Farms

Illinois

Batavia

Muons, Inc.

Chicago

Nuvant Systems, LLC

Keracure

Evanston

Sixtyseven Kilohertz, Inc.

Hoffman Estates

Polium Technologies, Inc.

Niles

MicroLink

Rolling Meadows

Cythor

Urbana

CU Aerospace

Wilmette

Rehabtek, LLC

Indiana

Bloomington

Quarrymen Optical, Inc.

Greenville

Space Hardware Optimization Technology

Indianapolis

Indesign

Kansas

Lawrence

Wetzel & Company

Kentucky

Lexington

Academic Edge, Inc.

DSP Techniques, Inc.

Louisville

Intellas Group, LLC

Maine

Arundel

Sea Run Holdings, Inc.

Maryland

Silver Spring

Technologies & Devices International, Inc.

Gaithersburg

Biotech Research Laboratories (BTRL)

Lanham

Research Support Instruments (3)

Rockville

Intelligent Automation, Inc. (3)

Silver Spring

Technologies & Devices International, Inc.

Simquest International, Inc.

Massachusetts

Andover

Physical Sciences, Inc. (3)

Arlington

Nascent Technology Corp.

Bedford

Spire Corporation

Billerica

Aerodyne Research, Inc.

Burlington

Spectral Sciences, Inc.

Cambridge

Icosystem Corp.

Omniguide Communications, Inc.

Charles River Analytics, Inc.

Chelmsford

Triton Systems, Inc. (3)

Sensera, Inc.

Fall River

Emitech, Inc.

Lexington

Speech Technology/Applied Research Corp.

Lowell

Konarka Technologies, Inc.

Medfield

Yankee Scientific, Inc.

Newton

Giner Electrochemical Systems, LLC

Salisbury

Biomod Surfaces

Somerville

Molecular Mechanisms LLC

Waltham

Foster-Miller, Inc. (2)

Westford

Linden Photonics, Inc.

Winchester

Agiltron Corp. (2)

Woburn

Scientific Systems Company, Inc.

Aptima, Inc.

Cambria Biosciences, LLC

Worcester

Insight Neuroimaging Systems, Inc.

Michigan

Ann Arbor

Soar Technology, Inc.

Mc3, Inc. (2)

Emag Technologies, Inc.

Picotronix, Inc.

T/J Technologies, Inc.

Detroit

NT Two

Grosse Pointe Farms

Biomide Corporation

Port Huron

Tel Med Technologies

Minnesota

Eden Prairie

SVT Associates, Inc. (3)

NVE Corporation

Faribault

Speechgear, Inc.

Minneapolis

Avanti Optics Corp.

Mississippi

Starkville

Semisouth Laboratories

Missouri

Chesterfield

Innovative Technology Applications (2)

St. Louis

Reliable Biopharmaceutical Corporation

Montana

Bozeman

Chronochrome, Inc.

JC Nabity Lithography Sys

Ligocyte Pharmaceuticals, Inc.

Nevada

Carson City

Software and Engineering Associates, Inc

Henderson

Asi Technology Corp.

New Hampshire

Manchester

Cryo Industries Of America, Inc.

New Jersey

Bound Brook

Pilato Consulting

Lincoln Park

Kay Elemetrics Corporation

Livingston

Utility Development Corp.

Long Branch

Microsolv Technology Corporation

Mount Laurel

Liteweaver Technologies, Inc.

Piscataway

Structured Materials Industries (2)

Nanopowder Enterprises, Inc.

South Plainfield

PTC Therapeutics, Inc.

New Mexico

Albuquerque

Adherent Technologies, Inc.

Way Research, Inc.

Placitas

Electrophorics, Inc.

New York

Albany

Mohawk Innovative Technology, Inc.

Amherst

Advanced Cytometry Instrumentation Systems

Clifton Park

Simmetrix, Inc.

Cortland

Cortland Cable Company

Dix Hills

Bethpage Technologies, Inc.

Elmsford

Hypres., Inc.

Henrietta

STS Biopolymers, Inc.

Lansing

Advanced Design Consulting, Inc. (2)

Middle Island

Heat Wise Inc.

New York

Nanodynamics, Inc.

Rochester

Impact Technologies, LLC

Ronkonkoma

Advanced Acoustic Concepts, Inc.

North Carolina

Chapel Hill

Applied Nanotechnologies, Inc.

Durham

Chatham Research, Ltd

Biostratum, Inc.

Tracera, Inc.

Greensboro

Software Safety-Critical Systems, Inc

Raleigh

Hexatech (3)
Kyma Technologies, Inc.
Barr-Mullin Inc.
Geophex Ltd.

Research Triangle Park

Endacea, Inc.
Paragen

North Dakota

Fargo

Dakota Technologies, Inc. (2)

Ohio

Beavercreek

Taitech, Inc.

Cincinnati

Molecular Diagnostics Laboratories, Inc.

Cleveland

Flow-Amp Systems, Ltd

Columbus

Srico, Inc.

Nova-Ther Technologies

Dayton

Cornerstone Research Group, Inc.
Innovative Scientific Solutions, Inc.

Dublin

Applied Engineering Solutions, LLC

Stow

Catawba Resources

Troy

Global Research & Development, Inc.

Worthington

Nextech Materials, Ltd.

Oklahoma

Stillwater

Nomadics, Inc. (2)
Sciperio, Inc.

Oregon

Eugene

Iris Media, Inc.

Myrtle Creek

Umpqua Research Company

Pennsylvania

Bala Cynwyd

Octagen Corporation

Bethlehem

Serenix Pharmaceuticals, Inc.

Dublin

Combustion Research & Flow Technology, Inc.

Exton

Morphotek, Inc.

Lower Gwynedd

Chi Systems, Inc.

Malvern

Nucleonics, Inc.

North Huntingdon

Nanommat, Inc.

Pittsburgh

Chromodynamics, Inc.

Xtal Matic, Inc.

Immunetrics, Inc.

Kit Solutions, Inc.

Maya Viz

Casurgica, Inc.

South Carolina

Charleston

Organ Recovery Systems, Inc.

Mount Pleasant

Argolyn Bioscience, Inc. (2)

South Dakota

Brookings

Genetic Archit Edu Analys

Rapid City

Cynetics Corp.

Advintec, LLC

Tennessee

Knoxville

RIS Corp.
TPG Applied Technology

Nashville

Tk Tx Company (2)

Rockford

Atmospheric Glow Technologies

Texas

Austin

Innovalight, Inc.
Magellus Corp.
Xidex Corp.

Bellaire

Grassroots Pharmaceuticals, LLC

Houston

Synthecon, Inc.
Seqwright, LLC
Pharmareview Corporation
Mecom, Inc.
RosettaMed, Inc.
Cytogenix, Inc.

Plano

Microfab Technologies, Inc.

Rockwall

Twilight Training

San Antonio

Biomedical Development Corporation (2)

Sweetwater

Ludlum Measurements, Inc.

Utah

Salt Lake City

Axon Medical Inc.
Bionic
Ceramatec, Inc.

Vermont

Burlington

Healthsim, Inc.

South Burlington

Tolmie, Inc.

Virginia

Alexandria

Mirum Corp.

Arlington

System Planning Corp.

Blacksburg

Luna Innovations, Inc. (9)
Technology in Blacksburg, Inc. (2)
Prime Photonics, Inc.
Biodefense Technologies, Inc.

Charlottesville

Adenosine Therapeutics, LLC

Christiansburg

NanoSonic, Inc.

Clearbrook

Seaward International, Inc.

Dulles

Edenspace

Fairfax

Materials Modification, Inc. (2)
Cougaar Software, Inc.
Glen Allen
Sentor Technologies, Inc.

Herndon

Aeroastro, Inc. (2)
Synterials, Inc.

McLean

N-Vision, Inc.
Innovative Concepts, Inc.

Williamsburg

Tao of Systems Integration, Inc.

Washington

Bellevue

Ewing Technology Assoc., Inc.

Kennewick

Vista Engineering Technologies, LLC

Port Townsend

The Davis Nelson Company

Richland

Innovatek, Inc.

Seattle

Insightful, Inc.
Corixa Corporation

Vancouver

Microenergy Technologies, Inc.

West Virginia

Triadelphia

Touchstone Research Laboratory, Ltd.

Wisconsin

Elm Grove

Bioinnovation, LLC

Middleton

Prairie Technologies, Inc.

Wyoming

Laramie

Firehole Technologies

FY 2002 STTR Phase II Awardees

Alabama

Brownsboro

Information Systems Laboratories, Inc.

Huntsville

Alabama Cryogenic Engineering, Inc.

Time Domain Corp.

Pelham

Gem Pharmaceuticals, Inc.

Arizona

Scottsdale

Three Rivers Holdings, LLC

Tucson

Advanced Ceramics Research, Inc.

Lite Cycles, Inc.

Materials & Electrochemical Research

California

Hawthorne

Systems Technology, Inc.

Los Angeles

Technology Service Corp.

Marina del Rey

Fetch Technologies

San Diego

Orincon Corp.

Tristan Technologies, Inc.

San Leandro

AASC

Sherman Oaks

Arete Assoc.

Sun Valley

Powdermet, Inc.

Torrance

Opto-Knowledge Systems, Inc. (OKSI)

Intelligent Optical Systems, Inc.

Westlake Village

Metacomp Technologies, Inc.

Colorado

Boulder

Knowledge Analysis Technologies, LLC

Lafayette

Boulder Nonlinear Systems, Inc. (2)

Wheat Ridge

TDA Research, Inc.

Connecticut

Farmington

Us Nanocorp, Inc.

Wethersfield

Qualtech Systems, Inc.

District of Columbia

Synergene Therapeutics, Inc.

Florida

Alachua

Ixion Biotechnology, Inc.

Jacksonville

Analysis, Design & Diagnostics, Inc.

Oviedo

Zaubertek, Inc.

Georgia

McDonough

Guided Systems Technologies, Inc.

Hawaii

Honolulu

Oceanit Laboratories, Inc.

Illinois

Champaign

NPL Associates, Inc.

Chicago

Integrated Genomics, Inc.

Downers Grove

Vertec Biosolvents, Inc.

Evanston

Containerless Research, Inc.

Naperville

I.C. Gomes Consulting & Investment,

Iowa

Fairfield

Psychological Systems & Research

Kentucky

Columbia

Image Analysis, Inc.

Maine

Wiscasset

Technology Systems, Inc.

Maryland

Gaithersburg

Immersion Medical, Inc.
Verachem, LLC

Massachusetts

Andover

Physical Sciences, Inc.

Belmont

Natural Pharmacia International, Inc.

Cambridge

Pericor Science, Inc.

Chelmsford

Scientific Solutions, Inc.
Triton Systems, Inc. (2)

East Falmouth

Webb Research Corp.

Salisbury

Biomod Surfaces

Westborough

Boston Medical Products, Inc.

Weston

Gene Regulation Laboratories (2)

Woburn

Scientific Systems Company, Inc.

Michigan

Ann Arbor

Mechanical Compliance, Inc.
Emag Technologies, Inc.

Dexter

Bio Logic Engineering, Inc.

Minnesota

Minneapolis

Bioengineering, Inc.

Missouri

Chesterfield

Innovative Technology Applications

St. Louis

Virrx, Inc.

New Hampshire

Nashua

Scientific Solutions, Inc.

New Jersey

Monmouth Junction

Princeton Scientific Instruments, Inc.

Piscataway

Nanopowder Enterprises, Inc.

Princeton

Nanonex Corp.

Springfield

Orthogen Corporation

New Mexico

Albuquerque

Thor Technologies, Inc.
Adherent Technologies, Inc.

New York

Buffalo

Zeptomatrix Corporation

Hawthorne

Acorda Therapeutics, Inc.

Ithaca

Expertology

New York

Weidlinger Assoc., Inc.

Yaphank

Nanoprobes, Inc.

North Carolina

Cary

3Tex Engineered Fiber Products (2)

Durham

Triangle Laboratories, Inc.

Raleigh

Hydrosize Technologies, Inc.

Hexatech

Ohio

Athens

Austral Engineering & Software, Inc.

Dayton

Ues, Inc.

Aps Material, Inc.

Fremont

Sierra Lobo, Inc.

Oklahoma

Stillwater

Nomadics, Inc.

Oregon

Gresham

Blue Road Research (2)

Pennsylvania

Bethlehem

Serenix Pharmaceuticals, Inc.

Fort Washington

Materials Sciences Corp.

Landisville

Electron Energy Corp.

Philadelphia

Near Infrared Monitoring, Inc. (Nim)

Warrington

Tiger Optics

South Carolina

Edgefield

Newtec Services Group, Inc.

Tennessee

Chattanooga

Accurate Automation Corporation

Nashville

Generx+, Inc.

Texas

Austin

Systems & Materials Reserach Cons
Agave Biosystems, Inc.

Bryan

Accelerator Technology Corporation

Houston

Fem Cadet

Richardson

Scenpro, Inc.

Sugar Land

Translite

Utah

Orem

Adept Systems, Inc.

Virginia

Alexandria
Mirum Corp.

Blacksburg
Aerosoft, Inc.

Centreville
Eyetel Corporation

Chantilly
Edenspace Systems Corporation

Charlottesville
Adenosine Therapeutics, LLC

Christiansburg
NanoSonic, Inc.

Falls Church
Cortana Corp.

Reston
Diamondback Vision, Inc.

Washington

Bellevue
Ewing Technology Assoc., Inc.

Richland
Yahsgs LLC

Seattle
Stirling Dynamics Inc

Woodinville
Sienna Technologies, Inc.
Sonic Concepts, Inc.

Wisconsin

Madison
Eragen Biosciences, Inc.

Wyoming

Sheridan
Big Horn Valve

STTR Program Data - Fiscal Year 2002

AGENCY OBLIGATIONS	DOD	NSF	DOE	NASA	HHS	TOTAL
AGENCY EXTRAMURAL BUDGET	28,323,539,923	3,120,000,000	3,761,041,000	4,325,700,000	18,839,000,000	58,369,280,923
AGENCY STTR BUDGET	42,564,344	4,500,000	5,641,000	6,500,000	28,264,000	87,469,344
DOLLARS OBLIGATED	47,153,348	5,544,221	5,839,444	6,548,626	30,720,790	95,806,429
% OF EXTRAMURAL BUDGET	0.17%	0.18%	0.16%	0.15%	0.16%	0.16%
DEFICIT/SURPLUS	4,589,004	1,044,221	198,444	48,626	2,456,790	8,337,085
STTR AWARD PROFILE - COMMITMENTS						
TOTAL PHASE I AWARDS	207	20	17	20	92	356
MINORITY DISAD. PHASE I AWARDS	23	2	1	4	0	30
TOTAL PHASE II AWARDS	56	7	11	9	31	114
MINORITY/DISAD. PHASE II AWARDS	4	3	3	2	0	12
TOTAL PHASE I DOLLARS AWARDED	17,768,349	1,999,131	1,698,105	1,995,232	12,926,688	36,387,505
MIN/DISAD. PHASE I DOLLARS AWARDED	1,960,964	199,834	100,000	398,810	0	2,659,608
TOTAL PHASE II DOLLARS AWARDED	25,359,286	3,545,090	4,141,339	4,553,394	17,794,102	55,393,211
MIN/DISAD. PHASE II DOLLARS AWARDED	1,916,682	1,499,749	1,328,063	999,951	0	5,744,445
TOTAL PHASE I & II AWARDED	43,127,635	5,544,221	5,839,444	6,548,626	30,720,790	91,780,716
AVERAGE AMOUNT PHASE I AWARDS (\$)	85,837	99,957	99,889	99,761	140,507	102,212
STTR SOLICITATION PROFILE						
NO. OF SOLICITATIONS RELEASED	1	1	1	1	1	5
NO. OF RESEARCH TOPICS	56	4	45	5	120	230
NO. PHASE I PROPOSALS RECEIVED	665	97	191	57	279	1,289
NO. PHASE II PROPOSALS RECEIVED	90	17	17	16	94	234
RESEARCH INSTITUTION PROFILE						
NUMBER OF FFRDCS	13	2	10	4	0	29
NUMBER OF UNIVERSITIES	236	24	16	23	133	432
NUMBER OF OTHER NON-PROFIT	14	1	2	2	21	40

STTR Program Data - Fiscal Year 2002

	DOD	NSF	DOE	NASA	HHS	TOTAL
COOPERATIVE RESEARCH PROFILE						
TOTAL DOLLARS OF AWARDS	43,127,635	5,544,221	5,839,444	6,548,626	30,720,790	91,780,716
DOLLARS TO SMALL BUSINESS	27,485,430	3,356,256	4,260,668	3,973,766	16,339,381	55,415,501
DOLLARS TO RESEARCH INSTITUTION	16,287,514	2,141,965	2,961,809	2,520,777	14,092,701	38,004,766
NO. OF AWARDS TO UNIVERSITIES	236	24	16	23	133	432
DOLLARS TO UNIVERSITIES	15,085,456	1,576,140	1,522,373	1,800,034	12,218,446	32,202,449
NO. OF AWARDS TO FFRDCS	13	2	10	4	0	29
DOLLARS TO FFRDCS	642,810	333,119	1,315,096	609,759	0	2,900,784
NO. OF AWARDS TO OTHER NON-PROFITS	14	1	2	2	21	40
DOLLARS TO OTHER NON-PROFITS	559,248	232,706	124,340	110,984	1,874,276	2,901,554
PHASE I						
NUMBER OF FFRDC AWARDS	11	0	4	3	0	15
NUMBER OF UNIVERSITY AWARDS	183	20	12	15	81	311
NO. OF OTHER NON-PROFIT AWARDS	13	0	1	2	11	27
TOTAL DOLLARS OF AWARDS	17,768,349	1,999,131	1,698,105	1,995,232	12,926,688	36,387,505
DOLLARS TO SMALL BUSINESS	10,700,926	1,135,937	1,111,173	1,229,125	6,742,171	20,919,332
DOLLARS TO RESEARCH INSTITUTIONS	6,615,099	863,194	586,932	766,107	6,139,862	14,971,194
NO. OF AWARDS TO UNIVERSITIES	183	20	12	15	81	311
DOLLARS TO UNIVERSITIES	5,882,938	863,194	424,678	545,364	5,542,735	13,258,909
NO. OF AWARDS TO FFRDCS	11	0	4	3	0	18
DOLLARS TO FFRDCS	342,868	0	135,000	109,759	0	587,627

STTR Program Data - Fiscal Year 2002

	DOD	NSF	DOE	NASA	HHS	TOTAL
NO. OF AWARDS TO OTHER NON-PROFITS	13	0	1	2	11	27
DOLLARS TO OTHER NON-PROFITS	389,293	0	27,254	110,984	597,127	1,124,658
PHASE II						
NUMBER OF FFRDCS	2	2	6	1	0	11
NUMBER OF UNIVERSITIES	53	4	4	8	52	121
NUMBER OF OTHER NON-PROFIT	1	1	1	0	10	13
TOTAL DOLLARS OF AWARDS	25,359,286	3,545,090	4,141,339	4,553,394	17,794,102	55,393,211
DOLLARS TO SMALL BUSINESS	16,784,504	2,220,319	3,149,495	2,744,641	9,597,210	34,496,169
DOLLARS TO RESEARCH INSTITUTIONS	9,672,415	1,278,771	2,374,877	1,754,670	7,952,839	23,033,572
NO. OF AWARDS TO UNIVERSITIES	53	4	4	8	52	121
DOLLARS TO UNIVERSITIES	9,202,518	712,946	1,097,695	1,254,670	6,675,711	18,943,540
NO. OF AWARDS TO FFRDCS	2	2	6	1	0	11
DOLLARS TO FFRDCS	299,942	333,119	1,180,096	1,254,670	0	3,067,827
NO. OF AWARDS TO OTHER NON-PROFITS	1	1	1	0	10	13
DOLLARS TO OTHER NON-PROFITS	169,955	232,706	97,086	0	1,277,128	1,776,875

FY 2002 dollars obligated include modifications to previous year's awards for DOD (\$4,025,713)