

U.S. Small Business Administration



**SMALL BUSINESS
INNOVATION
RESEARCH PROGRAM
(SBIR)**

ANNUAL REPORT – FY 2007

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

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Introduction

The Small Business Innovation Development Act of 1982, Public Law 97-219, as amended, directs the U.S. Small Business Administration (SBA) to establish policy for monitoring, evaluating, and reporting on accomplishments of the Small Business Innovation Research (SBIR) program. This is the 25th annual report on the SBIR program, which summarizes program activities and results for FY 2007.

Public Law 97-219 was signed on July 22, 1982, and is found in section 9 of the Small Business Act. Congress reauthorized the SBIR program in 1986, and again in 1993, extending it to October 1, 2000. This reauthorization also increased the percentage of research and development (R&D) funds that participating Federal agencies must direct to small businesses under the program from 2 percent to 2.5 percent. On December 21, 2000, Public Law 106-554 was signed, reauthorizing the SBIR program through September 30, 2008. The program has been extended until July 31, 2009.

FY 2007 Summary

- In FY 2007, the 11 agencies participating in the SBIR program released a total of 19 Phase I solicitations. The Department of Education (ED) released 4 solicitations; the Department of Defense (DOD) released 3 solicitations; the Department of Health and Human Services (HHS), the Department of Homeland Security (DHS), and the National Science Foundation (NSF) each released two solicitations; and the other six agencies released one each.
- Participating agencies received 22,278 Phase I proposals from small high-tech business concerns. Agencies subsequently made 3,814 Phase I awards, representing 17.1 percent of proposals received.
- A total of 2,912 Phase II proposals were received by participating agencies,

resulting in 1,542 awards. These awards represented 53 percent of Phase II proposals received.

- In total, 25,190 Phase I and Phase II proposals were received in FY 2007. Phase I and Phase II awards totaled 5,356, representing 21 percent of the total number of proposals received.

HUBZone Small Business Concerns

The Small Business Act requires the SBA to report on the participation of HUBZone small business concerns (SBCs) in the program. The participating agencies received 799 proposals and made 113 Phase I awards to HUBZone SBCs. The participating agencies received 92 proposals and made 56 Phase II awards to HUBZone SBCs. Phase I awards totaled \$9.7 million, and awards for Phase II totaled \$34.0 million for a total of \$43.7 million to HUBZone SBCs.

Technology Resources Network

As defined in Section 9 of the Small Business Act, the SBA designed the Technology Resources Network (Tech-Net) which was implemented in part in 1998. Tech-Net streamlines and standardizes the reporting of SBIR awards and applicant information by the Federal agencies required to participate in the SBIR program. The SBA held several working sessions with the agencies to define the input data fields and a core set of output reports to facilitate the administration of the program. The SBA incorporated the unique needs of each agency into the design of the database system to ensure that the system would provide much needed award and applicant information. Information such as name, size, location, abstracts and identifying number of each SBC that has received a Phase I or Phase II award is available in this database. Agencies now have the ability to review awards and

applicant information and edit previously reported data interactively. The public version of this database can be accessed by visiting website: <http://tech-net.sba.gov>. The participating agencies are providing information needed in a timely manner to maintain the database.

The SBA is testing the Government database, which will maintain commercialization information on all Phase II projects funded under the SBIR program. This database will not be directly accessible by the public, instead aggregated performance information will be included in our annual reports. Therefore, any confidential information that is provided by the SBIR Phase II awardees will not be disclosed to the public. A username and password will be required to access the database. The SBA will control the issuance of the username and passwords. The database is being designed to collect information that will allow stakeholders to effectively measure the impact and success of the program.

SBA is working to develop a measure that would be the percentage of sales compared to Phase I and Phase II awards plus additional Federal investment, i.e. $\text{sales}/(\text{Phase I} + \text{Phase II} + \text{follow-on investment})$.

Compliance with Reporting of Follow-on Non- SBIR Awards

SBIR firms should be encouraged to develop and expand business applications of their SBIR research with the desired outcome of generating new employment and income. One purpose of follow-on funding agreements or Phase III is to commercialize the innovation and help the small business concern grow. Congress requires agencies that operate SBIR Programs to give preference to make Phase III awards to the SBIR awardees that developed the technology. There are however, occasions where agencies make Phase III awards to firms other than the firm that developed the technology under a Phase I or Phase II award. When a Phase III award is given to

a firm under these circumstances, agencies are required to notify SBA, and outline the rationale for the award. Upon review of the agency notification, SBA may file an appeal with the agency further questioning the rationale for the award and the reason why the Congressional preference has not been utilized.

The number of awards for Phase I and Phase II usually increase each fiscal year; however, during FY 2007, the Phase II awards decreased. (Please see Table 2.) The SBIR participating agencies have stated the following reasons for the decrease:

The Department of Commerce's budget for FY 07 was less than for FY 06 and the award amount was increased for FY07, thereby reducing the number of possible awards. The Department of Defense stated that the timing of their contract awards is affected by the availability of funds. Also, the principal reason the decrease was that a large portion of the Army's budget was temporarily withheld and reprogrammed in February 2007 to help cover the costs of overseas operations pending Congress passing a supplemental appropriations bill. The Department of Homeland Security's budget was reduced in FY 07 thereby allowing for less Phase II awards to be funded. The Department of Health and Human Services states that there were more non-competing (grants) Phase II awards in FY 2007 than FY 2006 (they only report new/competing awards). The Department of Energy's number of Phase II awards decreased in FY 07 due primarily to a 15% increase of Phase II awards made in FY 06 and the way it obligates Phase II funding over the two-year performance period.

Table 2: Number of SBIR Awards -- FY 1983 through FY 2007

Fiscal Year	Phase I	Phase II	Totals
83	776	-	776
84	1,005	275	1,280
85	1,470	347	1,817
86	1,585	567	2,152
87	2,052	688	2,740
88	1,932	702	2,634
89	2,031	748	2,779
90	2,354	833	3,187
91	2,598	747	3,345
92	2,487	907	3,394
93	2,911	1,028	3,939
94	3,088	882	3,970
95	3,059	1,246	4,305
96	2,826	1,184	4,010
97	3,327	1,400	4,727
98	2,976	1,249	4,225
99	3,324	1,235	4,559
00	3,894	1,328	5,222
01	4,231	1,520	5,751
02	5,112	1,585	6,697
03	5,086	1,734	6,820
04	4,375	1,978	6,353
05	4,216	1,859	6,075
06	3,722	1,926	5,648
07	3,814	1,542	5,356
*Total	74,251	27,509	101,760

*The above table uses Tech-Net data rather than summary information provided by the participating agencies. The SBA is using Tech-Net data because it is more specific and accurate than the summary information, and therefore, the numbers shown here will be different than in prior reports. Specifically, the data that is compiled in Tech-Net contains information on all individual awards (including an abstract of the award, company information, and award information). This information allows the SBA to look behind the summary programmatic numbers and review individual awards.

- During FY 2007, participating agencies awarded over \$2.0 billion through the SBIR program, which includes modifications.
- FY 2007 Phase I awards totaled over \$435 million.
- Phase II awards aggregating over \$1.3 billion were made in FY 2007.
- In FY 2007, minority/disadvantaged-owned firms received 440 awards totaling over \$127 million.

Table 1: SBIR Program Data

Fiscal Year 2007 SBIR Agency Obligations Summary (dollars in thousands)

	DOA	DOC	DOD	DOE	DOT	ED	EPA	DHS	HHS	NASA	NSF	TOTAL
Agency Extramural Budget	756,050	221,257	46,782,253	4,509,244	259,394	327,000	169,494	732,460	23,615,972	3,992,500	3,785,000	85,150,624
Agency SBIR Budget	18,901	5,531	1,170,053	112,730	3,242	8,175	4,237	25,241	590,399	99,800	94,630	2,132,939
Dollars Obligated	19,450	4,462	1,106,731	103,762	4,826	10,496	5,568	25,198	595,948	108,364	95,429	2,080,234
Percent of SBIR to Extramural Budget	2.57%	2.02%	2.37%	2.30%	1.86%	3.21%	3.29%	3.44%	2.52%	2.71%	2.52%	2.44%
Deficit/Surplus	549	-1,069	-63,322	-8,968	1,584	2,321	1,331	-43	5,549	8,564	799	-52,705

Fiscal Year 2007 Award Profile (dollars in thousands)

	DOA	DOC	DOD	DOE	DOT	ED	EPA	DHS	HHS	NASA	NSF	TOTAL
Total Phase I Awards	80	12	1,982	278	18	25	36	61	777	259	286	3,814
Minority/Disadvantaged Phase I Awards	2	1	161	21	5	0	4	5	49	36	26	310
HubZone Phase I Awards	14	0	58	21	0	0	0	3	1	8	8	113
Total Phase II Awards	35	4	854	111	4	13	12	11	299	120	79	1,542
Minority/Disadvantaged Phase II Awards	2	1	59	10	3	0	1	4	17	14	19	130
HubZone Phase II Awards	9	1	30	4	0	0	0	1	1	5	5	56
Total Phase I Dollars Awarded (\$)	6,187	1,100	177,138	27,726	1,714	1,974	2,516	6,990	168,295	25,296	28,407	447,343
Minority/Disadvantaged Phase I Dollars (\$)	158	74	14,452	2,096	475	0	280	549	7,800	3,527	2,581	31,992
HubZone Phase I Dollars (\$)	1,031	0	4,772	2,095	0	0	0	349	100	700	700	9,747
Total Phase II Dollars Awarded (Obligations)	11,879	1,200	647,960	80,735	2,653	8,489	4,119	9,014	320,461	71,451	39,475	1,197,436
Minority/Disadvantaged Phase II Dollars (\$)	692	300	46,038	6,985	1,989	0	225	3,000	17,710	8,336	9,494	94,769
HubZone Phase II Dollars (\$)	1,031	400	24,291	2,999	0	0	0	999	375	1,963	1,963	34,021
Average Amount for Phase I Awards (\$)	77	92	89	100	95	79	70	115	217	98	99	117
Average Amount for Phase II Awards (\$)	339	300	759	727	663	653	343	819	1,072	595	500	777

Fiscal Year 2007 Agency Solicitation Profile

	DOA	DOC	DOD	DOE	DOT	ED	EPA	DHS	HHS	NASA	NSF	TOTAL
Number of Solicitations Released	1	1	3	1	1	4	1	2	2	1	2	19
Number of Research Topics in Solicitations	12	4	1,134	54	17	7	4	17	209	27	8	1,493
Number of Copies Distributed	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*
Number of Phase I Proposals Received	512	149	12,407	1,318	89	83	401	420	3,439	1,709	1,751	22,278
Number of Phase II Proposals Received	70	22	1,081	243	4	129	28	34	782	280	239	2,912
Number of Phase I Awards	80	12	1,982	279	18	19	36	61	877	259	286	3,909
Number of Phase II Awards	39	10	867	113	4	13	13	22	335	120	79	1,615

Dollars obligated can include modifications to previous year's awards: DOD \$274,356,173; HHS \$13,066,352; EPA \$70,000; DHS \$491,459; DOT \$464,156; NSF \$27,446,830

Table 5: CALCULATION OF EXTRAMURAL BUDGET

Agency Name	FY 2007 R&D Budget	Intramural Budget & Other	Extramural Budget	\$SBIR	Other Comments
Dept. of Air Force	\$ 24,457,062	\$ 5,658,932	\$13,113,310	\$ 327,833	
Dept. of Army	11,054,958	898,728	9,720,137	243,003	
DOD -Defense Health Program (DHP)	772,322	-0-	772,322	19,308	DHP reported FY07 SBIR of \$19,307K
US Special Operations Command	409,658	748	488,526	12,213	
DOD Defense Missile Defense Agency (MDA)	9,423,653	1,020,377	5,089,664	127,241	
DOD-CBD Program	1,084,130	600,020	381,163	9,529	
DOD-OSD	2,168,450	458,077	1,528,860	38,222	
Defense Logistic Agency	124,199	41,985,000	81,629,000	2,040,725	DLA reported FY07 SBIR of \$2,040,000
Defense Microelectronics Activity	93,000,000	1,823,000	90,731,000	2,268,275	DMA reported FY07 SBIR of \$2,269,000
Defense Adv. Research Project Agency	3,294,348	312,131	2,809,179	70,229	
Defense Threat Reduction Agency	456,140	186,367	269,773	6,744	
Dept. of Navy	19,570,910	4,736,032	12,436,959	310,924	
Dept of HHS (including NIH)	23,588,734	-0-	23,588,734	589,718	
Nat'l Oceanic & Atmospheric Administration	556,800	363,600	193,200	4,830	FY 07 SBIR was calculated based on NOAA's extramural budget reported.
Nat'l Science Foundation	3,970,110	-0-	3,970,110	94,630	\$185 million budgeted for FFRDC was excluded from calculations of SBIR.
Dept. of Transportation (Combined)	831,402	217,106	614,296	6,485	Both FAA (\$192,201K) and FHWA (\$162,701K) were excluded from SBIR assessment.
Dept. of Education	341,000	14,000	327,000	8,175	
EPA	555,383,000	385,888,600	169,494,400	4,237,360	
NASA	6,137,000	N/A	3,993,000	99,825	FY 07 extramural budget of \$5,000,300K represents 65% of the actual FY 07 R&D budget.
Dept. of Energy	7,609,068	67,445	4,509,214	112,730	
Dept. of Agriculture					**No FY 07 extramural budget numbers provided
Dept. of Homeland Security (DHS)					**No FY 07 extramural budget numbers provided

**Table 3: Value of SBIR Awards--
FY 1983 through FY 2007
(in millions of dollars)**

Fiscal Year	Phase I	Phase II	Totals
83	\$ 36.7	\$	\$ 36.7
84	48.8	99.8	148.6
85	72.8	118.2	199.1
86	81.1	221.3	303.5
87	103.0	164.7	267.7
88	97.8	290.2	388.0
89	102.0	291.1	393.1
90	119.8	327.2	447.1
91	130.8	319.7	450.5
92	125.0	390.8	515.8
93	158.6	459.7	618.4
94	219.6	373.6	593.3
95	233.9	708.9	942.8
96	227.2	684.2	911.4
97	277.4	841.6	1,119.1
98	257.7	776.7	1,034.4
99	289.7	812.8	1,102.6
00	290.4	755.1	1,045.5
01	303.2	857.4	1,294.3
02	411.4	1,023.3	1,160.7
03	465.6	1,266.4	1,732.0
04	491.0	1,463.7	1,954.7
05	450.7	1,397.4	1,848.1
06	422.1	1,479.5	1,901.6
07	447.3	1,196.6	1,644.0
*Total	5,860.4	16,368.1	22,228.5

*The above table uses Tech-Net data rather than summary information provided by the participating agencies. The SBA is using Tech-Net data because it is more specific and accurate than the summary information, and therefore, the numbers shown here will be different than in prior reports. Specifically, the data that is compiled in Tech-Net contains information on all individual awards (including an abstract of the award, company information, and award information). This information allows the SBA to look behind the summary programmatic numbers and review individual awards.

Through its SBIR Policy Directive, the SBA requires each participating agency to list the number of Phase I awards made both within 6 months and after 6 months of the closing date of its solicitation announcement. Table 4 provides this information for FY 2007.

Table 4: FY 2007-- Phase I TimeFrame

Agency	Total FY 07 Phase I Awards	No. within 6 Months of Solicitation Close	No. More Than 6 Months After Solicitation Close
DOA	80	0	80
DOC	12	12	0
DOD	1,982	1,682	300
DOE	278	278	0
DOT	18	17	1
ED	25	4	21
EPA	36	36	0
DHS	61	61	0
HHS	777	777	0
NASA	259	259	0
NSF	286	286	0
TOTAL	3,814	3,412	402

Extramural Budget Calculation

Public Law 106-554 directs each Federal agency with an SBIR program to provide SBA with an annual report that includes a description of the methodology used for calculating the amount of the extramural budget of the Federal agency. (See Table 5.)

To monitor and report on the participating agencies' SBIR programs, the SBA has established a reporting base to compare against each agency's budget data. To determine extramural obligations as a base for the size of each agency's SBIR program, the Small Business Act provides a definition of R&D.

It should be noted that a 3-year budget cycle is used for establishing extramural R/R&D obligations. Within any given year, a participating agency's initial estimate can change due to congressional action on that agency's R/R&D budget. To ensure proper implementation of the program, each agency will establish an estimated budget as a basis for operations during the year.

The SBA's Chief Financial Officer's office has reviewed the methodology used in calculating each participating agency's extramural budget. The results of that review are in Table 5.