

SMALL BUSINESS
INNOVATION
RESEARCH

SMALL BUSINESS
TECHNOLOGY
TRANSFER

ANNUAL REPORT

FISCAL YEAR 2013



Dedicated to the Memory of

ROLAND TREFETHEN TIBBETTS



This report honors the great pioneer and small business champion, Roland Tibbetts, widely acknowledged as the ‘Father’ of today’s Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs. By facilitating small business access to the federal research and development marketplace, Mr. Tibbetts revolutionized the innovation landscape in this country and further improved its economic vitality.

The annual Tibbetts Awards presented by the U.S. Small Business Administration (SBA) is a testament to Mr. Tibbetts’ legacy of small business entrepreneurship, applied research, and technological achievement. The Tibbetts Awards are presented to small businesses that have excelled through the SBIR/STTR programs and to individuals and supporting organizations that have advanced the missions of the SBIR and STTR programs – all to the benefit of the federal government’s research and development needs, the general public’s wellbeing, and the nation’s economy.

“Through his innovation, Mr. Tibbetts has touched millions of lives around the globe over the last three plus decades. In the world of innovation and research surrounding small businesses, he was truly one of a kind.”

-SBA Administrator, Maria Contreras-Sweet

JUNE 27, 1924 - OCTOBER 27, 2014



On behalf of our partners across the United States Federal Government, I am pleased to present this report on the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs, or more concisely – *America's Seed Fund* – the world's largest source of non-dilutive angel capital for innovative small businesses.

The Small Business Administration (SBA) is not the bank, and we're not a direct investor. We are the coordinator in charge of ensuring the SBIR and STTR programs provide over \$2½ billion dollars of seed-funding annually, directly into the hands of small businesses that are pushing the frontiers of science-and-technology development in areas from national security, to materials science advancement, to space exploration, to pressing healthcare innovation – all groundbreaking efforts that might otherwise go untested, undeveloped or undiscovered without the investment from *America's Seed Fund*.

This report highlights the successes and achievements of the SBA, our 11 Agency partners, our collective resource partners, and – of course – some of our best and brightest small business visionaries that are meeting the needs of Uncle Sam today by developing the emerging and viable technologies that may prove a brighter tomorrow for us all.

Everyone stands to benefit from tapping into all of the genius and all of the hard work that America has to offer. It's the 10,001 small breakthroughs that will lead us to the next big breakthrough, and it will be the innovators in our small labs, biorefineries, agridevelopers, and advanced manufacturing facilities that will lead us there – innovators who are passionate about harnessing creativity and brainpower to solve our toughest problems and challenges – curing diseases, strengthening our defenders, and putting our planet on a more sustainable path.

The SBIR/STTR programs do more than provide grants and contracts for Federal research and development needs. They do more than create jobs and introduce innovative products to the marketplace. *America's Seed Fund* is as much a critical pillar of our national competitiveness as our national defense, and countries from across the globe are noticing – looking to our SBIR/STTR programs as they make strides to catch up with the world leader in innovation.

As SBA Administrator, one of my overarching goals is to ensure that all Americans from all communities and walks of life have access to the types of capital and supportive small business resources they need to achieve dreams, create jobs and innovate. We at SBA remain committed to building upon the indelible impacts of the SBIR/STTR programs and to making sure future generations continue to see a return on investment from *America's Seed Fund*.



Maria Contreras-Sweet
Administrator
U.S. Small Business Administration



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OVERVIEW

This Fiscal Year 2013 (FY13) Annual Report provides comprehensive summary data and performance results for the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs, aggregating information as reported to the U.S. Small Business Administration (SBA) from the 11 SBIR/STTR program participating federal agencies (the Agencies).

FY13 SBIR/STTR PROGRAM FUNDING

The SBIR/STTR programs require that the Agencies set aside certain percentages of their extramural Research/Research and Development (R&D) budgets for small businesses engaging in R&D activities that are of specific interest to the U.S. Federal Government and/or have the potential for private sector commercialization. Additionally, this report highlights program improvements and key initiatives undertaken by SBA and the Agencies to improve small business access to federally funded R&D through the SBIR/STTR programs.

SBIR Agencies with extramural R&D budgets exceeding \$100 Million were required to set aside 2.7% of their FY13 extramural R&D budgets for SBIR Awards to small businesses. SBIR Awards were provided by 11 Agencies with the goal of strengthening small business participation in meeting their individual R&D needs while also stimulating innovation, advancing technologies, and spurring entrepreneurial growth.

STTR Modeled on the SBIR program, the STTR program requires that Agencies with extramural R&D budgets exceeding \$1 Billion set aside 0.35% of their FY13 extramural R&D budgets for small businesses working in cooperation with federal laboratories and non-profit research institutions. STTR Awards were provided by 5 Agencies with the goal of meeting their individual R&D needs while also stimulating innovation and accelerating the transfer of newly developed technologies from the lab to the marketplace.

FY13 SBIR PERFORMANCE

- ✓ \$1.4 Billion in 4,485 new Awards
 - \$462 Million in 3,011 new Phase I Awards
 - \$930 Million in 1,474 new Phase II Awards
- ✓ \$54.25 Million in prior-year Phase I Awards
- ✓ \$629.8 Million in prior-year Phase II Awards
- ✓ 15% of proposals received Phase I Awards
- ✓ 55% of proposals received Phase II Awards
- ✓ 15% of total Award dollars went to Women-owned Small Business Concerns (WSBCs)
- ✓ 6% of total Award dollars went to Socially or Economically Disadvantaged-owned Small Business Concerns (SED SBCs)
- ✓ 4% of total Award dollars went to HUBZone-certified Small Business Concerns (HUBZone SBCs)
- ✓ 52% of total Award dollars went to 10 states: CA, MA, VA, NY, MD, TX, CO, PA, OH and FL

FY13 STTR PERFORMANCE

- ✓ \$167.5 Million in 669 new Awards
 - \$72.4 Million in 476 new Phase I Awards
 - \$95.2 Million in 349 new Phase II Awards
- ✓ \$7.9 Million in prior-year Phase I Awards
- ✓ \$75 Million in prior-year Phase II Awards
- ✓ 18% of proposals received Phase I Awards
- ✓ 55% of proposals received Phase II Awards
- ✓ 14% of total Award dollars went to Women-owned Small Business Concerns (WSBCs)
- ✓ 5% of total Award dollars went to Socially or Economically Disadvantaged-owned Small Business Concerns (SED SBCs)
- ✓ 1% of total Award dollars went to HUBZone-certified Small Business Concerns (HUBZone SBCs)
- ✓ 62% of total Award dollars went to 10 states: CA, MA, TX, NY, MD, FL, VA, IL, NC, and OH



SBIR PROGRAM SUMMARY DATA

Report Field		DOD	HHS	DOE	NASA	NSF
Phase I	Solicitations Released (#)	3	26	4	**	3
	Proposals Received (#)	8,412	4,726	2,260	1,498	1,690
	Phase I Awards (#)	1,303	653	284	259	345
	Obligations for New Phase I Awards (\$)	\$156,917,958	\$152,571,280	\$50,287,696	\$34,137,153	\$51,551,399
	Obligations on Prior-Year Phase I Awards (\$)	\$16,433,279	\$35,081,559	-	-	\$2,637,158
	WSBC Proposals Received (#) / Percent of Total (%)	1,545 / 18%	657 / 14%	91 / 4%	199 / 13%	262 / 16%
	WSBC Awards (#) / Percent of Total (%)	206 / 16%	86 / 13%	17 / 6%	35 / 14%	61 / 18%
	WSBC Obligations (\$) / Percent of Total (%)	\$25,068,339 / 16%	\$22,151,735 / 15%	\$2,086,749 / 4%	\$4,423,091 / 13%	\$9,112,412 / 18%
	SED SBC Proposals Received (#) / Percent of Total (%)	882 / 10%	184 / 4%	128 / 6%	166 / 11%	277 / 16%
	SED SBC Awards (#) / Percent of Total (%)	81 / 6%	27 / 4%	11 / 4%	26 / 10%	42 / 12%
	SED SBC Obligations (\$) / Percent of Total (%)	\$9,489,956 / 6%	\$6,741,144 / 4%	\$1,797,420 / 4%	\$3,470,808 / 10%	\$6,289,887 / 12%
	HUBZone SBC Proposals Received (#) / Percent of Total (%)	155 / 2%	-	116 / 5%	46 / 3%	138 / 8%
HUBZone SBC Awards (#) / Percent of Total (%)	21 / 2%	-	17 / 6%	6 / 2%	37 / 11%	
HUBZone SBC Obligations (\$) / Percent of Total (%)	\$2,478,552 / 1.6%	-	\$2,522,662 / 5%	\$747,639 / 2%	\$5,543,033 / 11%	
Phase II	Proposals Received (#)	1,267	636	223	240	188
	Total Phase II Awards (Initial+Second) (#)	824	290	96	82	100
	“Second Phase II” Awards (subset) (#)	80	16	1	-	-
	Obligations for New Phase II Awards (\$)	\$466,328,745	\$213,159,427	\$97,346,597	\$57,207,717	\$54,749,115
	Obligations for "Second Phase II" Awards (subset) (\$)	\$57,314,351	\$14,653,853	\$1,625,000	-	-
	Obligations on Prior-Year Phase II Awards (\$)	\$325,718,444	\$220,455,596	\$7,039,078	\$41,184,233	\$26,872,131
	WSBC Proposals Received (#) / Percent of Total (%)	134 / 11%	88 / 14%	13 / 6%	25 / 10%	19 / 10%
	WSBC Awards (#) / Percent of Total (%)	109 / 13%	41 / 14%	7 / 7%	4 / 5%	9 / 9%
	WSBC Obligations (\$) / Percent of Total (%)	\$65,293,459 / 14%	\$55,683,111 / 26%	\$7,005,964 / 7%	\$2,798,418 / 5%	\$5,483,940 / 10%
	SED SBC Proposals Received (#) / Percent of Total (%)	53 / 4%	13 / 2%	10 / 4%	20 / 8%	6 / 3%
	SED SBC Awards (#) / Percent of Total (%)	39 / 5%	14 / 5%	-	4 / 5%	2 / 2%
	SED SBC Obligations (\$) / Percent of Total (%)	\$21,899,424 / 4.7%	\$18,446,735 / 9%	-	\$2,758,747 / 5%	\$1,229,788 / 2%
HUBZone SBC Proposals Received (#) / Percent of Total (%)	20 / 2%	-	24 / 11%	9 / 4%	13 / 7%	
HUBZone SBC Awards (#) / Percent of Total (%)	18 / 2%	-	8 / 8%	2 / 2%	10 / 10%	
HUBZone SBC Obligations (\$) / Percent of Total (%)	\$8,996,135 / 2%	-	\$7,991,493 / 8%	\$1,396,966 / 2%	\$5,342,771 / 10%	
Admin	Technical Assistance (\$)	\$3,740,000	\$1,451,998	\$1,682,994	-	\$5,906,311
	Administrative Funding Pilot (3%) (\$)	\$2,427,884	\$7,388,589	\$1,295,000	-	\$1,166,006
	Commercialization Readiness Program (CRP) (DOD only)	\$6,102,736	-	-	-	-
Totals	Total SBIR Obligations (\$)	\$977,669,046	\$630,108,449	\$157,651,365	\$132,529,103	\$142,882,120
	Extramural R&D* (\$)	\$33,879,164,718	\$23,321,614,455	\$5,899,125,005	\$5,217,000,000	\$4,877,000,000
	SBIR Obligations as Share of Extramural R&D (%)	2.89%	2.70%	2.67%	2.54%	2.93%

- These fields were new based on Reauthorization Act, and Agencies had not made changes to their systems to collect this data.

* Some Agencies reported this figure in terms of dollars obligated, while other Agencies reported this figure in terms of amounts budgeted for the programs. See discussion in next section.

** NASA released no solicitations in FY13 due to realignment of its solicitation release-close cycle.



SBIR PROGRAM SUMMARY DATA (CONTINUED FROM PREVIOUS PAGE)

<i>USDA</i>	<i>DHS</i>	<i>ED</i>	<i>DOC</i>	<i>DOT</i>	<i>EPA</i>	<i>Report Field</i>	<i>SBIR TOTAL</i> <i>All Agencies</i>	
2	2	2	2	2	1	Phase I Solicitations	47	<i>Phase I</i>
518	248	253	164	122	322	Phase I Proposals Received	20,213	
60	29	24	19	9	26	New Phase Is (#)	3,011	
\$5,862,650	\$2,888,676	\$2,845,931	\$1,758,678	\$1,346,436	\$2,078,094	New Phase Is (\$)	\$462,245,951	
-	\$99,918	-	-	-	-	Obligations on Prior Phase Is	\$54,251,914	
74 / 14%	61 / 25%	64 / 25%	34 / 21%	37 / 30%	2 / 1%	WSBC Proposals (#)/(%)	3,026 / 15%	
10 / 17%	3 / 10%	8 / 33%	2 / 11%	3 / 33%	2 / 8%	WSBC Phase Is (#)/(%)	433 / 14%	
\$974,459 / 17%	\$292,543 / 10%	\$1,049,465 / 37%	\$184,973 / 11%	\$449,925 / 33%	\$160,000 / 8%	WSBC Phase Is (\$)/(%)	\$65,953,692 / 14%	
36 / 7%	44 / 18%	28 / 11%	36 / 22%	27 / 22%	1 / 0.3%	SED SBC Proposals (#)/(%)	1,809 / 9%	
4 / 7%	4 / 14%	-	1 / 5%	1 / 11%	1 / 4%	SED SBC Phase Is (#)/(%)	198 / 7%	
\$399,863 / 7%	\$403,574 / 14%	-	\$89,999 / 5%	\$149,990 / 11%	\$79,957 / 4%	SED SBC Phase Is (\$)/(%)	\$28,912,598 / 6%	
81 / 16%	5 / 2%	28 / 11%	16 / 10%	5 / 4%	-	HUBZ SBC Proposals (#)/(%)	590 / 3%	<i>Phase II</i>
9 / 15%	1 / 3%	2 / 8%	3 / 16%	-	-	HUBZ SBC Phase Is (#)/(%)	96 / 3%	
\$888,165 / 15%	\$100,000 / 4%	\$150,000 / 5%	\$284,756 / 16%	-	-	HUBZ SBC Phase Is (\$)/(%)	\$12,714,807 / 3%	
52	28	22	15	11	24	Phase II Proposals (#)	2,706	
28	19	8	10	10	7	Phase IIs (#)	1,474	
-	-	-	-	3	-	2 nd Phase IIs (subset) (#)	100	
\$12,386,403	\$10,894,860	\$5,938,214	\$3,497,252	\$6,422,526	\$2,098,329	New Phase IIs (\$)	\$930,029,186	
-	-	-	-	\$1,701,580	-	New 2 nd Phase IIs (subset) (\$)	\$75,294,784	
-	\$5,691,557	\$1,749,854	-	\$374,755	\$70,000	Obligations on Prior Phase IIs	\$629,155,648	
11 / 21%	3 / 11%	6 / 27%	4 / 27%	6 / 55%	-	WSBC Proposals (#)/(%)	309 / 11%	
8 / 29%	2 / 11%	2 / 25%	2 / 20%	4 / 40%	-	WSBC Phase IIs (#)/(%)	188 / 13%	
\$3,446,954 / 28%	\$1,498,990 / 14%	\$1,799,981 / 30%	\$799,777 / 23%	\$2,349,951 / 37%	-	WSBC Phase IIs (\$)/(%)	\$146,160,545 / 16%	
2 / 4%	3 / 11%	1 / 5%	1 / 7%	3 / 27%	-	SED SBC Proposals (#)/(%)	112 / 4%	
1 / 4%	2 / 11%	1 / 13%	1 / 10%	5 / 50%	-	SED SBC Phase IIs (#)/(%)	69 / 5%	
\$449,000 / 4%	\$1,442,460 / 13%	\$250,000 / 4%	\$300,000 / 9%	\$3,384,717 / 53%	-	SED SBC Phase IIs (\$)/(%)	\$50,160,871 / 5%	
5 / 10%	1 / 4%	-	1 / 7%	1 / 9%	2 / 8%	HUBZ SBC Proposals (#)/(%)	76 / 3%	
3 / 11%	-	-	1 / 10%	1 / 10%	2 / 29%	HUBZ SBC Phase IIs (#)/(%)	46 / 3%	
\$1,276,063 / 11%	-	-	\$399,993 / 10%	\$749,938 / 10%	\$600,000 / 29%	HUBZ SBC Phase IIs (\$)/(%)	\$27,210,850 / 3%	
-	-	-	\$100,000	-	\$166,500	Technical Assistance (\$)	\$13,047,803	<i>Admin</i>
\$7,048	-	-	-	\$6,330	-	Admin Funding Pilot (3%) (\$)	\$12,290,857	
						CPP (DOD only)(\$)	\$6,102,736	
\$18,256,101	\$19,575,011	\$10,533,999	\$5,355,930	\$8,150,048	\$4,412,923	Total SBIR Obligations (\$)	\$2,107,124,095	<i>Totals</i>
\$682,000,000	\$414,226,000	\$303,334,757	\$257,513,400	\$252,874,000	\$138,863,000	Extramural R&D* (\$)	\$75,242,715,335	
2.67%	4.72%	3.47%	2.08%	3.22%	3.18%	SBIR as Share of R&D (%)		

- These fields were new based on Reauthorization Act, and Agencies had not made changes to their systems to collect this data.

* Some Agencies reported this figure in terms of dollars obligated, while other Agencies reported this figure in terms of amounts budgeted for the programs. See discussion in next section.



STTR PROGRAM SUMMARY DATA

Report Field		DOD	HHS	DOE	NASA	NSF	STTR TOTAL All Agencies
Phase I	Solicitations Released (#)	2	13	4	**	3	22
	Proposals Received (#)	1,264	646	230	244	274	2,658
	Number of New Phase I Awards (#)	225	144	38	33	36	476
	Obligations for New Phase I Awards (\$)	\$24,156,564	\$29,769,618	\$6,223,469	\$4,107,606	\$8,093,187	\$72,350,444
	Obligations on Prior-Year Phase I Awards (\$)	\$1,918,356	\$5,853,828	-	-	\$152,855	\$7,925,039
	WSBC Proposals Received (#) / Percent of Total (%)	184 / 15%	76 / 12%	8 / 3%	32 / 13%	62 / 23%	362 / 14%
	WSBC Awards (#) / Percent of Total (%)	33 / 15%	19 / 13%	2 / 5%	4 / 12%	5 / 14%	63 / 13%
	WSBC Obligations (\$) / Percent of Total (%)	\$3,629,803 / 15%	\$4,710,168 / 16%	\$374,953 / 6%	\$498,035 / 12%	\$1,124,966 / 14%	\$10,337,925 / 14%
	SED SBC Proposals Received (#) / Percent of Total (%)	145 / 11%	13 / 2%	5 / 2%	46 / 19%	46 / 17%	255 / 10%
	SED SBC Awards (#) / Percent of Total (%)	14 / 6%	3 / 2%	2 / 5%	5 / 15%	1 / 3%	25 / 5%
	SED SBC Obligations (\$) / Percent of Total (%)	\$1,569,473 / 6%	\$779,467 / 3%	\$299,958 / 5%	\$623,231 / 15%	\$225,000 / 3%	\$3,497,129 / 5%
	HUBZone SBC Proposals Received (#)/Percent of Total (%)	15 / 1%	-	10 / 4%	9 / 4%	24 / 9%	58 / 2%
HUBZone SBC Awards (#) / Percent of Total (%)	2 / 1%	-	2 / 5%	2 / 6%	3 / 8%	9 / 2%	
HUBZone SBC Obligations (\$) / Percent of Total (%)	\$229,997 / 1%	-	\$299,944 / 5%	\$248,930 / 6%	\$673,971 / 8%	\$1,452,842 / 2%	
Phase II	Proposals Received (#)	206	72	29	38	4	349
	Total Phase II Awards (Initial+Second) (#)	126	37	15	14	1	193
	"Second Phase II" Awards (subset) (#)	1	1	-	-	-	2
	Obligations for New Phase II Awards (\$)	\$52,612,262	\$17,742,907	\$14,546,817	\$9,777,455	\$499,905	\$95,179,346
	Obligations for "Second Phase II" Awards (subset) (\$)	\$250,000	\$1,000,000	-	-	-	\$1,250,000
	Obligations on Prior-Year Phase II Awards (\$)	\$35,691,661	\$26,247,728	\$939,544	\$4,877,698	\$7,231,784	\$74,988,415
	WSBC Proposals Received (#) / Percent of Total (%)	25 / 12%	5 / 7%	3 / 10%	3 / 8%	1 / 25%	37 / 11%
	WSBC Awards (#) / Percent of Total (%)	11 / 9%	2 / 5%	2 / 13%	1 / 7%	-	16 / 8%
	WSBC Obligations (\$) / Percent of Total (%)	\$6,398,806 / 12%	\$3,659,058 / 21%	\$1,980,932 / 14%	\$700,000 / 7%	-	\$12,738,796 / 13%
	SED SBC Proposals Received (#) / Percent of Total (%)	14 / 7%	3 / 4%	1 / 3%	5 / 13%	-	23 / 7%
	SED SBC Awards (#)/ Percent of Total (%)	7 / 6%	-	-	1 / 7%	-	8 / 4%
	SED SBC Obligations (\$) / Percent of Total (%)	\$3,536,292 / 7%	-	-	\$699,564 / 7%	-	\$4,235,856 / 4%
HUBZone SBC Proposals Received (#) / Percent of Total (%)	4 / 2%	-	2 / 7%	1 / 3%	-	7 / 2%	
HUBZone SBC Awards (#) / Percent of Total (%)	2 / 2%	-	-	-	-	2 / 1%	
HUBZone SBC Obligations (\$) / Percent of Total (%)	\$877,135 / 2%	-	-	-	-	\$877,135 / 1%	
Totals Admin	Obligations for Technical Assistance (\$)	-	-	-	-	\$2,386,394	\$2,386,394
	Obligations for "Phase 0" Programs (NIH only) (\$)	-	\$1,391,507	-	-	-	\$1,391,507
Totals	Total STTR Obligations (\$)	\$114,378,843	\$81,005,588	\$21,709,830	\$18,762,759	\$18,364,125	\$254,221,145
	Extramural R&D*	\$33,879,164,718	\$23,321,614,455	\$5,899,125,005	\$5,217,000,000	\$4,877,000,000	\$73,193,904,178
	STTR Obligations as share of Extramural R&D	0.34%	0.35%	0.37%	0.36%	0.38%	-

- These fields were new based on Reauthorization Act, and Agencies had not made changes to their systems to collect this data.

* Some Agencies reported this figure in terms of dollars obligated, while other Agencies reported this figure in terms of amounts budgeted for the programs. See discussion in next section.

** NASA released no solicitations in FY13 due to realignment of its solicitation release-close cycle.



The Small Business Act (the Act), as amended by the SBIR/STTR Reauthorization Act of 2011 (the Reauthorization Act) requires SBIR/STTR participating agencies (the Agencies) to set aside certain percentages of their extramural Research/Research and Development (R&D) budgets to fund small business R&D activities through the SBIR/STTR programs.

For the SBIR program, each Agency with an annual extramural R&D budget of \$100 Million or more was required to set aside no less than 2.7% of that budget:

- Department of Defense (DOD)
- Department of Health & Human Services (HHS)
- Department of Energy (DOE)
- National Aeronautics & Space Administration (NASA)
- National Science Foundation (NSF)
- Department of Agriculture (USDA)
- Department of Homeland Security (DHS)
- Department of Education (ED)
- Department of Commerce (DOC)
- Environmental Protection Agency (EPA)
- Department of Transportation (DOT)

For the STTR program, each Agency with extramural R&D budgets of \$1 Billion or more was required to set aside no less than 0.35% of that budget:

- Department of Defense (DOD)
- Department of Health & Human Services (HHS)
- Department of Energy (DOE)
- National Aeronautics & Space Administration (NASA)
- National Science Foundation (NSF)

SBIR/STTR Minimum Share of Agency R&D*

	2013	2014	2015	2016	2017 (thereafter)
SBIR	2.7%	2.8%	2.9%	3.0%	3.2%
STTR	0.35%	0.4%	0.4%	0.45%	0.45%

**Required minimum percentages by fiscal year, established by the Act.*

TRANSITION YEAR FOR REPORTING

In FY13, SBA and the Agencies further implemented changes related to the reporting and collecting of data included in the Reauthorization Act. Increased reporting requirements and the creation of new databases for collecting and maintaining data presented technical obstacles that were necessarily time-consuming and yet transitional in nature. Agencies are required to submit Annual Reports to SBA covering the period ending September 30 of the prior fiscal year by March 15 of each year. However, for FY13 verifying the timeliness of those submissions was met with further technical challenges beyond combining the different platforms used by contracting Agencies and granting Agencies with the vast amounts of data from different Agency data sets utilizing different formats. The enormous task of accommodating multi-Agency migration of data across multiple platforms, coupled with an overall redesign of the public- and private-facing SBIR.gov portal through which Agencies must submit all reporting data, took considerable SBA resources to develop and fine-tune.

The complexities of testing new data capture systems were further complicated with new reporting fields required by the Reauthorization Act. In verifying the FY13 data, SBA began to note reporting inconsistencies and/or discrepancies that SBA struggled to reconcile, in some cases well into Fiscal Year 2015. However, SBA's work with the Agencies to ensure data is being correctly provided, accurately captured, and effectively maintained and retrieved electronically continues to improve SBIR.gov's efficiencies and will lead to faster verification of reported data going forward.



SBA CLARIFIED THE CALCULATION OF EXTRAMURAL R&D

Prior to the Agencies' FY13 reporting, SBA determined that the extramural R&D figures reported to SBA had been previously calculated differently by different Agencies, leading to inconsistent reporting and unclear determinations of funding compliance. Agencies had differing interpretations of the statutory language explaining the funding requirement, with the use of the terms "budget" and "expend" in the statute¹ leading some Agencies to understand funding compliance would be met by budgeting the appropriate set-aside amounts from the Agency's annual appropriation at the beginning of the fiscal year. With some Agencies utilizing multi-year funding practices, this led to inconsistent reporting across Agencies and in some cases an unclear calculation of the compliance ratio where *program amounts* were reported in terms of actual obligations made during the reporting period, while the *extramural R&D* number was reported in terms of the amount budgeted.

SBA believes the statute is clear in defining "extramural budget" in terms of amounts actually *obligated* in that fiscal year, not the amount budgeted.² SBA provided guidance in the FY13 Annual Reporting template and directed the Agencies to report both the extramural R&D and the SBIR/STTR program amounts in terms of funds actually obligated during FY13, regardless of the budget year of the funds obligated. Because this clarification was a substantial change in practice, SBA recognized that some Agencies might not be able to make the necessary adjustments within the FY13 reporting timeframe and requested that Agencies provide detailed explanations on how the reported numbers were calculated. SBA will continue to work with the Agencies to clarify and improve the reporting and to identify the best budget planning approaches to avoid underfunding of the SBIR/STTR programs in future years.

AGENCIES DEFINED "EXTRAMURAL R&D" IN DIFFERENT WAYS

Section 10 (h)(4)(i) of the SBIR/STTR Policy Directives direct the funding Agencies to assess the funding for these programs from the total extramural R&D amounts they report annually to NSF³ pursuant to the Annual Budget of the United States Government. The NSF total extramural R&D amounts may differ from the extramural R&D amounts used for calculating the SBIR/STTR funding set-asides due to certain R&D programs being statutorily exempted from the funding calculation. The Small Business Act defines extramural R&D as follows,

*(1) the term "extramural budget" means the sum of the total obligations minus amounts obligated for such activities by employees of the agency in or through Government-owned, Government-operated facilities, except that for the Department of Energy it shall not include amounts obligated for atomic energy defense programs solely for weapons activities or for naval reactor programs, and except that for the Agency for International Development it shall not include amounts obligated solely for general institutional support of international research centers or for grants to foreign countries;*⁴

¹ Section 9(e)(1) of the Small Business Act states that "... each Federal agency which has an extramural **budget** for research or research and development in excess of \$100,000,000 for fiscal year 1992, or any fiscal year thereafter, shall **expend** with small business concerns— ... (E) not less than 2.7 percent of such **budget in** fiscal year 2013;" [emphasis added].

² Section 9(e)(1) of the Act states: "For the purpose of this section—(1) the term 'extramural budget' means the sum of the total **obligations** minus amounts obligated for such activities by employees of the agency in or through Government-owned, Government-operated facilities ..." [emphasis added].

³ Each federal agency reports its annual R&D obligations in the NSF's Survey of Federal Funds for Research and Development.

⁴ 15 U.S.C. § 638(e)(1).



As a result, a number of Agencies have developed definitions of “extramural” and “research and development” uniquely for the purpose of determining the funding levels for these programs. DOD, for example, calculated its extramural R&D base “...by collecting the Total Component RDT&E [Research Development Test & Evaluation] Budget appropriation, and reducing this amount by any applicable Congressional reductions, OSD [Office of Secretary of Defense] reductions, program dollars exempted by statute, and intramural R&D amounts.” While “applicable Congressional reductions” and “program dollars exempted by statute” appear to redundantly refer to the statutory exemption for programs in the Intelligence Community, it is not clear what is included as “OSD reductions.” SBA is working with DOD to better understand the unique exemptions it has reported.

FEW AGENCIES USED ACTUAL AMOUNTS OF OBLIGATED EXTRAMURAL R&D TO DETERMINE FY13 SBIR/STTR PROGRAM FUNDING

The Act requires each Agency to submit to SBA, within 4 months of the Agency’s annual appropriations, a report detailing the methodology used to calculate the Agency’s total extramural R&D budget for purposes of determining the minimum levels required for funding their SBIR and/or STTR programs. The methodology reports include the fiscal year amounts for total *budgeted* R&D, intramural R&D, and the amounts of programs exempted from this calculation by Congress. This information is due to SBA prior to the end of the fiscal year when true obligation amounts are known, so the reported is based on Congressional appropriations. Thus, these *budgeted* amounts can change throughout a fiscal year if an Agency receives supplemental appropriations and/or rescissions. Agencies are asked to submit the yearend total extramural R&D obligations as part of their Annual Report submissions in March of the following fiscal year. SBA is working with the Agencies to improve the accuracy and usefulness of the methodology reports.

For the FY13 Annual Report submissions, SBA clarified to the Agencies that the reported extramural R&D amounts should be the total amount actually obligated for extramural R&D during the reporting fiscal year. Recognizing that it may be difficult for some Agencies to change their reporting practices in the timeframe required, SBA allowed Agencies that were unable to provide the total amounts obligated to provide details as to why this was the case and explain the numbers reported.

SBA followed-up with each Agency to validate whether or not the Agency had provided their program funding amounts and the extramural R&D amounts in terms of actual obligations made. Every Agency reported SBIR/STTR program spending amounts in terms of Phase I awards, Phase II awards, and technical assistance amounts obligated during FY13. However, only 2 Agencies, HHS and NASA, reported total extramural R&D amounts expressed in terms of actual FY13 obligations, thereby accommodating SBA’s reporting request so that SBA could accurately determine these Agencies’ compliance with SBIR/STTR spending requirements. The other 9 Agencies, DOD, DOE, NSF, USDA, DHS, ED, DOC, DOT and EPA, opted to continue their past practices of reporting extramural R&D using budget figures estimated when appropriations were received, and therefore SBA could not accurately determine FY13 compliance with SBIR/STTR program spending requirements for those Agencies. SBA made the reporting of Agency extramural R&D in terms of actual obligations mandatory for Fiscal Year 2014 Annual Report submissions. The table on the following page provides further analysis of FY13 Agency compliance with SBIR/STTR program funding requirements.



SBIR/STTR PROGRAM FUNDING AND SBA ANALYSIS

AGENCY PERFORMANCE IN MEETING THE MINIMUM FUNDING LEVELS

As noted, FY13 was a transition year in the reporting of funding compliance with SBA's clarification that minimum program funding levels as statutory percentages of total extramural R&D were to be calculated on the basis of actual obligations, regardless of budget year. The following table shows the total extramural R&D amounts each Agency reported to SBA and whether or not the amount was reported in terms of total extramural obligations made during FY13. The total extramural R&D amounts as reported to NSF are also included for reference.

FY13 SBIR/STTR PROGRAM FUNDING AS SHARE OF AGENCY EXTRAMURAL R&D

AGENCY	EXTRAMURAL R&D REPORTED TO SBA	EXTRAMURAL R&D REPORTED AS OBLIGATIONS	REPORTED WITH PROGRAMS EXEMPTED	SBIR OBLIGATIONS	SBIR AS % OF EXTRAMURAL R&D (2.7% MIN)	STTR OBLIGATIONS	STTR AS % OF EXTRAMURAL R&D (0.35% MIN)	EXTRAMURAL R&D REPORTED TO NSF
DOD	\$33,879,164,718		✓	\$977,669,046	2.9%	\$114,378,843	0.34%	\$43,314,800,000
HHS	\$23,321,614,455	✓		\$630,108,449	2.7%	\$81,005,588	0.35%	\$23,296,300,000
DOE	\$5,899,125,005		✓	\$158,637,390	2.7%	\$21,709,830	0.37%	\$9,302,600,000
NASA	\$5,217,000,000	✓		\$133,221,539	2.6%	\$18,762,759	0.36%	\$8,792,500,000
NSF	\$4,877,000,000			\$142,882,120	2.9%	\$18,364,125	0.38%	\$4,938,400,000
USDA	\$682,000,000			\$18,256,101	2.7%			\$629,500,000
DHS	\$414,226,000			\$19,575,011	4.7%			\$292,000,000
ED	\$303,334,757			\$10,533,999	3.5%			\$295,800,000
DOC	\$257,513,000			\$5,355,930	2.1%			\$249,400,000
DOT	\$252,874,000		✓	\$8,150,048	3.2%			\$633,900,000
EPA	\$138,863,000			\$4,412,923	3.2%			\$270,500,000
TOTALS	\$75,242,714,935			\$2,108,802,556		\$254,221,145		\$92,015,700,000

HHS and NASA were the only Agencies to explicitly report total extramural R&D amounts for FY13 in terms of obligations made. NASA successfully reported program amounts and total Agency extramural R&D in terms of FY13 obligations, but the use of early budget numbers to set target amounts for the programs together with subsequent R&D increases later in the fiscal year resulted in NASA's SBIR program obligation amounts falling slightly short of the minimum set-aside. USDA did not report end-of-year obligations as requested, because they believed the obligation calculation did not accurately reflect spending compliance for an Agency that uses no-year funds in its program budgeting process. DOC significantly underfunded the SBIR program due to the Sandy Supplemental Funding that NOAA received later in the year after the Agency's acquisition due dates. Only DOD underfunded the STTR program. DOD has a 2-year funding cycle and reported its total annual SBIR and STTR obligations broken down by budget year; noting that for any reporting fiscal year, both current-year dollars and prior-year dollars were used to fund the programs. However, DOD reported it was unable to calculate and report the total extramural R&D obligations due to time constraints and instead reported the total extramural R&D budget amount. SBA will continue to work with DOD and other Agencies with multi-year and/or no-year appropriations to identify best budget planning approaches to ensure their SBIR/STTR programs are not underfunded in future years.



The Reauthorization Act created a new pilot program permitting Agencies to use up to 3% of their SBIR funding for the administrative purposes of both the SBIR and STTR programs. Beginning in FY13, SBA required each Agency wishing to utilize the Administrative Funding Pilot Program (AFPP) to submit a plan of work with estimated costs for SBA approval. Each proposed plan was required to address efforts supporting material improvements in program performance, such as streamlining award processes, reporting, and outreach.

SBA received and approved work plans from 10 Agencies: DOD, HHS, DOE, NASA, NSF, USDA, DHS, ED, DOC, and DOT. However, only 6 were able to obligate funding in FY13, and none were able to fully utilize the maximum 3% amount allowable. Out of the total \$56,783,789 in FY13 SBIR budget dollars approved in Agency AFPP plans, only \$12,290,857 was actually obligated, utilized by: DOD, HHS, DOE, NSF, USDA and DOT. The difference in the estimated amounts and actual obligated amounts is primarily attributed to the timing of: 1) Agency appropriations; 2) program office receipt of SBIR dollars; 3) development of administrative plans to utilize the 3%; and, 4) the amount of time available to make obligations after the necessary budget information was received and before the end of the fiscal year.

SBA anticipates Agencies will obligate and more fully utilize the 3% administrative funding in future fiscal years, as the Agencies have a better understanding of the added flexibilities and program support the AFPP resources afford them in targeting program office needs, conducting outreach, and more successfully meeting the R&D needs of their Agencies. Initial Agency feedback indicates positive outcomes from early efforts, and SBA expects additional reporting years to provide more meaningful data to adequately measure results.

FY13 utilization of AFPP allowed Agencies to dedicate resources and execute work plan initiatives, to: update and/or upgrade information technology systems to accommodate new reporting requirements; modify program application, review, and selection processes and procedures to shorten award timelines; develop targeted marketing, outreach and commercialization plans; assess prior awardee commercialization efforts; and, increase participation in small business R&D-related collaborative events. Specific examples include:

- DOD** Air Force hired 5 additional “Transition Agents” whose job is to ensure that Programs of Record are prepared for insertion of specific SBIR technologies and assist those SBIR firms in making that happen. They also performed an economic impact of 4,500 projects from the last 10 years, the largest study yet of SBIR commercialization activity, available on the Air Force SBIR website. Missile Defense Agency hired 4 new contracting officers that have helped reduce Phase II award time by 30%.
- HHS** Attended 35 conferences and events hosted across 15 states, 4 of which were Institutional Development Award (IDeA) program states; provided outreach and awareness through 19 events with a total of over 3,200 attendees from 42 states, DC and PR; and, hosted the Annual National Institutes of Health (NIH) SBIR/STTR Conference in SD with 39% of attendees being from 12 IDeA states and PR.
- DOE** Upgraded information systems to support new Reauthorization Act requirements and support functions; including: application processes, to accommodate information transfer from grants.gov; and, award review and selection processes, to meet the 90 day award selection period. These changes assisted DOE in shortening award timelines in FY13.
- NSF** Launched Eureka Park in partnership with the Consumer Electronics Association (CEA), featuring 30 NSF SBIR/STTR-funded companies with emerging technologies at the Consumer Electronics Showcase (CES) and offering excellent commercialization opportunities for grantees and outreach for the programs. Collaborated and organized with MassChallenge a symposium featuring NSF’s SBIR program, bringing together research and business communities and promoting NSF SBIR/STTR resources available.
- USDA** Enabled staff to conduct several site visits within the remaining 2 months of FY13, providing opportunities to conduct outreach with small businesses and assessing commercial successes of prior awardees.
- DOT** Developed outreach plans, attended the SBIR National Conference, and attended the New England SBIR/STTR Summer Session with participants from RI, ME, VT.



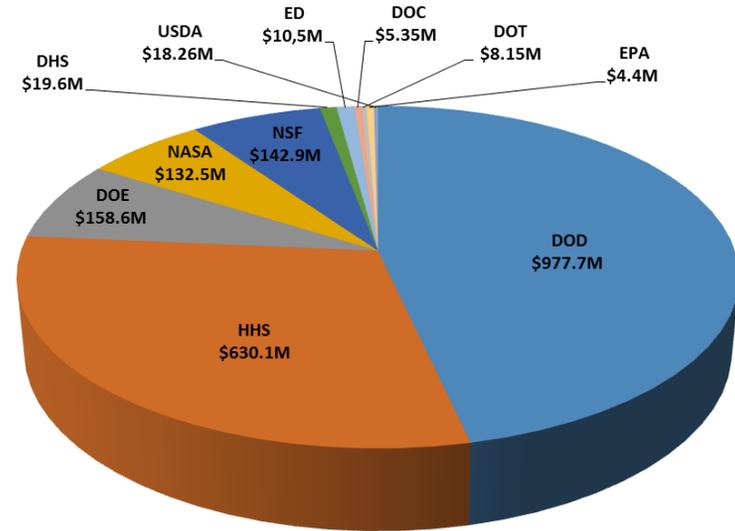
SBIR Awards

Agencies made a total of 4,485 new SBIR Awards in FY13, totaling nearly \$1.4 Billion in new Phase I and Phase II Award obligations. 3,011 Phase I Awards accounted for 67% of all new FY13 SBIR Awards and 33% of the total dollars at a little over \$462 Million. Inversely, the 1,474 new Phase II Awards represented 33% of the total number of new Awards obligated, yet at nearly \$930 Million, new Phase IIs represented 67% of all new SBIR Award dollars.

Out of a total of \$2.1 Billion in SBIR obligations in FY13, a little over 76% came from DOD and HHS. Nearly 21%, of total dollars, was attributable to DOE, NASA, and NSF, with the remaining 3% of total FY13 SBIR Award dollars being obligated by USDA, DHS, DOC, ED, DOT, and EPA.

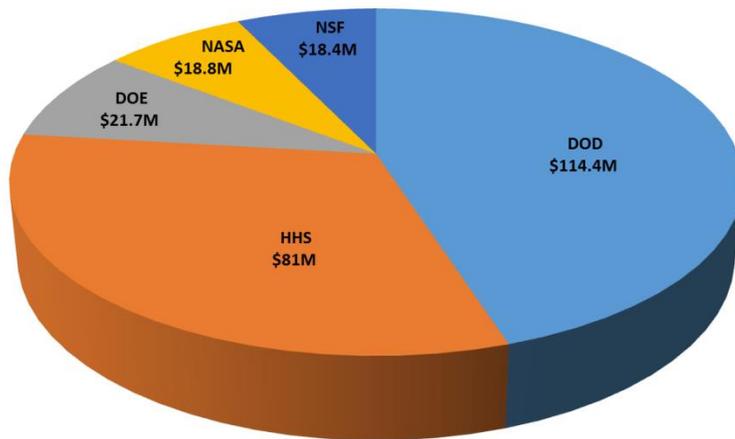
Approximately \$54.25 Million of total SBIR obligations went to prior-year Phase I Awards and \$629.8 Million went to prior-year Phase II Awards.

*FY13 DISTRIBUTION OF TOTAL SBIR AWARD DOLLARS ACROSS AGENCIES**



**Totals include FY13 modifications on prior year awards.*

*FY13 DISTRIBUTION OF TOTAL STTR AWARD DOLLARS ACROSS AGENCIES**



**Totals include FY13 modifications on prior-year awards.*

STTR Awards

Agencies made a total of 669 new STTR Awards in FY13, totaling nearly \$167.5 Million in new Phase I and Phase II Award obligations. 476 Phase I Awards accounted for 71% of all new FY13 STTR Awards and 43% of the total dollars at a little over \$72.4 Million. 349 new Phase II Awards represented 29% of the total number of new Awards obligated and 57% of all new STTR Award dollars at \$95.2 Million.

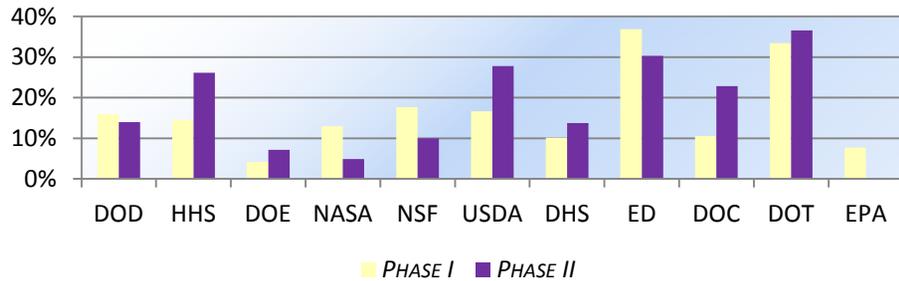
Out of \$254 Million in total FY13 STTR obligations, approximately 77% were attributed to DOD and HHS.

Approximately \$7.9 Million of total STTR obligations went to prior-year Phase I Awards and nearly \$75 Million went to prior-year Phase II Awards.

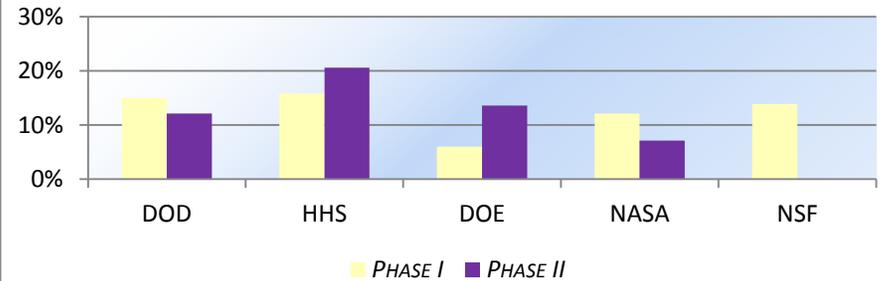


SBIR/STTR PROGRAM AWARD DATA

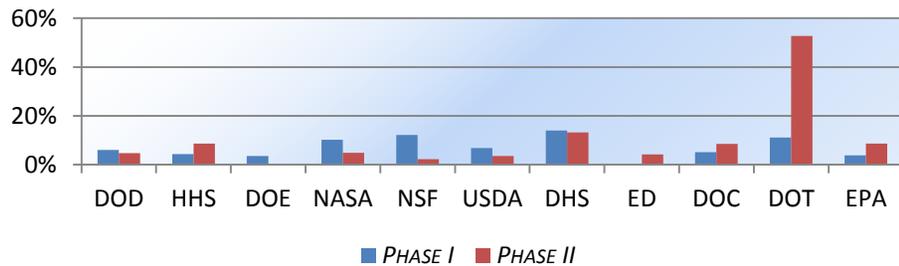
FY13 PERCENT OF SBIR AWARD DOLLARS TO WOMEN-OWNED SMALL BUSINESS CONCERNS



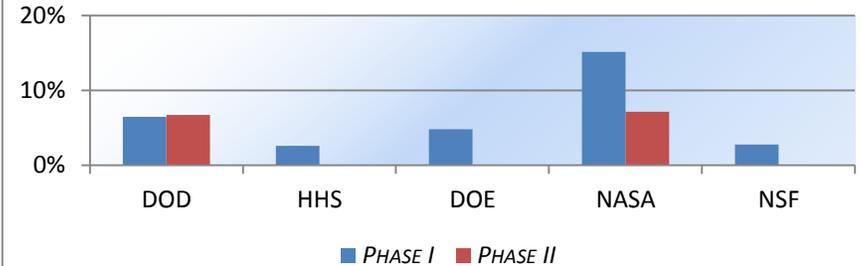
FY13 PERCENT OF STTR AWARD DOLLARS TO WOMEN-OWNED SMALL BUSINESS CONCERNS



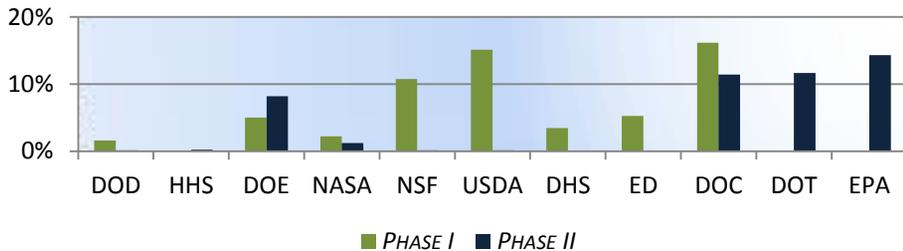
FY13 PERCENT OF SBIR AWARD DOLLARS TO SOCIALLY OR ECONOMICALLY DISADVANTAGED-OWNED SMALL BUSINESS CONCERNS



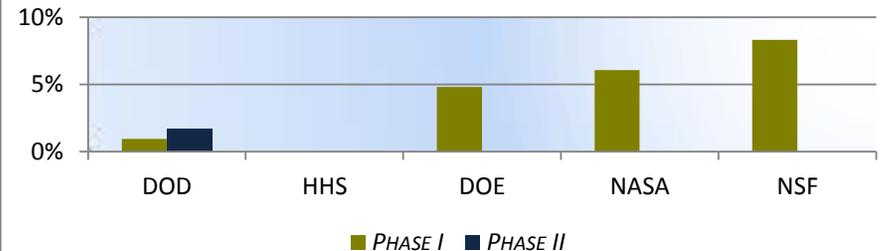
FY13 PERCENT OF STTR AWARD DOLLARS TO SOCIALLY OR ECONOMICALLY DISADVANTAGED-OWNED SMALL BUSINESS CONCERNS



FY13 PERCENT OF SBIR AWARD DOLLARS TO HUBZONE SMALL BUSINESS CONCERNS



FY13 PERCENT OF STTR AWARD DOLLARS TO HUBZONE SMALL BUSINESS CONCERNS



SBIR/STTR PROGRAM AWARD DATA

Awards Exceeding Guideline Amounts

The Act currently sets guideline amounts for Phase I award at \$150,000 and Phase II awards at \$1 Million. Agencies with smaller budgets have traditionally chosen to solicit for award sizes at less than the guideline amounts, with the rationale that it is more effective to issue a larger

FY13 Awards Exceeding Guideline Amounts						
		<i>DOD</i>	<i>HHS</i>	<i>DOE</i>	<i>NASA</i>	<i>NSF</i>
SBIR	Phase I	0	501	41	26	
	Phase II	48	184	9	4	0
STTR	Phase I	0	94	5	0	36
	Phase II	0	16	0	0	0
<i>(\$150,000 for Phase I, \$1,000,000 for Phase II)</i>						

number of awards to reach a wider range of possible solutions to R&D needs. Agencies with larger budgets have administered awards that exceed the guideline amounts with the rationale that in some cases larger award sizes are more effective, such as when dealing with capital intensive research projects, while their larger SBIR/STTR budgets still allow them to fund a sufficiently wide range of proposals under the guideline thresholds. Agencies may at their discretion exceed the guideline amounts by up to 50%, making the effective maximum award amounts - or the cap - at \$225,000 for Phase I and \$1.5 Million for Phase II awards.

The Reauthorization Act provided that an Agency may request from SBA a waiver for certain awards to exceed the cap. SBA established in the SBIR/STTR Policy Directives that an Agency making such a request must provide SBA with: 1) evidence that the limitations on award size interfere with the ability of the Agency to fulfill its R&D mission; 2) evidence that the Agency will minimize, to the maximum extent practicable, the number of awards that exceed the cap for the topic area; and, 3) evidence that research costs for the topic area differ significantly from those in other areas to warrant going over the cap. The latter becomes an important distinction for Agencies, such as HHS' NIH, DOD and DOE, where costs to mature technology to a level in which it can be transitioned or commercialized to the next level exceed the cap. For any Agency waiver request approved, that Agency must report to SBA any such awards made to include the identity and location of each recipient, which is information also now available to SBA through SBIR.gov.

FY13 Awards Exceeding 150% of Guideline Amounts*				
		<i>DOD</i>	<i>HHS</i>	<i>DOE</i>
SBIR	Phase I	0	316	0
	Phase II	10	105	0
STTR	Phase I	0	61	1
	Phase II	0	3	0
<i>(\$225,000 for Phase I, \$1,500,000 for Phase II)</i>				
*includes FY13 obligations on prior year awards				

For FY13, NIH requested and SBA approved waivers granting NIH broad authority to solicit and make awards over the cap, particularly for life science- and biomedical-related research topics involving clinical trials conducted within rigorous regulatory environments at substantially higher costs. SBA approved NIH's waiver request under the condition that NIH would monitor and report quarterly to SBA any awards exceeding a Phase I or Phase II cap. NIH's funding of the academic R&D involved in new drug therapies or products is crucial as the seed funding that allows those small businesses to ultimately attract private investors and carry the developed technology to the marketplace. DOD requested and SBA approved waivers for awards exceeding the cap on a case-by-case/project-by-project basis. In 2012, prior to the Reauthorization Act modifications in the SBIR/STTR Policy Directives, DOE notified SBA they would be soliciting FY13 proposals with 1 topic that would exceed the maximum award guidelines for 1 Phase I award and 1 Phase II award.

The Reauthorization Act also included a provision for second, sequential, Phase II awards, which doubles the amount of Phase II dollars an Agency may give to a Phase II awardee for a given project. Additionally, the Reauthorization Act created the Civilian Agency Commercialization Readiness Pilot Program (CRPP) that allows an Agency to use up to 10% of its SBIR/STTR budget for additional awards to SBIR/STTR awardees. The size of these awards may be up to three times the Phase II guideline amount. HHS, NASA, DHS, and DOC (NIST) were approved to establish CRPP components toward the end of FY13; however, no program funds were obligated or expended.



FY13 SBIR/STTR AWARDS BY U.S. STATE AND TERRITORY

The following table shows the total dollar amount and number of SBIR and STTR Phase I and Phase II awards across the U.S. This data is also publicly available on a searchable database at www.SBIR.gov and remains current to include subsequent funding of ongoing projects.

STATE	SBIR PHASE I		STTR PHASE I		SBIR PHASE II		STTR PHASE II		SBIR TOTAL AWARDS		STTR TOTAL AWARDS		SBIR/STTR TOTAL AWARDS	
	(#)	(\$)	(#)	(\$)	(#)	(\$)	(#)	(\$)	(#)	(\$)	(#)	(\$)	(#)	(\$)
AK	2	\$246,965	-	-	-	-	-	-	2	\$246,965	-	-	2	\$246,965
AL	55	\$7,794,400	9	\$1,076,394	34	\$26,548,571	5	\$2,738,497	89	\$34,342,971	14	\$3,814,891	1,03	\$38,157,862
AR	13	\$1,923,206	2	\$399,995	7	\$4,366,639	-	-	20	\$6,289,845	2	\$399,995	22	\$6,689,840
AZ	54	\$7,219,845	12	\$2,253,671	22	\$18,680,646	2	\$1,499,870	76	\$25,900,491	14	\$3,753,541	90	\$29,654,032
CA	638	\$111,665,890	80	\$12,684,744	328	\$293,975,963	30	\$21,260,088	966	\$405,641,852	110	\$33,944,832	1,076	\$439,586,684
CO	141	\$19,820,801	18	\$2,777,998	51	\$42,278,115	5	\$3,399,882	192	\$62,098,916	23	\$6,177,880	215	\$68,276,796
CT	45	\$7,912,746	6	\$849,950	21	\$15,770,184	2	\$1,699,999	66	\$23,682,920	8	\$2,549,949	74	\$26,232,869
DC	6	\$1,228,242	2	\$374,966	2	\$1,199,942	-	-	8	\$2,428,184	2	\$374,966	10	\$2,803,150
DE	22	\$3,417,088	2	\$249,991	9	\$7,274,076	-	-	31	\$10,691,164	2	\$249,991	33	\$10,941,155
FL	67	\$9,628,238	14	\$2,556,377	40	\$39,552,662	10	\$6,263,291	107	\$49,180,900	24	\$8,819,668	131	\$58,000,568
GA	43	\$8,743,248	5	\$757,677	20	\$20,470,208	5	\$4,683,629	63	\$29,213,456	10	\$5,441,306	73	\$34,654,762
HI	15	\$2,317,571	1	\$80,000	8	\$5,968,063	1	\$500,000	23	\$8,285,634	2	\$580,000	25	\$8,865,634
IA	12	\$1,775,431	4	\$950,084	-	-	1	\$684,889	12	\$1,775,431	5	\$1,634,973	17	\$3,410,404
ID	3	\$449,977	1	\$79,634	3	\$1,948,014	2	\$1,247,956	6	\$2,397,991	3	\$1,327,590	9	\$3,725,581
IL	70	\$11,031,511	10	\$1,238,841	39	\$29,818,024	7	\$5,883,067	109	\$40,849,535	17	\$7,121,908	126	\$47,971,443
IN	24	\$3,999,037	4	\$799,071	19	\$16,211,708	3	\$1,499,108	43	\$20,210,745	7	\$2,298,179	50	\$22,508,924
KS	9	\$1,634,863	1	\$225,000	4	\$3,779,020	1	\$998,189	13	\$5,413,883	2	\$1,223,189	15	\$6,637,072
KY	25	\$5,452,253	5	\$842,250	6	\$5,671,638	1	\$2,986,389	31	\$11,123,891	6	\$3,828,639	37	\$14,952,530
LA	9	\$1,032,359	-	-	5	\$3,493,701	-	-	14	\$4,526,060	-	-	14	\$4,526,060
MA	340	\$53,741,449	60	\$8,699,069	177	\$157,536,697	20	\$12,044,920	517	\$211,278,146	80	\$20,743,989	597	\$232,022,135
MD	155	\$25,274,108	19	\$3,411,883	62	\$60,169,337	10	\$5,956,860	217	\$85,443,445	29	\$9,368,743	246	\$94,812,188
ME	5	\$699,840.00	2	\$304,999	3	\$1,948,911	-	-	8	\$2,648,751	2	\$304,999	10	\$2,953,750
MI	73	\$10,826,024	10	\$1,579,149	34	\$30,705,142	4	\$3,491,043	107	\$41,531,166	14	\$5,070,192	121	\$46,601,358
MN	35	\$5,887,765	4	\$789,298	21	\$19,092,810	3	\$4,417,328	56	\$24,980,575	7	\$5,206,626	63	\$30,187,201
MO	14	\$2,078,040	2	\$524,687	7	\$6,208,356	1	\$709,336	21	\$8,286,396.	3	\$1,234,023	24	\$9,520,419
MS	-	-	3	\$580,339	-	-	1	\$700,000	-	-	4	\$1,280,339	4	\$1,280,339
MT	21	\$2,757,866	3	\$481,925	6	\$2,732,845	1	\$416,990	27	\$5,490,711	4	\$898,915	31	\$6,389,626
NC	70	\$12,388,264	14	\$2,925,033	31	\$31,794,427	4	\$3,368,672	101	\$44,182,691	18	\$6,293,705	119	\$50,476,396
ND	2	\$291,794	1	\$99,995	-	-	1	\$411,035	2	\$291,794	2	\$511,030	4	\$802,824
NE	4	\$697,762	2	\$306,840	-	-	-	-	4	\$697,762	2	\$306,840	6	\$1,004,602
NH	49	\$6,450,049	10	\$1,355,552	25	\$21,515,587	-	-	74	\$27,965,636	10	\$1,355,552	84	\$29,321,188
NJ	70	\$11,388,462	10	\$1,229,431	34	\$28,371,886	3	\$1,166,783	104	\$39,760,348	13	\$2,396,214	117	\$42,156,562
NM	52	\$6,973,424	4	\$504,700	16	\$12,753,969	5	\$3,227,589	68	\$19,727,393	9	\$3,732,289	77	\$23,459,682
NV	5	\$698,761	2	\$693,239	7	\$6,718,671	-	-	12	\$7,417,432	2	\$693,239	14	\$8,110,671



FY13 SBIR/STTR AWARDS BY U.S. STATE AND TERRITORY (CONTINUED)

STATE	SBIR PHASE I		STTR PHASE I		SBIR PHASE II		STTR PHASE II		SBIR TOTAL AWARDS		STTR TOTAL AWARDS		SBIR/STTR TOTAL AWARDS	
	(#)	(\$)	(#)	(\$)	(#)	(\$)	(#)	(\$)	(#)	(\$)	(#)	(\$)	(#)	(\$)
NY	118	\$19,952,055	24	\$4,541,641	64	\$65,813,913	8	\$5,139,663	182	\$85,765,968	32	\$9,681,304	214	\$95,447,272
OH	99	\$15,069,761	18	\$2,430,046	51	\$39,424,063	4	\$3,748,340	150	\$54,493,824	22	\$6,178,386	172	\$60,672,210
OK	5	\$1,137,418	3	\$949,969	4	\$4,284,349	-	-	9	\$5,421,767	3	\$949,969	12	\$6,371,736
OR	41	\$7,188,100	1	\$573,060	16	\$15,691,418	1	\$800,676	57	\$22,879,518	2	\$1,373,736	59	\$24,253,254
PA	101	\$17,566,923	19	\$3,633,890	43	\$38,345,933	4	\$2,308,819	144	\$55,912,856	23	\$5,942,709	167	\$61,855,565
PR	1	\$149,781	-	-	-	-	-	-	1	\$149,781	-	-	1	\$149,781
RI	12	\$1,784,486	-	-	4	\$5,221,444	-	-	16	\$7,005,930	-	-	16	\$7,005,930
SC	11	\$1,966,214	2	\$482,847	2	\$1,733,606	-	-	13	\$3,699,820	2	\$482,847	15	\$4,182,667
SD	4	\$559,187	-	-	1	\$500,000	-	-	5	\$1,059,187	-	-	5	\$1,059,187
TN	14	\$1,994,921	-	-	7	\$7,605,428	2	\$2,438,288	21	\$9,600,349	2	\$2,438,288	23	\$12,038,637
TX	134	\$22,415,290	19	\$2,450,653	63	\$60,274,965	22	\$15,577,429	197	\$82,690,254	41	\$18,028,082	238	\$100,718,336
UT	36	\$6,663,607	7	\$1,225,910	14	\$14,302,240	3	\$2,249,352	50	\$20,965,847	10	\$3,475,262	60	\$24,441,109
VA	176	\$22,777,280	29	\$3,960,607	97	\$77,549,873	7	\$4,205,288	273	\$100,327,152	36	\$8,165,895	309	\$108,493,047
VT	4	\$1,049,132	-	-	1	\$1,782,457	-	-	5	\$2,831,589	-	-	5	\$2,831,589
WA	60	\$10,722,623	5	\$957,896	25	\$25,563,125	2	\$2,486,817	85	\$36,285,748	7	\$3,444,713	92	\$39,730,461
WI	32	\$6,062,129	6	\$1,229,757	16	\$14,107,808	3	\$1,104,018	48	\$20,169,937	9	\$2,333,775	57	\$22,503,712
WV	2	\$204,997	-	-	2	\$1,582,411	-	-	4	\$1,787,408	-	-	4	\$1,787,408
WY	1	\$599,241	-	-	1	\$489,460	1	\$746,576	2	\$1,088,701	1	\$746,576	3	\$1,835,277

SBA has noted that the majority of SBIR/STTR Awards to small businesses are consistently located in the largest states and/or areas of economic clusters crossing several states:

- Approximately 52% of total FY13 SBIR Award dollars were concentrated among the states of CA, MA, VA, NY, MD, TX, CO, PA, OH, and FL.
- Approximately 62% of total FY13 STTR Award dollars were concentrated among the states of CA, MA, TX, NY, MD, FL, VA, IL, NC, and OH.

As such, SBA and the Agencies have worked to coordinate outreach efforts and tap into the innovation pipelines within the 27 most underrepresented states of AK, AR, DE, HI, IA, ID, KS, KY, LA, ME, MO, MS, MT, ND, NE, NV, OK, PR, RI, SC, SD, TN, UT, VT, WV, and WY. Key outreach contacts have been identified within these states (and all states and territories) to include economic development agencies, universities, accelerators, and state or local small business service providers, to foster cross-collaboration, increase small business awareness, and encourage future participation in the SBIR/STTR programs. Additionally, administrative funds to specifically enable outreach for SBIR/STTR participation in these underrepresented states have been allocated by the Agencies and approved by SBA.

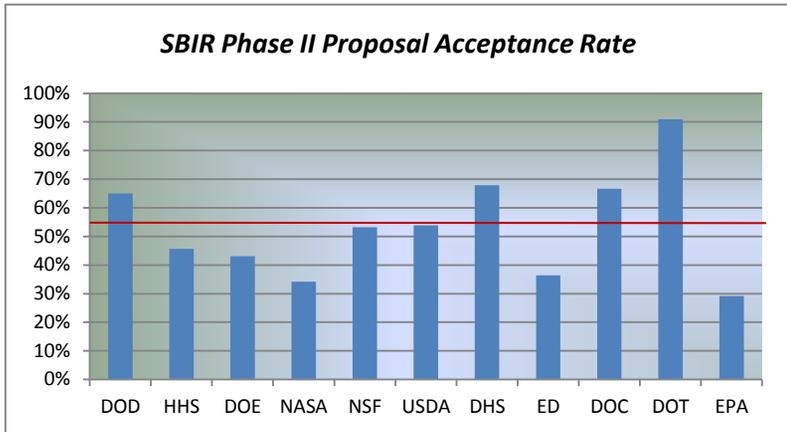
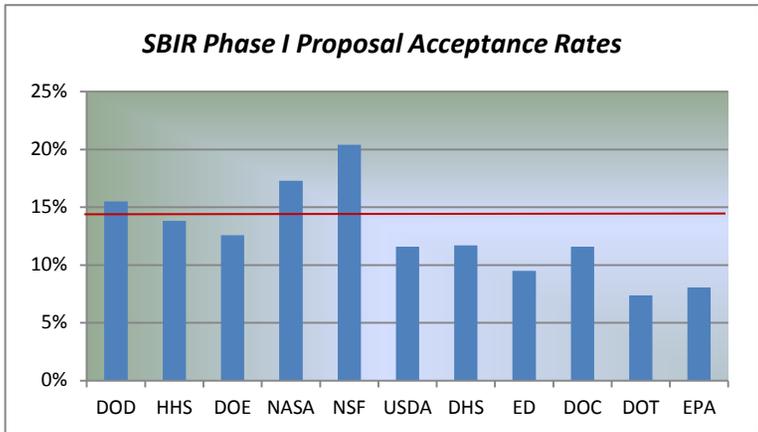


SBIR/STTR PROPOSAL ACCEPTANCE RATES

Proposal acceptance rates are essentially the number of awards made divided by the total number of proposals received. SBA monitors the acceptance rates for Phase I Awards as a measure of the competitiveness of the program. For Phase II Awards, SBA monitors the acceptance rates as an indicator of the quality of applicants that are building upon successful R&D efforts achieved through prior award funding.

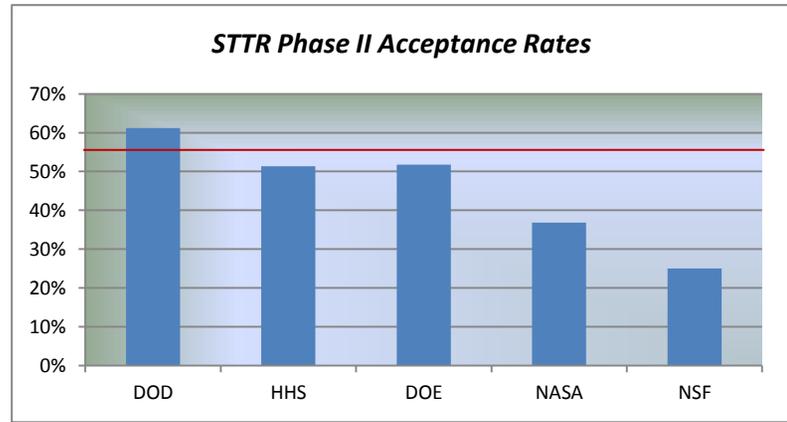
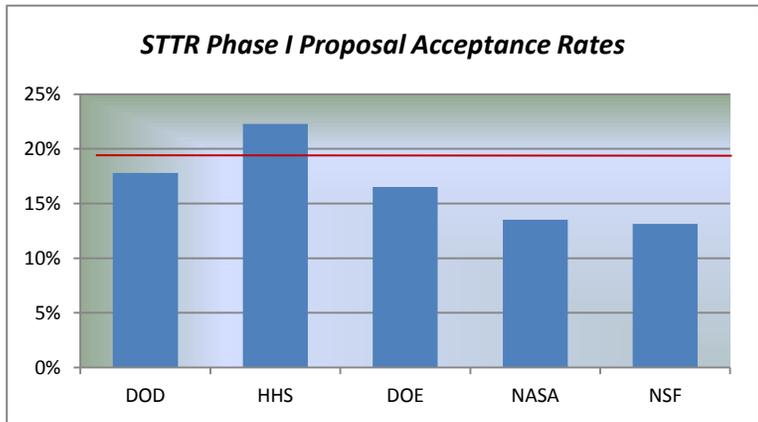
SBIR PROGRAM

Across the 11 SBIR Agencies, small businesses submitted a total of 20,213 proposals for the 3,011 new Phase I Awards that were made in FY13, resulting in an overall Phase I proposal acceptance rate of 14.9%. Agencies received 2,706 proposals for the 1,474 new Phase II Awards that were made, resulting in an overall Phase II proposal acceptance rate of 54.5%.



STTR PROGRAM

Across the 5 STTR Agencies, small businesses and research institutions submitted a total of 2,658 proposals for the 476 new Phase I Awards that were made in FY13, resulting in an overall Phase I proposal acceptance rate of 17.9%. Agencies received 349 proposals for the 193 new Phase II Awards that were made, resulting in an overall Phase II proposal acceptance rate of 55.3%.



SBIR/STTR AWARD TIMELINES

The Agencies were largely within the Congressionally prescribed maximum timeline (1 year for HHS and NSF and 90 days for all other Agencies) with regards to the time taken from the Phase I proposal due date to award notification. SBA through policy directive prescribes the time between proposal due date and the start of the Award (15 months for HHS and NSF and 180 days for other Agencies).

DOE, NASA, NSF, USDA, DHS, ED, DOC, and DOT reported timelines within requirements. EPA showed timelines exceeding 6 months. HHS did not have the capacity to collect and report this data but began implementing the ability to do so during FY13, with an expected completion date of April 2014.

SBIR TIMELINES	DOD	HHS	DOE	NASA	NSF	USDA	DHS	ED	DOC	DOT	EPA
Average time between Phase I Solicitation Close and Award Notification (days)	*	-	86	126	177	172	61	87	140	47	333
Average time between Phase I Notification and first day of period of performance (days)	*	-	44	50	25	133	49	51	50	85	45
Percentage of Phase I Awards where the time between Solicitation Close and Notification was less than or equal to 90 days (1 year for HHS and NSF only)	-	-	100%	-	100%	-	100%	58%	47%	100%	-
Percentage of Phase I Awards where time between Solicitation Close and first day of performance was less than or equal to 180 days (15 months for HHS and NSF only)	55%	90%	100%	100%	100%	0%	100%	54%	100%	100%	0%
Average time between Phase I Award final day of period of performance and Phase II Award's first day of period of performance (days)	117	505	137	248	219	281	127	133	178	364	332
Average time between Phase II Solicitation Close Date or Proposal Receipt Date and Award Notification (days)	*	-	76	248	212	95	60	78	139	98	259
Average time between Phase II Notification Date and first day of Period of Performance (days)	*	-	52	75	7	88	104	1	4	158	30
Percentage of Phase II Awards where time between Solicitation Close or Proposal Receipt and Notification Date was less than or equal to 90 days (1 year for HHS and NSF only)	-	-	100%	-	100%	-	84%	100%	-	40%	-
Percentage of Phase II Awards where time between Solicitation Close or Proposal Receipt and first day of performance was less than or equal to 180 days (15 months for HHS and NSF only)	34%	93%	98%	44%	100%	0%	74%	100%	100%	70%	0%

* DOD did not report this data to SBA.

- These fields were new based on Reauthorization Act, and Agencies had not made changes to their systems to collect this data.

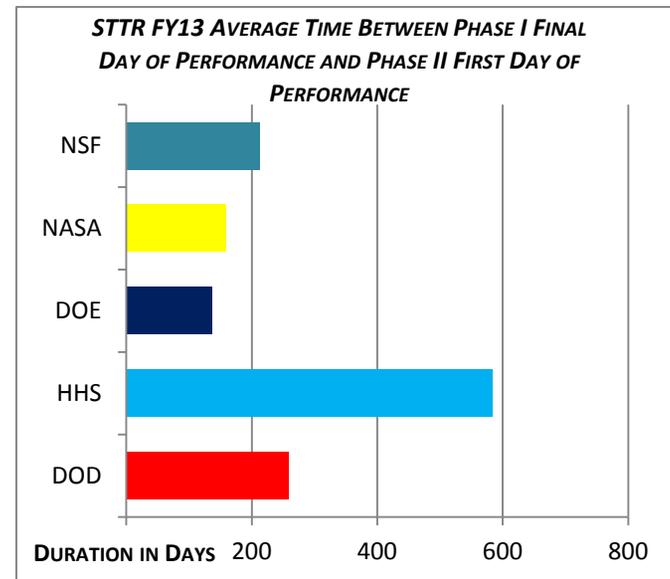
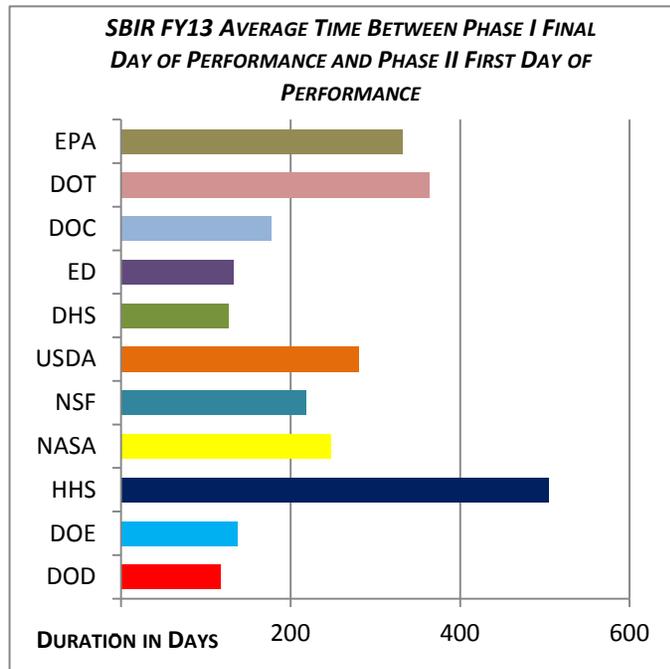


SBIR/STTR AWARD TIMELINES

<i>STTR TIMELINES</i>	<i>DOD</i>	<i>HHS</i>	<i>DOE</i>	<i>NASA</i>	<i>NSF</i>
Average time between Phase I Solicitation Close and Award Notification (days)	*	-	86	126	161
Average time between Phase I Notification and first day of period of performance (days)	*	-	44	50	11
Percentage of Phase I Awards where the time between Solicitation Close and Notification was less than or equal to 90 days (1 year for HHS and NSF only)	*	-	89%	0%	100%
Percentage of Phase I Awards where time between Solicitation Close and first day of performance was less than or equal to 180 days (15 months for HHS and NSF only)	71%	85%	89%	100%	100%
Average time between Phase I Award final day of period of performance and Phase II Award's first day of period of performance (days)	259	583	137	159	213
Average time between Phase II Solicitation Close Date or Proposal Receipt Date and Award Notification (days)	*	-	76	67	180
Average time between Phase II Notification Date and first day of Period of Performance (days)	*	-	52	86	9
Percentage of Phase II Awards where time between Solicitation Close or Proposal Receipt and Notification Date was less than or equal to 90 days (1 year for HHS and NSF only)	*	-	100%	100%	100%
Percentage of Phase II Awards where time between Solicitation Close or Proposal Receipt and first day of performance was less than or equal to 180 days (15 months for HHS and NSF only)	17%	100%	98%	93%	100%

* DOD did not report this data to SBA.

- HHS did not have the capacity to collect and report this data but began implementing the ability to do so during FY13, with an expected completion date of April 2014.



AWARDS TO MAJORITY-OWNED SMALL BUSINESSES

The Reauthorization Act provided pilot authority to SBIR Agencies to use a portion of their program funds for awards to firms that are majority-owned by multiple Venture Capital Operating Companies (VCOCs), hedge funds (HFs) or private equity firms (PEFs). During FY13, HHS's NIH and DOE's Advanced Research Projects Agency-Energy (ARPA-E) elected to begin using this authority. Although no such awards were made during the reporting fiscal year, both Agencies reported receiving proposals. The 2 Agencies reported the following implementation activities:

- HHS** NIH SBIR solicitation issued after January 28, 2013, allowed portfolio companies of VCOCs to apply to the NIH SBIR program. Additionally, NIH reissued its Omnibus SBIR solicitation on May 30, 2013, to allow portfolio companies to apply for the remainder of due dates in 2013. While NIH implemented this provision in FY13, and received 10 proposals from majority-owned portfolio companies, the first possible awards under the NIH SBIR program will not be made until Fiscal Year 2014. NIH asserted controls in place to ensure that overall spending on portfolio companies would not exceed 25% of its FY13 SBIR set-aside.
- DOE** ARPA-E required any SBIR applicant that was funded in majority part by multiple VCOCs, hedge funds, or private equity firms to submit with its Application a certification conforming to the 'Certification for Applicants that are majority-owned by multiple Venture Capital Operating Companies (VCOCs), Hedge Fund, or Private Equity Firms.' While ARPA-E received 2 such proposals in FY13, the first possible awards will not be made until Fiscal Year 2014. ARPA-E asserted controls in place to ensure that overall spending on portfolio companies would not exceed 25% of its FY13 SBIR set-aside.

PHASE III APPEALS

Pursuant to Section 4(c)(8) of the SBIR/STTR Policy Directives, Agencies are to notify SBA before they pursue follow-on work on a technology developed under an SBIR/STTR Award with an entity other than the SBIR/STTR Awardee that developed the technology. SBA did not receive such a notification from a funding Agency during FY13. SBA may also be contacted directly by SBIR/STTR Awardees seeking assistance with perceived violations of the Phase III preference requirements or SBIR/STTR data rights. In such cases, SBA works with the Awardee and the relevant Agency to resolve the issue and may, if warranted, appeal an Agency decision or action to pursue Phase III work with another entity.

During FY13, SBA received one complaint from an SBIR Awardee regarding a possible violation of the Phase III preference policy. NAVSYS Inc. notified SBA that they believed the Department of the Army's Project Manager of Combat Ammunition Systems (PM CAS) had failed to provide preference to NAVSYS for follow-on work it believed derived directly from one of its prior SBIR projects. NAVSYS presented evidence supporting its claim that the Advanced Field Artillery Tactical Data System (AFATDS) Project 322, which PM CAS was pursuing on an in-house basis, qualified as Phase III work for NAVSYS. After reviewing the details of the complaint, SBA determined that the work appeared to be a follow-on to NAVSYS SBIR technology and that the Army had not adequately reported its decision to pursue the work with an entity other than NAVSYS. SBA notified PM CAS of the reporting obligation. Ongoing discussions between NAVSYS, SBA and Army continued beyond FY13 in an effort to reach a resolution in this case.



AGENCY COMPLIANCE WITH E.O. 13329 ENCOURAGING INNOVATION IN MANUFACTURING

Pursuant to Executive Order (E.O.) 13329, Agencies must give priority to small business concerns that participate in or conduct R&D “...relating to manufacturing processes, equipment and systems; or manufacturing workforce skills and protection.” Each Agency includes in its Annual Report to SBA a synopsis of its implementation of these requirements. Agencies utilize a variety of approaches in addressing the E.O. 13329 directive. For most, these requirements are assessed within the scope of each Agency’s R&D needs with tangible numbers of solicitation topics, awards and dollars. However, it is more difficult to assess for Agencies with R&D needs weighted more heavily toward ‘Research’ than ‘Development’ where the innovation achieved may- or may-not lead to future manufacturing. Mechanisms commonly used by Agencies to give priority to manufacturing-related work include: adding manufacturing-related topics in solicitations; requesting in solicitations that proposals address any possible manufacturing-related elements of the small businesses’ proposed work, technological approach, delivery or resulting technological applicability to manufacturing processes; and, noting in solicitations that including such elements in proposals may provide a competitive advantage in the award selection process. Additionally, cross-Agency collaborations, targeted outreach efforts and other Agency-specific activities related to manufacturing contribute to addressing the objectives of E.O. 13329.

AGENCY COMPLIANCE WITH THE ENERGY INDEPENDENCE AND SECURITY ACT OF 2007 (EISA)

Pursuant to the Energy Independence and Security Act of 2007 (PL 110-140) and Policy Directives issued by SBA, Agencies must give high priority to small business concerns that participate in or conduct energy efficiency or renewable energy system R&D projects. Agencies utilize a variety of approaches to comply with EISA and the Policy Directives. For some, such as DOE, these efforts are engrained in the Agency mission and therefore easy to assess in very tangible ways. However, for Agencies with R&D needs that are completely different, such as ED or HHS, EISA compliance requires creative solutions. Mechanisms commonly used by Agencies – aside from specifically adding energy related topics in solicitations – include adding that solicitation proposals address any energy efficiency or renewable energy aspects related to the small businesses’ technological approach, delivery or technological applicability and often provide such proposals a competitive advantage in the award selection process. Cross-Agency collaborations, outreach efforts and other initiatives also become critical to assessing the collective achievements of the program rather than focusing on individual Agency performance. Each Agency’s Annual Report addresses EISA compliance by including: examples of SBIR/STTR projects related to energy efficiency or renewable energy; procedures and mechanisms used during the reporting fiscal year to give priority in the SBIR/STTR to energy efficiency and renewable energy projects; and, specific actions taken to promote and support energy efficiency and renewable energy research projects.

INTERAGENCY POLICY COMMITTEE (IPC)



The Interagency Policy Committee (IPC), as created by the Reauthorization Act, is co-chaired by SBA and the White House Office of Science and Technology Policy (OSTP). The IPC is comprised of representatives from all SBIR/STTR Agencies with the collective purpose to review issue areas and make policy recommendations on ways to improve SBIR/STTR program effectiveness and efficiency.

Throughout FY13, SBA, OSTP and the Agency representatives collaborated through the IPC in monthly meetings at SBA to formulate the policy recommendations to Congress while also striving to improve administrative programmatic efficiencies, government data and reporting mechanisms, overhauling the public-facing www.SBIR.gov portal, and exploring new mechanisms by which cooperative efforts can help small businesses gain access to the SBIR/STTR programs.



U.S. SMALL BUSINESS ADMINISTRATION (SBA)



SBA is charged with reviewing the progress of the SBIR/STTR programs across the federal government, serving as the coordinating agency for all participating Agencies in the SBIR and STTR programs. SBA's Office of Technology, within the Office of Investment and Innovation (OII), oversees the SBIR/STTR Agencies in their individual program implementations, provides policy guidance and directives as authorized by statute, reviews Agency progress and performance, collects required annual reporting data, and reports to the U.S. Congress. SBA administers the program with maximum flexibility, allowing the Agencies to tailor their SBIR/STTR activities in ways that best address their unique Agency missions, cultures, and R&D needs. SBA issues Policy Directives to provide the guidance governing the Agencies' program implementation, compliance, and reporting. SBA maintains updated versions of the SBIR and STTR Program Policy Directives at www.SBIR.gov.

SBA'S SBIR/STTR PROGRAM INFORMATION DATABASE – WWW.SBIR.GOV

SBA maintains the central, SBIR/STTR program-wide database of award and performance information, collectively referred to as www.SBIR.gov. The primary purpose of the continual investment in SBIR.gov is to both meet the statutory requirement of providing a secure, web-based electronic system capable of collecting, cataloguing, and displaying program metrics in one centralized place and to also provide interested stakeholders with a one-stop-shop repository of valuable, searchable, SBIR/STTR program information. The complex platform collects and hosts multiple levels of programmatic information across 7 relational databases:

- *Solicitations*- all SBIR/STTR solicitations and topics from all Agencies;
- *Company Registry*- company-specific and proprietary information collected from all SBIR/STTR small business applicants and awardees;
- *Applications*- all SBIR/STTR proposals from all Agencies;
- *Awards*- all SBIR/STTR awards by number and dollar as collected from all Agencies;
- *Commercialization*- company-specific and proprietary information collected from all SBIR/STTR small business awardees and awarding Agencies on all SBIR/STTR award commercialization efforts and results of;
- *Annual Report*- required Agency reporting of all SBIR/STTR activities to SBA ; and,
- *Other*- information required by statute to be submitted but does not fit into any of the other database.

Although certain database elements containing proprietary information are unavailable to the public, the www.SBIR.gov portal allows visitors the flexibility to self-identify into roles based on individual interests and needs. Users may search award topics, solicitations and award activity by Agency or small business. Small businesses may connect with outside resource partners for SBIR/STTR-related support or services and utilize outreach tools and informational links to Agency offices, conference listings, registrations, webinars, tutorials, and blogs. Throughout FY13, SBA and the Agencies continued to work together to improve the government databases' data and reporting mechanisms while providing transparency to mitigate fraud, waste, and abuse:

- Upgraded SBIR.gov design and function to import Agency SBIR/STTR program data;
- Improved site content as a one-stop-shop for small businesses interested in participating;
- Unified solicitations across the Agencies to provide a searchable site for use by both Agencies and small business concerns;
- Reconciled differences in award data collected across Agencies and across years from legacy systems;
- Developed detailed data-structure framework for reporting new data requirements under the Reauthorization Act; and,
- Collected Agencies' Annual Reports electronically to SBA through SBIR.gov to prevent duplicative submissions.





The Federal and State Technology (FAST) Partnership program is an important catalyst for stimulating economic development among small, high technology businesses through federally-funded innovation and R&D programs, with a particular emphasis on helping socially and economically disadvantaged firms compete in the SBIR and STTR programs. FAST program participants support areas such as: small business R&D assistance; technology transfer from universities to small businesses; technological diffusion of innovation benefiting small businesses; proposal development and mentoring for small businesses applying for SBIR/STTR grants; and, commercializing technology developed through SBIR/STTR grants. (For more information on FAST, including legislative history, please see Appendix D).

In FY13, SBA awarded 20 FAST grants of \$95,000 each to 20 state and local economic development agencies, business development centers, and colleges and universities to support innovative, technology-driven small businesses. SBA's Office of Technology, within OII, issued the FY13 FAST program announcement on May 6, 2015. Candidates for the FAST program were submitted by the governors of all 50 U.S. states and territories, as FAST grants require varying levels of matching funds depending upon the sponsoring state or territory. All eligible proposals submitted by the closing date of June 7, 2013, were evaluated first by a panel of senior SBIR program managers, who made recommendations to officials from SBA, DOD and NSF. Based on the merit of each proposal, the joint review by the agencies led to the selection of the 20 FAST Awardees, with project and budget periods for 12 months, starting October 1, 2013.

The following 2013 FAST Awardees were announced by SBA on July 25, 2013:

Arizona Commerce Authority
Board of Trustees of the University of Arkansas
Connecticut Innovations, Inc.
University of Delaware
Louisiana State University and A&M College
BBC Entrepreneurial Training & Consulting LLC, Michigan
Innovate Mississippi
Curators of the University of Missouri
Montana Department of Commerce
Technology Ventures Corporation, New Mexico

Research Foundation for the State University of New York
University of North Dakota
Ohio Aerospace Institute
Oregon Built Environment & Sustainable Technologies Center
Ben Franklin Technology Partners Corporation, Pennsylvania
Inter-American University of Puerto Rico SBTDC
South Dakota Governor's Office of Economic Development
Tennessee Technology Development Corporation, Launch Tennessee
Vermont State Colleges
Board of Regents of University of Wisconsin System





The annual Tibbetts Awards, named for SBIR program pioneer Roland Tibbetts, are presented to models of excellence for developing and commercializing new technologies through participation in the SBIR/STTR programs. Small businesses having received SBIR or STTR Award assistance are eligible for the Tibbetts Awards, and winners are selected based upon the merit of their SBIR/STTR-funded work, the economic and societal impacts of their technological innovations, and the successful commercialization of developed technologies. Similarly, individuals selected for Tibbetts Awards are selected based upon the merit of their roles in SBIR/STTR-funded R&D without having received any SBIR or STTR Award assistance.

The SBIR Hall of Fame recognizes companies with extraordinary successes in research, innovation, and commercialization within the SBIR program. Eligible nominees must have previously won SBIR Award economic assistance and shown continued and significant contributions to the goals of the SBIR program by evincing success beyond participating in the SBIR program through ingenuity, resolve and longevity.

The 2013 Tibbetts and SBIR Hall of Fame Awards were presented during a White House ceremony on May 20, 2013, by then SBA Administrator Karen Mills, Senator Mary Landrieu, Chair of the Senate Small Business and Entrepreneurship Committee, and Rebecca Bagley, CEO and President of NorTech.

SBA honored 18 high-tech small businesses and 3 individuals with Tibbetts Awards for their outstanding roles in federal R&D, innovation, and job creation. In addition, SBA named 3 former SBIR participants to the 3rd annual SBIR Hall of Fame for their extraordinary successes in research, innovation, and product commercialization throughout the 30 year history of the SBIR program

SBIR Hall of Fame

*Aerovironment, Inc.
Monrovia, CA*

*Autonomous Technologies Corporation
Orlando, FL*

*Biogen-Idec
Weston, MA*

Tibbetts Individuals

*Richard Flake
Air Force Research Laboratory (AFRL/XPP)
Wright-Patterson AFB, OH*

*Joe Hennessey, Ph.D.
NSF SBIR/STTR Senior Advisor
Arlington, VA*

*Tizoc Loza
Northrop Grumman Corporation
Falls Church, VA*



Tibbetts Small Businesses

*Accuray, Inc.
Sunnyvale, CA*

*Aurora Flight Sciences Corporation
Cambridge, MA*

*Beacon Interactive Systems, LLC
Cambridge, MA*

*CPSI Biotech
Owego, NY*

*Design Interactive, Inc.
Oviedo, FL*

*Ecovative Design, LLC
Green Island, NY*

*GS Engineering, Inc.
Houghton, MI*

*Harmonia Holdings Group, LLC
Blacksburg, VA*

*Institute of Disabilities Research and
Training (IDRT), Inc.
Wheaton, MD*

*Kutta Radios, Inc.
Phoenix, AZ*

*MBF Bioscience
Williston, VT*

*Modular Robotics
Boulder, CO*

*Ocean Renewable Power Company, LLC
Portland, ME*

*Orono Spectral Solutions, Inc.
Bangor, ME*

*Protochips, Inc.
Raleigh, NC*

*Syntonics, LLC
Columbia, MD*

*Tier1 Performance Solutions, LLC
Covington, KY*

*Torrey Hills Technologies, LLC
San Diego, CA*



Design Interactive, Inc. (DI) based in Oviedo, Florida, is a certified economically disadvantaged woman-owned small business with almost 15 years of excellence in providing innovative, next-generation human-systems integration and training solutions.

The firm provides solutions in training system performance assessment, readiness assessment, and next generation Human Systems Integration.

DI has provided successful solutions in training effectiveness evaluations for businesses of all sizes, including Fortune 500 clients. Military Training Technology magazine named Design Interactive as one of the top Modeling and Simulation Companies for Innovation in 2011 and 2012.





The DOD SBIR/STTR Program’s mission is to elicit innovative solutions from the small business community that address defense technology gaps confronting the DOD and to include technologies that will also have high commercialization potential in the private sector. DOD issues solicitation topics supporting the Warfighter in different cycles throughout the year, with 3 SBIR and 2 STTR annual solicitations for proposals.

The DOD SBIR program is made up of 13 participating components:

- Department of the Army (Army)
- Department of the Navy (DON)
- Air Force (USAF)
- Missile Defense Agency (MDA)
- Defense Advanced Research Projects Agency (DARPA)
- Joint Science and Technology Office for Chemical and Biological Defense (CBD)
- U.S. Special Operations Command (SOCOM)
- Defense Threat Reduction Agency (DTRA)
- National Geospatial-Intelligence Agency (NGA)
- Defense Logistics Agency (DLA)
- Defense Microelectronics Activity (DMA)
- Office of Secretary of Defense (OSD)
- Defense Health Program (DHP)

The DOD STTR program is made up of 6 participating components:

- Department of the Army (Army)
- Department of the Navy (DON)
- Air Force (USAF)
- Missile Defense Agency (MDA)
- Defense Advanced Research Projects Agency (DARPA)
- Office of Secretary of Defense (OSD)



COMMERCIALIZATION READINESS PROGRAM (CRP)

DOD also administers the Commercialization Readiness Program (CRP), which was originally authorized and created as part of the National Defense Authorization Act of Fiscal Year 2006 as the Commercialization Pilot Program (CPP) under the Secretary of Defense and the Secretary of each Military Department. The purpose of the CRP, made permanent under the Reauthorization Act, is to accelerate the transition of SBIR/STTR funded technologies to Phase III, especially those providing significant benefit to the nation’s warfighters in improved performance, new capabilities, increased reliability, and cost savings well exceeding investment. Phase III commercialization work derives, extends, or logically concludes from efforts performed under prior SBIR/STTR funded projects, and requires small businesses to obtain funding from the private sector and/or non-SBIR/STTR government sources. Under the CRP, up to 1% of the available SBIR funding may be used by systems commands (SYSCOMs) for administrative support to provide non-financial resources through activities that enhance the connectivity among SBIR/STTR firms, prime contractors, and DOD science & technology and acquisition communities. The CRP may also support improving a firm's capability to provide an identified technology to a Department, directly or as a subcontractor.

In FY13, DOD obligated approximately \$6.1M to CRP activities by USAF, ARMY and DON. DOD’s FY13 CRP report provides detailed information on the individual Departments’ activities and initiatives, as well as information on the aggregate total of 107 specific projects that were initiated and funded. The full report may be made available to Members of Congress upon request.





Commercialization

USAF’s CRP efforts brought together key stakeholders to identify and accelerate the maturation and transition of high potential projects to the warfighter or to the commercial sector. CRP Transition Agents (TAs) in each product center help focus SBIR/STTR topics on priority technology needs while working with small businesses, system program offices, SBIR program managers, technical points of contact, and industry technology integrators to identify transition funding sources in SBIR Technology Transition Plans (STTPs).

With Navy participation, AF continued to organize technology interchange workshops at major defense contractor sites. Boeing, Battelle, Northrop Grumman, Raytheon NCS, Raytheon SAS, ATK, and Sierra Nevada Corporation hosted workshops and actively engaged with 120 SBIR companies. CRP TAs also supported AF’s Life Cycle Management Center with a proactive SBIR time-phased workshop process focused on the Program Executive Officers (PEOs) at Wright-Patterson AFB, OH, and participated in the small business industry day at Hanscom AFB, MA. These activities featured use of an AF SBIR data-mining tool that now includes DOD STTRs. AF also hosted a booth at the Navy Opportunity Forum.

The CRP manager also began planning for a series of small business industry days to better integrate AF needs with small businesses and SBIR technology solutions. AF hopes to schedule at least 3 such events a year with all AF PEOs, programs and sustainment complexes.

During FY13, 47 CRP projects were funded, for a total of 349 projects since inception of the SBIR program. 18 projects were identified as successes; providing significant benefit to warfighters in improved performance, new capabilities, and increased reliability at a cost savings well-exceeding investment. The following noteworthy SBIR projects also included STTPs:



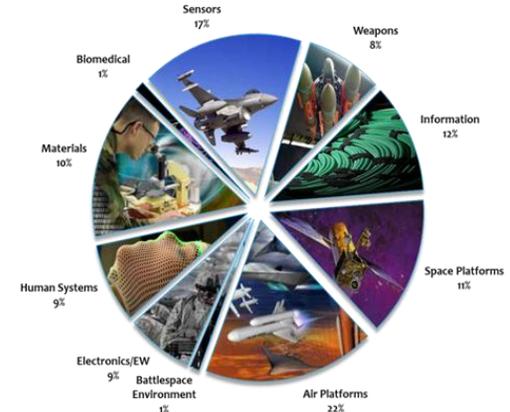
U.S. AIR FORCE

- Inserting cryogenic machining into the F-35 supplier base will result in approximately \$267 Million in cost savings for machined titanium parts;
- Extending InfoSphere to mobile platforms via optimized, off-the-shelf technologies will increase warfighter’s access to critical intelligence information; and,
- Developing advanced frangible composite structures for frangible towers that will break away if impacted will leave an aircraft flyable and with minimal damage.

Success Stories

- Richard Flake, CRP manager, received a 2013 Tibbetts Award, for outstanding work as an individual in the SBIR/STTR program, helping to meet federal R&D needs, encouraging diversity, and increasing commercialization.
- FIRST RF Corporation, in Boulder, CO, developed a wideband low-profile radiator and several related antennas in support of the Joint Improvised Explosive Device Defeat Organization's sponsored Sand Dragon program. Sand Dragon is a 200-lb. runway-independent, long-endurance remotely-piloted vehicle providing route surveillance and improvised explosive device detection. From Phase II funding under Sand Dragon, FIRST RF released over 10 antenna products for both manned and unmanned airborne platforms. In March 2013, FIRST RF received a Phase III contract with a \$25 Million ceiling to develop broadband antennas for airborne radar and communications.
- Pharad LLC, in Hanover, MD, developed innovative, environmentally-compliant wideband conformal antenna technologies for integration into ground vehicles, such as high-mobility multipurpose wheeled vehicles, mine-resistant ambush-protected vehicles, and aerospace vehicles used by Special Operations. The technology, integrated onto a Scan Eagle unmanned air vehicle, realized a 15-mile link range at a 5,000 feet altitude. The reduced weight and improved aerodynamics increased flight range and persistence, and the SBIR funded technology became Pharad's fastest growing product line once introduced to the market.

FY13 Topics by DOD Technology Focus Areas

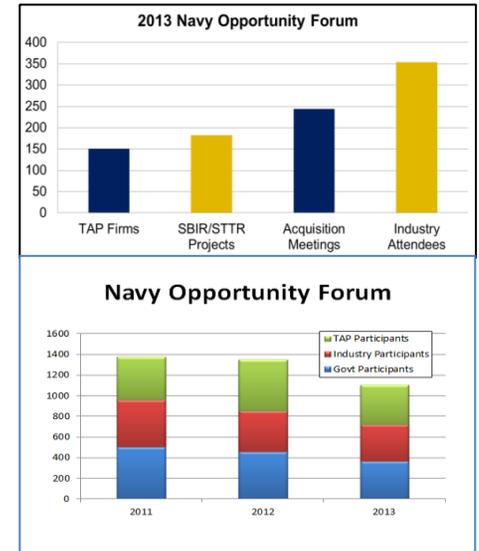




Transition Assistance Program and Navy Opportunity Forum®

The DON Transition Assistance Program (TAP) is a unique eleven month program with the sole goal of increasing commercialization success of our SBIR/STTR firms.

- Culmination of TAP is the Navy Opportunity Forum® providing exposure to government & industry acquisition decision-makers. Virtual Acquisition Showcase allows technologies to be showcased to those unable to attend in person
- From inception until FY13, DON TAP participants received over \$1.86B in Phase III funding within the first 18 months of the Navy Opportunity Forum



Bringing Small Business Innovation to the Fleet/Force



Surface Ship Torpedo Defense (SSTD) Program - Deployed in FY13 on USS George H.W. Bush 1 year ahead of accelerated Initial Operational Capability (IOC) and 4 years ahead of initial IOC! Family of systems: *Torpedo Warning System (TWS)*, *Anti-Torpedo Torpedo (ATT)*, & *AN/SLQ-25C (Nixie) Counter Measure* Prime Contractor for TWS is DON SBIR firm 3 Phoenix, Inc.

- All aircraft carriers to be equipped with SSTD by 2035
- 24 Contributing SBIR/STTR Projects
- TWS won 2013 DOD “Myth-Busters” Award

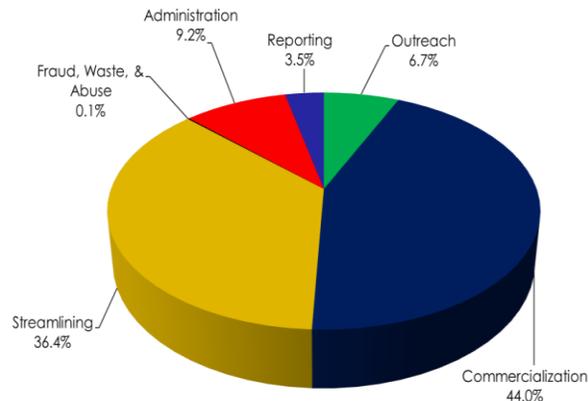


Electromagnetic (EM) Railgun

Game Changer for the Warfighter!

- Long-range weapon fires using electricity
- Multi-discipline/industry SBIR support
- 47 SBIR/STTR Technology Providers
- 94 Contributing SBIR/STTR Projects

FY13 Administrative Funding Pilot Program



Commercialization

- Development of SBIR University, a federal-wide SBIR/STTR education platform for small businesses
- DON Phase III Acquisition Guidebook development
 - Resource for Contracting Officers and PMs to support Phase III contracts
- Transition Support to small businesses ,including market assessments, risk analysis, and OEM activities

Outreach

- 2013 National SBIR Conference – spearheaded by DON!
 - 320 Small Business Attendees; 165 Government Attendees
 - Over 40 available 1-on-1 tables, approximately 675 meetings between SBCs and govt/industry
 - 190+ attended the Women- and Minority-Owned Business session

Administration

- Continuous process improvement including updates to PM Database
- Training personnel on topic development, proposal evaluation, contract monitoring, and Fraud, Waste, & Abuse
- Development of internal SYSCOM metrics for enhanced reporting
- Implementation of new procedures for Phase II Initial Proposal evaluations
- Phase II project reviews and additional follow-up with small businesses





Key FY13 Achievements

Administration

The MDA SBIR/STTR Program Management Office (PMO) made many changes to processes and procedures:

- Updated topic development process, proposal evaluation process, and selection notification system, resulting in the distribution of 571 select/non-select letters within 90 days of solicitation close. Evaluators may now select from uniform pre-populated statements to reflect proposal assessments instead of creating narrative assessments, thereby significantly reducing time spent on evaluations and allowing more time for contract development
- Developed standard operating procedures to implement policy changes regarding certifications involving life cycle, funding, and venture capital. MDA implemented a process to review questions prior to award; a requirement for small businesses to complete and comply with certifications at time of award; and, a Contract Data Requirements List for firms to provide certifications throughout period of performance.
- Emphasized availability of Discretionary Technical Assistance (DTA), employing a process for researching and approving DTA requests.
- Modified solicitation instructions to inform small businesses of new rules and regulations for submitting proposals and certification requirements, DTA funding, and eligibility of Phase I awardees for submitting Phase II proposals.
- Provided detailed training for personnel to increase consistency and efficiency, resulting in a better-informed community of technical monitors with understanding of- and adherence to- standards, policies, procedures, guidelines, and potential for fraud, waste, and abuse.

Outreach

MDA hired a fulltime Outreach Manager with significant prior DOD SBIR experience:

- Revised the outreach process from a market commercialization focus to connecting small businesses directly with prime contractors.
- Focused on outreach efforts in underrepresented states and coordinated informative discussions between technical representatives and small businesses in AR, KY, LA, NE, and SD, and conducted focused discussions with state representatives in MT, NE, ND, and SD.
- Developed metrics and established baselines for measuring outreach efforts in underrepresented states and underrepresented demographics. Although not reflective of FY13 efforts, MDA received 19 proposals from underrepresented states, representing 2% of all proposals received, and 246 proposals from underrepresented demographic groups, representing 33% of all proposals received.

Commercialization

MDA created a Commercialization and Transition Office (CTO) and developed a commercialization plan that included applying best practices and lessons learned from other agencies, simplifying processes for monitoring potential and existing 'Beyond Phase II' efforts, and creating a roadmap for transitioning end products to Ballistic Missile Defense System (BMDS) programs:

- Conducting briefings by research areas and provided detailed contract progression questionnaires to technical monitors, gaining insight on how to better match-up Agency technology needs with promising innovations.
- 6 Phase III efforts were initiated and awarded in FY13; 3 of the 6 via the Rapid Innovation Fund (RIF).
- Certified over \$5 Million in matching funds for 5 SBIR/STTR Phase II efforts.





The HHS SBIR/STTR programs are administered exclusively by the National Institutes of Health (NIH) to invest in early-stage, biomedical, and health and life science companies creating a wide range of innovative technologies aligning with NIH’s mission to improve health and save lives. A key objective of this work is translating promising technologies with strong potential for commercialization to the private sector through strategic public and private partnerships, so that life-saving innovations reach consumer markets. Key highlights for FY13 include:

- Awarding over 1,100 new SBIR/STTR Phase I, Phase II, Phase IIB & Fast-track applications to US small businesses
- Implementing key features of the Reauthorization Act, including the Venture Capital (VC) provision to allow small businesses that are majority owned by multiple VC firms, hedge funds, or private equity firms to apply to NIH SBIR only
- Beginning to develop and implement the Direct Phase II and SBIR/STTR switching mechanism
- Hired an SBIR/STTR statistician and communications coordinator to help with Congressional reporting and targeted SBIR/STTR outreach

NIH SBIR/STTR Technical Assistance Programs

NIH has two technical assistance programs to help small businesses transition their technology to the marketplace. The Niche Assessment Program (Niche) provides a detailed market analysis for Phase I Awardees. The Commercialization Assistance Program (CAP), a 9-month customized training program, helps small businesses that have received a Phase II or Phase IIB Award accomplish key commercial goals. Each program services a wide-range of companies in different industry sectors. In FY13:

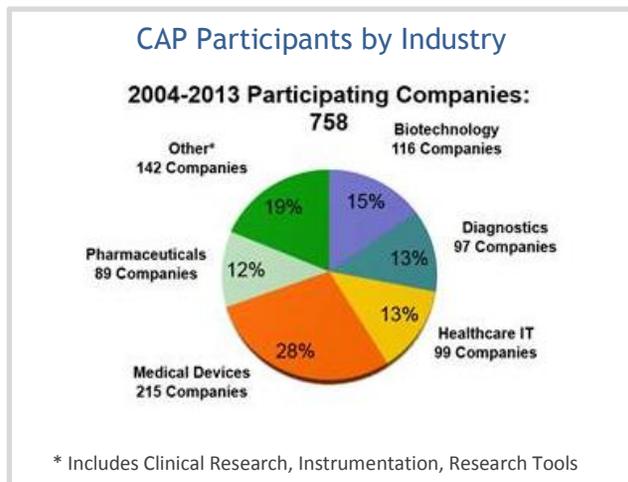
- Niche had 125 participating companies & CAP had 68 participating companies
- From 2004 – 2013, CAP has helped small businesses create over 1,680 jobs, raise over \$586 Million in non-governmental funding, form thousands of strategic partnerships and sign over 586 deals



Key NIH SBIR/STTR Outreach Statistics

NIH’s SBIR/STTR outreach activities during FY13 were directed at identifying new SBIR/STTR applicants, with a special emphasis on women-owned businesses (WOSB), socially and economically disadvantaged businesses (SDB) and Institutional Development Award (IDeA) states. Overall outreach metrics for FY13 include:

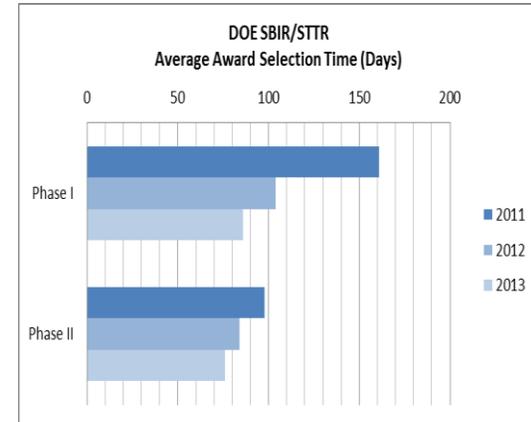
- Began collaborating with the IDeA program to reach states that have historically received lower levels of NIH funding. Attended 3 IDeA regional conferences in MO, DE, and OK
- Launched the @NIHsbir twitter account
- Participated in 45 events (webinars and in-person) hosted in 21 states (including 6 IDeA states)
- Held the 14th Annual NIH SBIR/STTR conference in Louisville, KY, an IDeA state, that reached 435 attendees
- Began planning the 15th Annual NIH SBIR/STTR conference in South Dakota, an IDeA state
- Reached 277 WOSB through 7 events
- Reached 150 SDB through 6 events



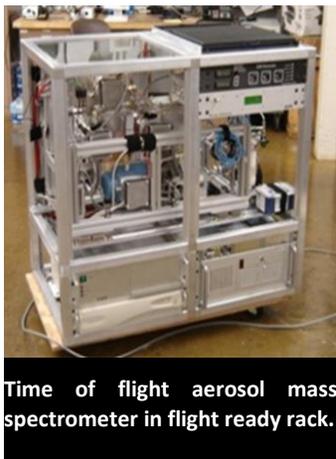


The Department of Energy SBIR/STTR Programs continued to implement changes required in the Reauthorization Act and the following additional improvements in FY13:

- Notified all SBIR/STTR applicants of award decisions in less than 90 days as required by statute. Implemented several operational changes to reduce processing time from 160 days in FY 2011 to less than 90 days in FY13
 - Leveled DOE workload by increasing the number of annual Phase I solicitations from one to two;
 - Implemented Phase I Letters of Intent to permit identification of merit proposal reviewers in advance of application submission; and
 - Utilized administrative funding to accelerate implementation of a web-based application management system
- Implemented a webinar-based outreach program associated with each Phase I solicitation that permits applicants to interact with DOE technical program managers (topic webinars) as well as understand the application process (Funding Opportunity Announcement webinars). These webinars greatly expanded our outreach audience beyond traditional SBIR/STTR national, regional, and state conferences and is improving the percentage of awards going to first-time applicants and awardees.
- Improved technology transfer resulting from DOE-funded basic and applied science, by including technology transfer opportunities from DOE National Labs and universities as subtopics for the first time in FY13. In this inaugural year, two Phase I Awards were made which provided small businesses a no-cost option to license the technology in addition to an SBIR/STTR grant.



DOE 2013 SBIR/STTR Small Business of the Year



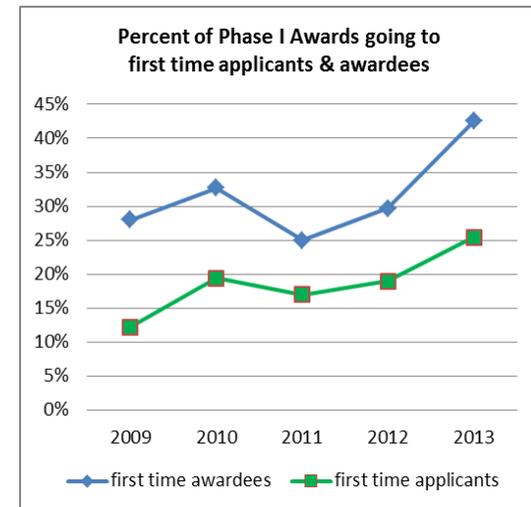
Time of flight aerosol mass spectrometer in flight ready rack.



Aerodyne Research

*Aerodyne Research, Inc.
Billerica, MA*

This technology has led to major improvements in our understanding of the sources, sinks, and atmospheric transformations of ambient aerosol. The instrument developed in this project was deployed on board the DOE Gulfstream research aircraft during the MaxMex atmospheric monitoring campaign over Mexico City in 2006 and the VOCALS campaign in Chile in 2008. This program contributed to the delivery of over 70 ToF-AMS systems (\$25 Million in revenue), about 10 of which have been deployed on aircraft platforms worldwide.





NASA SBIR/STTR provides the small business sector and research institutions with an opportunity to compete for funding to develop technology for NASA and commercialize that technology to spur economic growth.

- Annual Solicitations for Phase I Awards
- Phase II proposed six months later
 - Phase II-E and 2-X: Cost-sharing opportunities to promote extended R&D efforts of current Phase II contracts.
- Phase 3: Commercialization of SBIR/STTR-funded technology
 - Funded from sources other than SBIR/STTR, may be awarded without further competition.
- Commercialization Readiness Program is a matching funds program to further facilitate infusion or commercialization

Success Stories

Yardney Technical Products, Pawcatuck, CT
Lithium ion Batteries

Creare, Hanover NH
Space qualified vacuum pump

Starsys Research, Boulder, CO
Goatboxes for robotic arm

Honeybee Robotics, NY, NY
Dust removal tool

inXitu, Campbell, CA
Chemistry and Microbiology experiment (CheMin) instrument

Grammatech, Ithaca NY -
Software for rover operations



"The tests that we are conducting with Smart SPHERES will help NASA make better use of robots as assistants to and versatile support for human explorers -- in Earth orbit or on long missions to other worlds and new destinations"

-Terry Fong, Project Manager of the Human Exploration Telerobotics project and Director of the Intelligent Robotics Group (Ames)

Aurora Flight Sciences Corp. -- receives Phase III funding in July 2012 to further develop the Synchronized Position Hold, Engage, Reorient, Experimental Satellites (SPHERES). These are bowling-ball sized spherical satellites that are used inside the space station to test a set of well-defined instructions for spacecraft performing autonomous rendezvous and docking maneuvers.



BRS AVIATION

00322

LIVES SAVED

Defining Aviation Safety

"NuSTAR will help us find the most elusive and most energetic black holes, to help us understand the structure of the universe"

-Fiona Harrison, NuSTAR principal investigator

NuSTAR

Deployable Mast

Focal Plane/ Detectors

Optics

AEC-Able Engineering Company developed a 10 meter long boom for the Nuclear Spectroscopic Telescope Array (NuSTAR). The boom supports key focusing elements of the high energy X-ray observatory.

NuSTAR, a NASA SMD SMEX mission, successfully deployed the first focusing telescopes to image the sky in the high energy X-ray region of the electromagnetic spectrum on June 13, 2012 with the boom following on June 21, 2012.

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10 FINALIST TEAMS SELECTED

Teams Advance in Global Competition to Develop Customer Focused Diagnostic Device

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The NSF SBIR/STTR Programs seek to transform scientific discovery into societal and economic benefit by catalyzing private sector commercialization of technological innovations. The program increases the incentive and opportunity for startups and small businesses to undertake cutting-edge, high-quality scientific R&D to meet NSF's needs.



FY13 Highlights

- Administrative Impact - Streamlined the submission process by running SBIR and STTR competitions in parallel and with the same topics, as opposed to a staggered submission, with STTR focusing on a specific topic.
- Commercialization Impact - Piloted the Beat-the-Odds Bootcamp at the Phase I Grantees Conference, which compacts and adapts I-Corps™ methodology and curriculum for commercialization/customer discovery training relevant for Phase I grantees.
- Other Impact - Emphasized the focus of STTR on the commercialization of NSF-funded research. Released special STTR solicitations in collaboration with NSF colleagues in academic research divisions: Accelerating Sustainability using Enabling Technologies (ASET) and Enhancing the Bioeconomy using emerging Biological Technologies (EBBT).
- Geographic/Socioeconomic Impact - Companies in 48 U.S. states and territories were awarded in FY13, and companies in 51 U.S. states and territories were supported in FY13.

Success Stories

- Acquisitions - BluefinLabs (FY 2009; 1 NSF Phase II Award) was acquired by Twitter for “nearly \$100M”. EcoATM (FY 2011; 1 NSF Phase II Award) was acquired by Outerwall for \$350M.
- Private Sector Awards - Affectiva (FY 2011; 1 NSF Phase II Award) made Inc.’s 25 Most Audacious Companies of 2013 list. Asius Technologies (FY 2011; 1 NSF Phase II Award) made the top 5 of the Wall Street Journal Startup of the Year contest.
- Tibbetts Awards - Torrey Hills Technologies (FY 2012; 1 NSF Phase II Award), Ecovative Design (FY 2010 and 2011; 2 NSF Phase II Awards), Modular Robotics (FY 2009 and 2013; 2 NSF Phase II Awards), and Institute of Disabilities Research and Training (IDRT) (FY 2011; 1 NSF Phase II Award).

Outreach

- Postdoctoral Program - Outreach through ASEE informing attendees at conferences like Great Minds in STEM (HENAAC Conference) about NSF SBIR/STTR in general and the Postdoctoral Fellowships available at NSF-funded Phase II SBIR/STTR grantees.
- Community College Outreach - Outreach through NSF’s Advanced Technology Education Centers program, which focuses on two-year colleges. Outreach to the Mississippi River Consortium regarding research opportunities for Community College teams with NSF-funded Phase II grantees (Phase IICC).
- Trade Show Outreach - Started Eureka Park in partnership with the CEA at the Consumer Electronics Showcase. Began with nearly 30 NSF SBIR/STTR companies and then added 94 other start-up companies around the world. Excellent for commercialization opportunities for grantees and outreach opportunities for the program.

National Science Foundation
WHERE DISCOVERIES BEGIN

Digital Outreach - Established Twitter and LinkedIn accounts and an electronic newsletter to increase outreach, which helps to increase submissions from underrepresented groups. Established and standardized webinar and Q&A webinar processes. One-off webinars for various state organizations. Completely revamped the program website for a better user experience, especially for first-time applicants.





United States Department of Agriculture
National Institute of Food and Agriculture

The USDA SBIR program is administered exclusively by the National Institute of Food and Agriculture (NIFA), which offers competitively-awarded grants to qualified small businesses to support high quality, advanced concepts research related to important scientific problems and opportunities in agriculture that could lead to significant public benefits.

USDA Commercialization Assistance Training Program (USDA-CATP)

- The objective of the USDA – CATP is to provide support services to Phase II Awardees to develop and transition their research into a commercial and marketable product / service to further the economic goals of the small company while satisfying the short and long-term goals of the USDA.
- In FY13 USDA assessed, mentored, and assisted 23 Phase II projects to craft commercialization strategies and equipped them with a detailed strategic action plan to guide the company post program.

FY13 USDA – CATP Successes

Some key observations among the FY13 companies since their completion of the program include:

- 16, or 84% of companies, have had at least one meeting with a prospective partner, and of those companies, 50% led to ‘closed’ deals, with one company securing a \$1.3M deal by the close of the CATP.
- 12, or 63% of companies, have had Confidentiality Agreements signed, with one company having a total of 21 CDAs signed.
- 47% of companies filed 153 patents since the completion of the CATP.
- 4 companies have filed 10 international pending patents and 6 international granted patents.
- A total of 117 disclosures were signed.
- 6 or, 32% of responding companies, filed for 33 pending patents.
- 4 or, 21% of responding companies, filed for 19 provisional patents.
- 8 or, 42% of responding companies, have obtained a total of 16 in-licenses and out-licenses for their product or technology.
- 11 or 58% of companies indicated an increase in the number of employees since their participation in the CATP.
- The total number of employees increased by 16% for a total of 25 new hires.
- 58% of companies’ largest source of revenue was from R&D Grant/Contracts.
- No companies reported sales above \$5M, but 21% of companies reported having \$1,000,000 to \$4,999,999 dollar range of sales. Approximately 16% reported being in the \$500,000 to \$999,999 range and 22% reported being in the \$100,000 to \$499,999 range.



Future Commercialization Tracking

- Utilizing the 3% Administrative fund, USDA will be conducting additional tracking of past Phase II grantees to determine commercialization successes.





The DHS SBIR Program serves as the centralized office to increase small business R&D in innovative homeland security solutions for all DHS operational units and to manage technology transfer throughout DHS and the DHS laboratory network. The DHS SBIR Program is administered through the Science and Technology Directorate (S&T) and the Domestic Nuclear Detection Office (DNDO).

S&T SBIR focuses on near-term commercialization and delivery of operational prototypes to federal, state and local emergency responders and managers, as well as internal DHS operational units. Annual solicitations consist of topics relevant to the S&T Directorates: Borders and Maritime Security; Chemical and Biological Defense; Cybersecurity; Explosives; Resilient Systems; and, First Responders.

DNDO SBIR focuses on aggressive and expedited small business R&D developing break-through technologies to enhance detection capability for the transportation, possession, storage and use of radioactive material out of regulatory control. These technologies should possess near-term technological potential for successful transition to system development, acquisition, deployment, and/or commercialization. Annual solicitations consist of topics relevant to the DNDO Directorates: Architecture and Plans; Product Acquisition & Deployment; Transformational & Applied Research; Operations Support; Assessments; and National Technical Nuclear Forensics Center.



DHS SBIR/STTR Addresses the R&D Needs of the 7 DHS Operational Units

- U.S. Coast Guard
- U.S. Transportation Security Administration
- U.S. Customs and Border Protection
- Federal Emergency Management Agency
- U.S. Citizenship and Immigration Services
- U.S. Immigration and Customs Enforcement
- U.S. Secret Service (and First Responders)



DHS SBIR-funded Technology Enables U.S. Small Businesses to be Successful and Profitable

- 384 Small Businesses in 43 States have received DHS SBIR Funding
- 85 Patents Filed
- 31 Patents Issued
- 28 Patents Pending
- 40+ Commercial Products in the Market*
- 30+ Mergers and Acquisitions

** data from a 2013 survey (includes standalone products, active licenses, products with DHS technology incorporated)*





ED’s SBIR program, operated by the Institute of Education Sciences (IES), provides funding to small businesses and partners to translate their innovative R&D ideas into commercially viable products to address educational challenges and improve relevant outcomes for teachers and students, including those with- or at-risk for- disabilities. The funds enable firms to develop prototypes, conduct iterative R&D to inform refinements, access full-scale development, and perform pilot research in schools to determine the feasibility and promise. After a project ends, firms commercialize or disseminate the products to schools, teachers, and students, producing solid results and gaining media and key stakeholder recognition of ED SBIR as an innovation driver in the ed-tech ecosystem.

Key FY13 Achievements

- Website upgrades - launched new website <http://ies.ed.gov/sbir> & video page <http://ies.ed.gov/sbir/videos.asp>
- Significant outreach to top-tier developers and key stakeholders in the burgeoning ed-tech ecosystem.
- Substantive Technical Assistance to over 200 potential applicants before solicitations were released and to all awardees during- and after- the project period.
- Driving Cross Agency Collaboration - ED SBIR led a successful joint-SBIR solicitation with DARPA SBIR on education games; ED SBIR works closely with WH/OSTP, SBA, ACF, NSF, and NIH; ED SBIR is a key member of several inter-agency working groups; ED SBIR invited Individuals from NSF, NASA, NIH, CDC and DOD to review ED SBIR proposals.
- Authoring Newsletters, ED Homeroom Blogs - See examples: <http://ies.ed.gov/sbir/news.asp>
- Briefings - provided to leadership teams at ED, OSTP, and other Agencies.
- Organizing **Ed-Tech Expos** - In 2013 and 2014, ED SBIR hosted major events to showcase its products.
- Visibility - approximately 1.8 million students in 20,000 schools in all 50 states used products funded by ED SBIR.
- Recognition - as an “innovation driver” in national publications such as *Education Week*, *Technomy*, *Edsurge*, *GamesCo*, and *TechCrunch*. (See all articles here: <http://ies.ed.gov/sbir/news.asp>).

Examples of ED/IES SBIR-funded Products used by 100,000+ Students

- In [Filament Games’ Reach for the Sun](#) middle school students “do photosynthesis” in a game by growing a sunflower from seed to full plant to learn key science concepts.
- In [Sokikom](#), grade school students “chop blocks” in a machine to practice fractions.
- In [Mindset Works](#), students’ learn a growth mindset to strengthen the learning process.
- [Handhold Adaptive’s iPrompts](#), supports students with autism in daily tasks.
- [NimbleTools](#) accommodates for the needs of students with disabilities during assessments.



Industry Awards

Several ED SBIR products have won prestigious national industry competitions, including: Filament Games, winner at the [National STEM Video Games Challenge](#) for [You Make Me Sick](#), and winner of the [Best Game](#) for [Reach for the Sun](#); [Sokikom](#), winner of multiple awards [for its math games](#); Fluidity Software, winner of the [SIIA Innovation Incubator](#) for a [math teaching tool](#); Triad Interactive, winner of the [CODiE award](#) for its [math game](#); and Handhold Adaptive, listed in the [Autism Speaks Education Technology](#) guide for [its app](#) for children with autism.

Please note: FY13 was the final year that a second SBIR program was operated by ED, at the National Institute on Disability and Rehabilitation Research (NIDRR). NIDRR was transferred to HHS by the Workforce Improvement and Opportunity Act and that SBIR program is now administered in HHS by the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR).





The Department of Commerce SBIR programs solicit from small businesses scientific and engineering related R&D proposals that respond to specific technical needs of the National Institute of Standards and Technology (NIST) and the National Oceanic and Atmospheric Administration (NOAA) – seeking highly innovative products with also excellent commercial potential.

Key FY13 Achievements

- Jointly provided 19 Phase I Awards and 10 Phase II Awards totaling over \$5M to small businesses.
- NIST implemented a Technology Commercialization Assistance Program for NIST Phase I and Phase II Awardees to increase success of commercialization.
- NIST supported Agency mission by making 7 Phase I and 4 Phase II Awards to small businesses for projects that address advanced manufacturing.
- NOAA initiated outreach through the launching of the Technology Partnerships Office website to include links to other Agencies.

Success Stories

- A NIST SBIR Phase II Award enabled PaneraTech (Chantilly, VA) to develop a base technology that will provide real-time process feedback to the U.S. nanomaterials and touch sensor manufacturing industries for improved yield and lower cost production. This will significantly increase the competitiveness of U.S. manufacturers globally.
- A NOAA SBIR Phase II Award enabled Desert Star (Marina, CA) to develop the Sea-Tag-GEO pop-up satellite tag for migratory studies of both commercial and non-commercial species. As one of the lightest and least expensive tags, it is suitable for animals as little as 1kg and works with any budget due to its low cost.

Program Successes

- NIST increased the number of awards to minority/disadvantaged small businesses by 14% over FY 2012. Increased outreach was accomplished without use of allowable Administrative Funding.
- NOAA conducted outreach communications and activities as well as scheduled webinars with underrepresented states.
- NOAA decreased the duration between award notification date and beginning of Phase II performance from 11 days in FY 2012 to 4 days in FY13.



DOT's SBIR program, managed for over 30 years by Volpe, the National Transportation Systems Center, seeks to contract with small businesses to pursue R&D on innovative solutions to our nation's transportation challenges across all modes by anticipating and addressing emerging issues and by advancing technical, operational, and institutional innovations through specific R&D topics of interest to DOT operating administrations: Federal Aviation Administration; Federal Highway Administration; Federal Motor Carrier Safety Administration; Federal Railroad Administration; Federal Transit Administration; National Highway Traffic Safety Administration; Pipeline and Hazardous Materials Safety Administration; and Office of the Assistant Secretary for Research and Technology. In FY13 DOT SBIR also focused on enhancing outreach while streamlining and simplifying processes:

- Developing new marketing materials and participating in conferences, including the American Council for Technology (ACT) and Industry Advisory Council (IAC) Small Business Conference (April 2013, Washington, D.C. and New England SBIR/STTR Summer Session (June 2013, Kennebecport, ME).
- Redesigning DOT's website and improving content, resulting in the webpage now being the most frequently visited webpage on the DOT Volpe Center's website.
- Updating the format for DOT's Phase I Solicitations to improve the user experience in preparing and submitting proposals.
- Developing a formal Contracting Officer Representative training to emphasize the roles and responsibilities of the COR overseeing a project and when to alert the Contracting Officer of any problems with deliverables and schedules.

FY13 Success Stories and Milestones

- **Solar Roadways** continued work on their Phase II contract for a project that was initially awarded through a Fiscal Year 2009 Solicitation Topic, "*Self-Sustaining Intelligent Pavements Systems*". Solar Roadways has since developed and tested solar panels that you can drive, park and walk-on that has great potential to impact the future of U.S solar energy and intelligent transportation systems. The company has had tremendous success in garnering over \$2 Million in additional funding through the crowdfunder site, www.indiegogo.com.
- **Migma Systems** continued work on their Phase II contract for a project that was initially awarded through a FY09 Solicitation Topic, "*Pedestrian Detection, Counting and Tracking Systems for Travel Surveys, Traffic Safety Systems, and Traffic Control Systems*". Migma developed a stereo vision system for detecting pedestrians at street crossings; identify pedestrians and turning on locator tones to help reduce the likelihood of conflicts between vehicles and pedestrians; extending walk times for seniors and the disabled; and, leading to safer crossings and fewer fatalities. From this project 2 commercial products have been developed: **MigmaIntersection™** and **MigmaMidblock™**.

DOT Topics Moving Forward

DOT is working both internally and externally to enhance how topics are selected to receive SBIR funding. In FY13, DOT's Federal Motor Carrier Safety Administration began working with the National Heart, Lung, and Blood Institute to enter into a Memorandum of Agreement to support funding of a Phase I topic, "Technologies Enabling the Assessment of Sleepiness." Also beginning in FY13, DOT's Operating Administrations (OA) began discussing how to develop multi-modal topics that can result in outcomes that are transferable to more than one OA and can benefit DOT more widely.



EPA's SBIR Program is the small program with the big mission – to develop and commercialize technologies that protect human health and the environment. EPA works to keep its annual solicitation responsive and relevant. Extensive communication is done within the Agency to identify the most important and current environmental needs. In addition, in FY13 EPA included an additional funding opportunity in its solicitation for small businesses that were formed as a result of their participation in another EPA sustainable technology program for student design teams, People Prosperity and the Planet (P3).



Key FY13 Achievements

- *Commercialization* - EPA works hard to help its small businesses commercialize their technologies. The selection criteria have been updated to place an increased emphasis on commercialization, including business expertise, partnerships and track record. In addition, EPA provides commercialization assistance through a contractor to all of its Phase I and Phase II companies. Also, EPA offers a commercialization option (like a Phase II B) where Phase II companies can receive a funding supplement of up to \$100,000 for securing 3rd party investment.
- *Communications* - EPA helps to get the word out about the success of its small businesses by vigorously communicating successes through its website and social media.
- *Timelines* - In order to decrease timelines, EPA has moved to electronic submission of proposals and to virtual peer review panels.
- *Outreach* - EPA continues to do outreach in person and virtually at national, state and local conferences.
- *Collaborations* - In FY13 EPA continued to collaborate with other agencies that support environmental technologies including NSF, NIEHS, USDA, DOE and NOAA. This includes informing technology developers of other opportunities, staying up on similar topics and interacting with Agency Program Managers on events of mutual interest. This effort contributed to a significant pool of funding available to green technology developers across the federal programs. In addition, EPA participated in many events for developers encouraging them to pursue all options available to them from federal sources.

Success Stories

NanoMech (Fayetteville, AR), an EPA SBIR Award recipient in 2004 and 2005, received R&D Magazine's R&D 100 Award for its TuffTek® coating technology for environmentally friendly cutting tool manufacture. This places NanoMech's TuffTek® technology in the top 100 groundbreaking innovations of 2013.



Ecovative (Albany, NY), an EPA SBIR Award recipient in 2009 and 2013, won the 2013 Tibbetts Award for its novel low-energy, biodegradable mushroom material that is a replacement for styrofoam. The company has been featured in Architecture Design, Popular Science, Packaging World and many others. Most recently, Eben Bayer, their CEO, was featured on Forbe's 2015 30 under 30 list.



APPENDIX A – HISTORY OF THE SBIR & STTR PROGRAMS

Although overseen by the Small Business Administration, the SBIR and STTR Programs are affiliated with government agencies involving research and development with an extramural budget of \$100 Million dollars or more. *SBIR and STTR Programs now have 2.2 Billion dollars set aside annually to support the financing of cutting-edge technologies developed by small businesses.* For the U.S. government to recognize the necessity of federal engagement in research and development of high risk technology development and to coordinate such a network would not have been possible without the support of key framers, politicians, and legislators. The ‘Father’ of the SBIR Program, Roland Tibbetts (pictured on the right), experienced firsthand how government programs affect individuals after President Roosevelt signed the GI Bill into law in 1944. Previously, a distinguished first lieutenant in the U.S. Army Air Corp during World War II, Tibbetts was able to complete his undergraduate degree at Boston University and then his MBA at Harvard due to benefits from the GI Bill. After garnering close to 20 years of corporate experience, including serving as the VP of two small, high-tech firms, Tibbetts was appointed as the Senior Program Officer at NSF in 1972. As an NSF program manager, Tibbetts was known as a task master with well-honed instincts for enabling potentially game-changing projects. He also recognized the importance of small, high-tech firms to the economy and observed the fierce opposition they faced from other recipients when pursuing federal R&D funding.



Senator Edward Kennedy (pictured on the left) also recognized the vital role that small businesses play in America’s growing economy. He spent much of the 1970’s tirelessly championing for NSF to support the research of qualified small businesses as the chairman of the National Science Foundation Subcommittee of the Senate Labor and Public Welfare Committee. Kennedy continued to introduce different proposals to increase the percentage of the budget directed toward small businesses. Once NSF recognized the need for ongoing support for small business, the foundation instituted the SBIR Program in 1977.

In addition to Senator Kennedy, much of the legislative support for the SBIR Program was directly due to the work of Arthur and Judith Obermayer (also pictured on the left). As early as 1970, Arthur testified before the U.S. Congress on the challenges small R&D companies faced in dealing with the government. He also lobbied alongside Kennedy for the initial 1974 NSF Authorization Act, which was actualized in the first NSF SBIR Program, designed by Roland Tibbetts. Tibbetts envisioned a 3-phase structure in order to foster the R&D of small, high-tech businesses and push them to realize their commercial potential. He believed these firms were instrumental in converting government R&D into public benefit through technological innovation and commercial applications, therefore stimulating aggregate economic growth. Of the 42 Phase I Awards and 21 Phase II Awards selected in 1977, one firm went on to discover the cystic fibrosis gene and complete the Human Genome Map, a small language-understanding firm (then MicroComputer) became Symantec, and a high-risk firm (then Relation Technology Inc.) became the data giant Ingres Corporation. It seems that Arthur Obermayer was on to something when he advised the Congressional committee in 1978 the NSF SBIR Program was “potentially...the most significant government program of this century in the field of science and technology.”



Due to the success of the NSF SBIR program, in 1979 the Small Business Administration concluded SBIR Programs should be instilled at all government agencies involving research in order to encourage innovation and technology in the United States. Senator Kennedy, an avid supporter of small businesses, spearheaded legislation to institute a government-wide SBIR Program. He and other legislators, including Judith and Arthur Obermayer, called for every federal agency with a budget in excess of \$100 Million to establish a program modeled after Tibbetts' NSF SBIR Program. The Obermeyers convinced a majority of delegates at the 1980 White House Conference on Small Business to support SBIR. After overcoming resistance from the academic community, President Reagan signed a government-wide SBIR Program into law in 1982 (pictured on the right). To date, the Program has resulted in 70,000 issued patents, close to 700 public companies, and approximately \$41 Billion in venture capital investments.



LEGISLATIVE AUTHORITY

The SBIR Program was created by enactment of Public Law 97-219, the Small Business Innovation Development Act of 1982. The program was reauthorized with the enactment of the Small Business Research and Development Enhancement Act of 1992, Public Law 102-564. Title I of the Act expanded and reauthorized the SBIR program. Title II of the Act created the STTR program.

In September 1996, Public Law 104-208 reauthorized the STTR program through FY 1997. In December 1997, Public Law 105-135 reauthorized the program through September 30, 2006. In 2000 the SBIR program was re-authorized until September 2009 by the Small Business Innovation Research Program Reauthorization Act of 2000. In October 2001, Public Law 107-50 reauthorized the STTR program through FY 2009 and increased the program set-aside from 0.15 percent to 0.30 percent which began in FY 2004.

From 2009 to 2011, the SBIR and STTR programs were authorized by a series of Continuing Resolutions issued by Congress. In December 2011, the programs were reauthorized until FY 2017 by the 2012 Defense Authorization Act, Public Law 112-81. The Act also increased the minimum set-aside amounts for both programs:

- SBIR: Agencies with extramural R&D budgets exceeding \$100 Million were required to set aside 2.6% of their FY 2012 extramural R&D budget for SBIR Awards to small businesses (an increase of 0.1% over FY 2011). The minimum percentage was then set to increase in increments of 0.1% each year until FY 2016 when it reaches 3.0%. For FY 2017 and each FY thereafter, the minimum percentage will remain at 3.2%, unless subsequently modified by statute.
- STTR: Agencies with extramural R&D budgets exceeding \$1 Billion were required to set aside 0.35% of their FY 2012 and FY13 extramural R&D budget for STTR Awards to small businesses (an increase of 0.05% over FY 2011). The minimum percentage was then set to increase to 0.40% for FYs 2014 and 2015, and again to 0.45% for FY 2016 and each FY thereafter, unless subsequently modified by statute.



The SBIR Program is a highly competitive program that encourages domestic small businesses to engage in Federal R&D that has the potential for commercialization. Through a competitive awards-based program, SBIR enables small businesses to explore their technological potential and provides the incentive to profit from its commercialization. By including qualified small businesses in the nation's R&D arena, high-tech innovation is stimulated and the U.S. gains entrepreneurial spirit as it meets its specific research and development needs.

SBIR MISSION AND PROGRAM GOALS

The mission of the SBIR program is to support scientific excellence and technological innovation through the investment of Federal research funds in critical American priorities to build a strong national economy.

The program's goals are four-fold:

- Stimulate technological innovation
- Meet Federal research and development needs.
- Foster and encourage participation in innovation and entrepreneurship by socially and economically disadvantaged persons.
- Increase private-sector commercialization of innovations derived from Federal research and development funding.

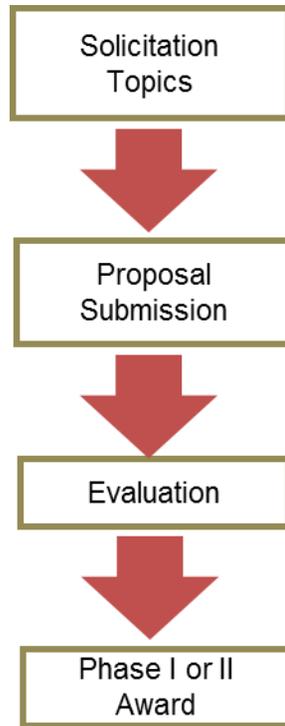
SBIR PARTICIPATING AGENCIES

Each year, Federal agencies with extramural R&D budgets that exceed \$100 Million are required to allocate a minimum percentage of their R&D budget to the SBIR program. Each Agency administers its own individual program within guidelines established by Congress. These agencies designate R&D topics in their solicitations and accept proposals from small businesses. Awards are made on a competitive basis after proposal evaluation. Currently, 11 Federal agencies participate in the program:

- Department of Defense (DOD)
- Department of Health & Human Services (HHS)
- Department of Energy (DOE)
- National Aeronautics & Space Administration (NASA)
- National Science Foundation (NSF)
- Department of Agriculture (USDA)
- Department of Homeland Security (DHS)
- Department of Education (ED)
- Department of Commerce (DOC)
- Environmental Protection Agency (EPA)
- Department of Transportation (DOT)



MILESTONE-DRIVEN AWARD PROCESS – THREE-PHASE PROGRAM



The SBIR Program is structured in three phases:

Phase I | Feasibility Study or Prototype

The objective of Phase I is to establish the technical merit, feasibility, and commercial potential of the proposed R&D efforts and to determine the quality of performance of the small business awardee prior to providing further Federal support in Phase II. SBIR Phase I Awards do not normally exceed \$150,000 total costs for 6 months.

Phase II | Full Research and Development Effort

The objective of Phase II is to continue the R&D efforts initiated in Phase I. Funding is based on the results achieved in Phase I and the scientific and technical merit and commercial potential of the project proposed in Phase II. Only Phase I Awardees are eligible for a Phase II Award. SBIR Phase II Awards do not normally exceed \$1,000,000 total costs for 2 years.

Phase III | Commercialization Effort

The objective of Phase III, where appropriate, is for the small business to pursue commercialization objectives resulting from the Phase I&II R&D activities. The SBIR program does not fund Phase III. In some Federal agencies, Phase III may involve follow-on, non-SBIR funded R&D or production contracts for products, processes or services intended for use by the U.S. Government.

COMPETITIVE OPPORTUNITY FOR SMALL BUSINESS

SBIR targets the entrepreneurial sector because that is where most innovation and innovators thrive. However, the risk and expense of conducting serious R&D efforts are often beyond the means of many small businesses. By reserving a specific percentage of federal R&D funds for small businesses, SBIR protects the small business and enables it to compete on the same level as larger businesses. SBIR funds the critical startup and development stages and it encourages the commercialization of the technology, product, or service, which, in turn, stimulates the U.S. economy. Since its enactment in 1982, the SBIR program has helped thousands of small businesses to compete for federal R&D awards. Their contributions have enhanced the nation's defense, protected our environment, advanced health care, and improved our ability to manage information and manipulate data.



The Small Business Technology Transfer (STTR) Program also expands funding opportunities in the federal innovation R&D arena. Central to the program is expansion of the public-private sector partnerships to include joint venture opportunities for small businesses and nonprofit research institutions. The unique feature of the STTR program is the requirement for a small business to formally collaborate with a research institution in Phase I and Phase II. STTR's most important role is to bridge the gap between performance of basic science and commercialization of resulting innovations.

STTR MISSION AND PROGRAM GOALS

The mission of the STTR program is to support scientific excellence and technological innovation through the investment of Federal research funds in critical American priorities to build a strong national economy.

The programs' goals are to:

- Stimulate technological innovation
- Foster technology transfer through cooperative R&D between small businesses and research institutions
- Increase private sector commercialization of innovations derived from federal R&D

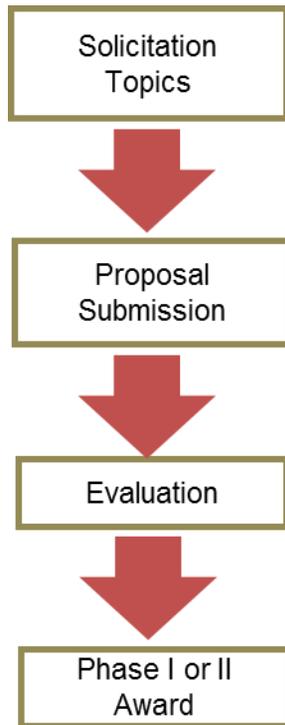
STTR-PARTICIPATING AGENCIES

Each year, federal agencies with extramural R&D budgets that exceed \$1 Billion are required to allocate a minimum percentage of their R&D budget to the STTR program. Each Agency administers its own individual program within guidelines established by Congress. These Agencies designate R&D topics in their solicitations and accept proposals from small businesses. Awards are made on a competitive basis after proposal evaluation. Currently, 5 Agencies participate in the STTR program:

- Department of Defense (DOD)
- Department of Health & Human Services (HHS)
- Department of Energy (DOE)
- National Aeronautics & Space Administration (NASA)
- National Science Foundation (NSF)



MILESTONE-DRIVEN AWARD PROCESS – THREE-PHASE PROGRAM



The STTR Program is structured in three phases:

Phase I | Feasibility Study or Prototype

The objective of Phase I is to establish the technical merit, feasibility, and commercial potential of the proposed R&D efforts and to determine the quality of performance of the small business awardee prior to providing further Federal support in Phase II. STTR Phase I Awards normally do not exceed \$150,000 total costs for 1 year.

Phase II | Full Research and Development Effort

The objective of Phase II is to continue the R&D efforts initiated in Phase I. Funding is based on the results achieved in Phase I and the scientific and technical merit and commercial potential of the project proposed in Phase II. Only Phase I Awardees are eligible for a Phase II Award. STTR Phase II Awards normally do not exceed \$1,000,000 total costs for 2 years.

Phase III | Commercialization Effort

The objective of Phase III, where appropriate, is for the small business to pursue commercialization objectives resulting from the Phase I&II R&D activities. The STTR program does not fund Phase III. In some federal agencies, Phase III may involve follow-on, non-STTR funded R&D or production contracts for products, processes or services intended for use by the U.S. Government.

COMPETITIVE OPPORTUNITY FOR SMALL BUSINESS

STTR is a highly competitive program that reserves a percentage of federal R&D funding for awards to small businesses and nonprofit research institutions. Small business has long been where innovation and innovators thrive. But the risk and expense of conducting R&D can be beyond the means of many small businesses. Conversely, nonprofit research laboratories are instrumental in developing high-tech innovations. But frequently, innovation advances theory, rather than the development of innovative practical applications. STTR combines the strengths of both entities by introducing entrepreneurial skills to high-tech research efforts. The technologies and products are transferred from the laboratory to the marketplace. The small business profits from the commercialization, which, in turn, stimulates the U.S. economy.



PURPOSE

Federal and State Technology Partnership (FAST) Program is a competitive grants program designed to strengthen the technological competitiveness of small businesses. It improves the participation of small technology firms in the innovation and commercialization of new technology, thereby helping keep the United States on the cutting edge of research and development in science and technology. All 50 states, the District of Columbia, Puerto Rico, the Virgin Islands, Guam and the American Samoa may receive funding for an array of services (e.g., outreach and technical assistance) in support of the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs.

GUIDELINES

FAST provides about \$2 Million in funding (typically up to \$100,000 per applicant) for outreach and technical assistance to science and technology-driven small businesses. The program places particular emphasis on helping socially and economically disadvantaged firms compete in the SBA's Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs.

Eligible applicants for FAST grants include state and local economic development agencies, Small Business Development Centers, and colleges and universities. Each state, through its governor, may submit one proposal.

FAST funding applicants are encouraged to show how they will help support areas such as:

- Small business research and development assistance
- Technology transfer from universities to small businesses
- Technological diffusion of innovation benefiting small businesses
- Proposal development and mentoring for small businesses applying for SBIR grants
- Commercialization of technology developed through SBIR grants

Proposals are evaluated by a committee consisting of small business owners, state level representatives, federal SBIR program managers, and representatives of the business and academic communities. The SBA, the Department of Defense and the National Science Foundation jointly review the recommendations from the evaluation panel and make awards based on proposal merit. Varying levels of matching funds are required from each participating state and territory. The FAST Program is administered by the SBA.

LEGISLATIVE AUTHORITY

Congress sought to reduce the variation within state technology programs that foster economic development among small high-technology firms. In response, the Consolidated Appropriations Act of 2001, codified at 15 U.S.C. § 657d(c), established the FAST program. The program expired on September 30, 2005, and was reestablished under the Consolidated Appropriations Act of 2010.

