

# Supporting Statement for Paperwork Reduction Submission

## Grantee Reporting Requirements for Science and Technology Centers (STC): Integrative Partnerships (3145-0194)

### A. Justification

#### A.1. Circumstances Requiring the Collection of Data

The Science and Technology Centers (STC): Integrative Partnerships program provides multiyear (up to ten years) support to STCs as continuing awards that are among the largest (up to \$4 million a year) awarded by the National Science Foundation (NSF). Since the duration and size of these awards are extensive, it is necessary for the NSF to ensure that its substantial investment is spent appropriately, that each of the centers meets the goals stated in its own strategic plan, and that each center's activities satisfy the goals and objectives of the STC program. The STC program currently funds a total of 17 Centers—5 beginning in 2000, 6 beginning in 2002, 2 beginning in 2005, and 4 beginning in 2006. To enable effective oversight of its investment, the NSF requires that each currently funded Center must submit an annual progress report that describes all activities of the Center; each existing Center began submitting an annual report at the end of its first year.

The annual reports contain information that contributes to NSF's efforts to answer broad evaluative research questions: 1) What is the overall value-added of the NSF STC program? 2) What is the quality and impact of the research conducted in the Centers? 3) What is the quality and impact of education supported by the Centers? 4) What is the quality and impact of the knowledge transfer of the Centers? 5) Do the Centers effectively encourage the participation of US citizens, underrepresented minorities, women, and persons with disabilities in their activities? 6) Do the Centers create and sustain organizational connections and linkages within and among academia, government, and industry?

*Changes and Lessons Learned.* No changes to the STC Reporting Template are considered at this time.

The annual progress reports will be used to:

- **Evaluate annual progress of a Center.** The primary purpose of the annual reports is to provide the information necessary for the NSF to monitor and evaluate the progress and accomplishments, as well as, to identify problems of individual STCs. The annual reports provide background information for the annual site visit reviews/evaluations of each of the Centers that are conducted by teams of external reviewers and the NSF staff. The annual site visit review/evaluation provides feedback to the Center and the NSF about its strengths and weaknesses. In cases of significant weaknesses a Center is provided advice and a time schedule for addressing any weaknesses.
- **Develop internal performance indicators and controls for a center.** The annual reports provide information that is used by the leadership of each STC to create and monitor metrics or performance indicators in the management of their centers.
- **Make funding decisions.** The STCs are funded under cooperative agreements, and funds are allocated to each Center on an annual basis. The NSF staff uses each Center's annual report together with the written input from the external reviewers responsible for the annual site visit review/evaluation of a Center to make decisions on the continuation and level of funding for the Center.
- **Evaluate overall effectiveness of the STC program.** The aggregate reports from all STCs are used by NSF in evaluating the effectiveness of the STC Program on an ongoing basis and, in particular, for a formal program review that is in progress. The objectives of this program review are to investigate: 1) the overall effectiveness of the Program and the "center mechanism", 2) the effectiveness of the Program in promoting high quality research; 3) the effectiveness of the Program in providing educational opportunities; 4) the effectiveness of the Program in undertaking knowledge transfer; 5) the degree to which the Program improves and enriches the participation of US citizens

and groups traditionally excluded from scientific activities; and 6) the degree to which the Program fosters institutional relationships that raise the effectiveness of its activities.

## **A.2. Purpose and Use of Data**

The reports will be used in the:

- **External Reviewer Annual Site Visits.** External site visit teams (one for each center) are convened by the NSF each year to evaluate the individual STCs. The external site visit team for a Center is selected each year by NSF program staff. An overlap between site visitors in consecutive years is attempted. Typically a site visit team will have 5-8 members that have scientific, educational and management expertise that corresponds to the specific Center's activities. The teams use the information in the annual reports to assist in the on-site evaluation of each STC's progress relative to its stated goals and objectives and to its performance during the previous year. Upon reading the annual progress report, the site visitors spend time at the Center's site in discussion with the Center's researchers, educators, staff and students the Center's progress. The external site visit team summarizes in writing strengths and weaknesses of the Center's progress and submits its report to the Center and to the NSF.
- **NSF Staff Evaluation of Center's Progress and Funding Decision for Following Year.** The NSF staff overseeing each STC consists of a technical coordinator who represents the directorate and division that are most closely related to the scientific mission of the center and representative(s) of the Office of Integrative Activities that oversees the STC program. In addition, representatives of the Education and Human Resources Directorate assists with program oversight. The NSF staff jointly monitor center activities, in part through data recorded in the annual reports, and make decisions about external reviewers and center funding.
- **Contractor Development of Aggregate Reports for Overall STC Program Management.** The effectiveness of the STC program is reviewed periodically by the NSF Senior Management and Round Table (SmaRT) or their representatives. In addition, the Program is currently undergoing

formal external review. The aggregated information extracted from annual reports is a component of the review, as appropriate. For the purpose of generating the aggregated information, our contractor (Abt Associates) reviews the reports on an annual basis and extracts relevant information from them, producing aggregate reports that provide for easy program monitoring. In addition to Aggregate Reports, individual center and cohort summaries are prepared annually by the contractor and are used in monitoring Program activities. Ad hoc reports on special topics also are prepared by the contractor to assist the Program in documenting and monitoring specific areas of interest.

### **A.3. Use of Automation**

All reports are submitted electronically via FastLane.

### **A.4. Efforts to Identify Duplication**

No other federal agencies or organization within NSF collects data pertaining to the Science and Technology Centers.

### **A.5. Small Business Consideration**

N/A

### **A. 6. Consequences of Less Frequent Collection**

The reports generated by the annual data collection comprise one of the primary mechanisms used by the NSF for approving funding for the STCs on an annual basis. Less frequent data collection would preclude NSF's annual monitoring and documentation of the progress of each STC and, thus, would not allow for informed decisions about funding and timely correction of any weaknesses identified in a Center's activities. The consequence of less frequent collection would manifest itself in lack of an effective way to continuously monitor the large investments of resources and time that NSF has committed to the Science and Technology Centers Program. Furthermore, the annual data collection is congruent with the annual cycle of academic institutions in which these Centers reside increasing

the likelihood that the improvements to Center activities will be made. Less frequent data collection would provide a greater burden on the individual Centers' management that would have two reporting responsibilities (1) to collect and aggregate data annually for internal management and (2) to collect and report data for efforts associated with program level monitoring and documentation.

**A.7. Special Circumstances for Collection**

N/A

**A. 8. Federal Register Notice and Outside Consultation**

The agency's notice, as required by 5 CFR 1320.8(d), was published in the *Federal Register* on December 16, 2008, at 73 FR 74607 and no comments were received.

In addition, the reporting requirements and estimates on the hourly burden were discussed with the management of the Science and Technology Centers and our contractor, Abt Associates. Center Directors and their management staff, the primary respondents to this data collection, were consulted for feedback on the availability of data, frequency of data collection, the clarity of instructions, and the data elements. Their feedback confirmed that the frequency of data collection was appropriate and that they did not provide these data in other data collections.

**A. 9. Gifts or Remuneration**

N/A

**A.10. Assurance of Confidentiality**

Because data are collected at the Center level, individual respondents are not identified. Centers make their annual reports publicly available.

#### **A. 11. Questions of a Sensitive Nature**

No questions of a sensitive nature are used. Only questions pertaining to the progress of the Center, as stated by the program announcement, are used.

#### **A. 12. Estimate of Burden**

This request pertains to the 17 Centers that have received awards as of fiscal year 2006; five of these centers that started in 2000 will submit their final annual report within next 12 months. These centers will be replaced by new centers that will be selected in FY2010. The competition for these centers started in fall of 2008 and it is anticipated that this competition will result in 5-7 new awards.

Each center (old and new) will be required to submit an annual report; thus, the total number of reports will be 17-19 per year. Based on the input from the management of the STCs, we estimate the burden of preparing annual reports, in terms of man-hours per Center, as follows:

1. Center's Director –10 hours
2. Deputy Director/Center's Administrator 40 – 50 hours
3. Education Director – 20 – 30 hours
4. Students graduate/undergraduate (material collection) – 20 – 30 hours

**Total hours per center** are estimated to be 90 - 120 hours, on average approximately 100 hours; the maximum burden is expected in the first year of reporting. In the years that follow, the burden often is reduced given that a Center's internal practices and procedures are established. In most cases, the burden in subsequent years is reduced to 75% of the hourly burden in the first year, although we provide estimates allowing for the average maximum anticipated effort in the first year.

Total number of hours for 17 centers: **approximately 1700 hours. In a case that the new competition results in 7 new centers (instead of 5) total number of hours will be about 1900.**

## ANNUALIZED COST TO RESPONDENTS

Estimated cost per Center, based on the most recent projections submitted in Center budgets, is as follows:

Expense category	Unit cost	Units	Total cost
1. Center Director	\$102/hour	10 hours	\$1020
2. Deputy Director/Center's Administrator	\$65/hour	40 –50 hours	\$2,600 - \$3,250 (average \$2,925)
3. Education Director	\$32/hour	20 – 30 hours	\$640 - \$960 (average \$800)
4. Students graduate/undergraduate	\$16/hour	20 – 30 hours	\$320 - \$480 (average \$400)
5. Fringe benefits (30%) on items 1-3 (based on averages)			\$1,566
6. Overhead costs (55%) on items 1-5			\$3,691
<b>Total cost per Center</b>			<b>\$10,402</b>
<b><i>Total cost for 17 existing centers and 5 new awards Starting in 2010</i></b>			<b><i>\$176,834</i></b>
<b><i>(in a case of 7 new awards and total of 19 centers)</i></b>			<b><i>(\$197,639)</i></b>

The range of cost is calculated assuming the lowest and the highest number of hours.

### **A. 13. Annual cost burden [not included in hour cost]**

There are no additional costs beyond the estimated hours of burden shown above.

### **A. 14. Annualized Cost to the Federal Government**

The reports submitted by the STCs are analyzed by the contractor for the purpose of providing Center profile documents, various types of data analysis, and tables for the purpose of overall program management. The following estimates of the anticipated effort are based on the input from our

contractor, Abt Associates, and their experience with the annual reports. The contractor uses three types of experts: research assistant, senior analyst, and an associate. The research assistant is responsible for data collection, analysis, tabulation and dissemination. The senior analyst assists with report preparation and review. The associate is responsible for report preparation, quality control, and review.

The estimate of their activities and role are as follows:

Expense category	Unit cost	Units	Total cost
Research assistant	\$60/hour	24 hours/Center	\$1,440
Senior analyst	\$112/hour	16 hours/Center	\$1,792
Associate	\$149/hour	8 hours/Center	\$1,192
<b>Total cost per Center</b>			<b>\$4,424</b>
<b><i>Total cost for 17 centers</i></b>			<b>\$75,208</b>
<b><i>(in a case of 7 new awards and total of 19 centers in 2010)</i></b>			<b>(84,056)</b>

#### **A. 15. Changes in Burden**

The changes in burden reported in Item 13 of OMB Form 83-I reflect the current number of centers and potential growth in FY2010. In addition, the estimated burden for completing the annual reports was originally estimated to decrease after the first year. In order to estimate the maximum anticipated burden to the Centers, this assumption is no longer used to adjust the estimated annual burden hours.

#### **A. 16 Publication of Collection**

N/A

**A. 17 Approval to Not Display OMB Expiration Date**

N/A

**A. 18 Exception to Item 19 of OMB Form 83-I Certification Statement**

N/A

**B. STATISTICAL METHODS**

Not applicable

**Attachments**

**Attachment I. Detailed description of information required in annual reports**