Cooperative Agreement

September 13, 2002
Mr. Edward F. Wink  
Associate Vice President for Research  
University of Minnesota  
University Gateway, Suite 450  
200 Oak Street, SE  
Minneapolis, MN  55455-2070

Re: Cooperative Agreement No. EAR-0120914

Dear Mr. Wink:

Attached is the referenced electronic Cooperative Agreement which provides support for the National Center for Earth-Surface Dynamics.

This Agreement has been awarded electronically. If this Agreement is acceptable to you, please print a copy of the signature page, sign it and return it by FAX to NSF (703) 292-9142 as soon as possible. No hard copy of this agreement will be mailed to the Awardee from NSF.

The Government is not obligated to you in connection with performance under the proposed Agreement until the Agreement has been signed without condition or changes, by an authorized official of your institution.

If you have any questions, contact Barbara A. Brooks, on my staff, at (703) 292-8213.

Sincerely,

Andrea R. Kline  
Grants and Agreements Officer

Attachment

awards@tc.umn.edu
COOPERATIVE AGREEMENT NO. EAR-0120914

Between
NATIONAL SCIENCE FOUNDATION
Arlington, VA 22230

And
University of Minnesota
Minneapolis, MN 55455-2070

TITLE: STC: National Center for Earth-Surface Dynamics

PI Name: Gary Parker

EFFECTIVE DATE: August 1, 2002
EXPIRATION DATE: July 31, 2007

AUTHORITY: This Agreement is awarded pursuant to the authority of the National Science Foundation Act of 1950, as amended (42 U.S.C. 1861-75).

This Agreement is entered into between the United States of America, hereinafter called the Government, represented by the National Science Foundation, hereinafter called the Foundation or NSF, and University of Minnesota, hereinafter called the Awardee or National Center for Earth-Surface Dynamics.

NSF Program Official:
H. Richard Lane
(703) 292-8551
FAX: (703) 292-9025
Email: hlane@nsf.gov

NSF Office of Integrative Activities Official:
Dragana Brzakovic
Telephone: (703) 292-8040
FAX: (703) 292-9040
Email: dbrzakov@nsf.gov

NSF Grants & Agreements Official:
Barbara A. Brooks
(703) 292-8213
FAX: (703) 292-9142
Email: bbrooks@nsf.gov

Please have an authorized official of your institution execute this Agreement and return two (2) signed copies within ten (10) working days to the Grants & Agreements Official.
I. STATEMENT OF PURPOSE

II. SPECIAL CONDITIONS
   A. Period of Performance
   B. Statement of Work & Awardee Responsibilities
   C. NSF Responsibilities
   D. Joint NSF-Awardee Activities
   E. Funding & Funding Schedule
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III. GENERAL CONDITIONS
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   B. Cooperative Agreement General Conditions
   C. Order of Precedence
SECTION I. STATEMENT OF PURPOSE

A. The overall mission of the National Center for Earth-Surface Dynamics is to conduct quantitative research on the dynamic interactions among the many processes shaping the surface of the Earth, bring scientists together with citizens from diverse ethnic groups and cultures into intellectual discussion on landscape integrity, and build a sound scientific basis for the integrated management of land, water, and mineral resources.

B. Lead and Subawardee Partner Institutions: The National Center for Earth-Surface Dynamics is configured as follows: University of Minnesota-Twin Cities, also referred to as the Awardee, is the lead institution in the STC; and University of California-Berkeley, Princeton University, Science Museum of Minnesota, Massachusetts Institute of Technology, and Fond du Lac Tribal and Community College are subawardee partner institutions. NSF expects the lead and subawardee partner institutions to function as an integrated whole, with shared research, education, and knowledge-transfer goals. The lead institution, University of Minnesota-Twin Cities, is responsible for planning, operating, and managing the Science and Technology Center, also referred to as the "Center," entitled, "National Center for Earth-Surface Dynamics," in accordance with proposal EAR-0120914, as modified by the revisions dated October 10, 2001 and July 30, 2002. Unless the National Science Foundation (NSF) reserves specific responsibility, by Special or General Condition, for coordinating or integrating the Center activities with other activities, or sharing responsibility for certain aspects of the Center, all such responsibilities remain with the Awardee.

C. The Foundation has responsibility for providing the Awardee general oversight and monitoring to help assure effective performance and administration, as well as facilitating any coordination among the Science and Technology Centers (STCs) as necessary to further the objectives of the Center Program.

SECTION II. SPECIAL CONDITIONS

A. Period of Performance

The period of performance of this Agreement shall begin August 1, 2002, and is approved for the period ending July 31, 2007, subject to annual review, level of support from other sources, and availability of NSF funds. Following is the schedule for anticipated funding period, performance period, and type of review for this STC:

<table>
<thead>
<tr>
<th>Performance Type of Year</th>
<th>Fiscal Performance Year</th>
<th>Period Review</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>2002</td>
<td>Site Visit</td>
</tr>
<tr>
<td>08/01/02-07/31/03</td>
<td>Site Visit</td>
<td>200308/01-03-07/31/04</td>
</tr>
</tbody>
</table>
B. Statement of Work & Awardee Responsibilities

1. The Awardee is responsible for the management, staffing, resource allocation, and operation of this Science and Technology Center in accordance with the plans submitted to and approved by NSF and for administering the award in accordance with NSF policies and the terms of the cooperative agreement. The Awardee will assure the responsibilities of the Center are met by a management team led by the Center Director and including management positions named in the approved proposal as modified. NSF is to be notified if the Center experiences difficulties in filling any of these positions. The Center must make all reasonable efforts to have these unfilled Center management team personnel in place within six (6) months of the effective date of this award. In the event of management team turnover, immediate notification of the vacancy to the cognizant NSF program official shall include plans for filling the position and for allocating the duties of the position among existing staff members on an interim basis.

2. The Center Director and associated Center personnel will develop a strategic and implementation plan (hereafter referred to as the "plan") with goals and timelines for the five-year period. The plan should include milestones and/or deliverables to measure the progress of the research, education, diversity, and knowledge transfer.

The final plan is due within 90 days of the effective date of this award to the cognizant NSF Program Officer for review and approval. NSF reserves the right to periodically review the plan and negotiate changes with the Awardee as required to ensure the efficient management, staffing, resource allocation, and operation of the STC. [Note: Section II.D.2. describes the required development of management and performance indicators to measure the Center's progress in meeting the planned goals.]

The plan will articulate the vision and mission of the Center as well as describe how the Center will pursue the following objectives in an effective and timely manner:

a. Maintain the unifying intellectual theme, as proposed, whose principal focus is to expand our quantitative understanding of the complex hydrologic, sedimentologic, geomorphic, climatic and ecologic processes that interact at the Earth's surface. The plan should address the Center's scientific thrust areas and how they are to be integrated with each other and across participating institutions. A timetable for the research should be included. Plans for facilities construction should be included where appropriate.
b. Integrate the educational activities proposed by the Center into a coherent program with well-defined goals, including the relationship of the Center's education and research programs; and measure, track, and report the Center's progress in this area.

c. Increase participation of United States citizens, nationals, or lawfully admitted permanent resident aliens of the United States, especially women and members of underrepresented groups, in the activities of the Center, including all subawardees, and in science and engineering careers; identify actions to enhance and ensure diversity throughout the life of the Center; and measure, track, and report the Center's progress in this area.

d. Provide educational and research opportunities at the Center and its subawardees for United States citizens, nationals, or lawfully admitted permanent resident aliens of the United States, especially women and members of underrepresented groups, who are undergraduate and graduate students, postdoctoral researchers, industrial fellows, faculty members from all colleges and universities, and others; and measure, track, and report the Center's progress in this area.

e. Provide mechanisms (including a copy of Intellectual Property Rights Agreements worked out prior to the award by all the Center's participating institutions and subawardees, including industry) for knowledge transfer and significant intellectual exchanges with other groups (for example, those in the private sector, federally supported laboratories, state and local government, and other academic institutions); and measure, track, and report the Center's progress in this area.

f. Establish a program of ethics training within the cross-disciplinary and multi-institutional context of the Center for all Center and subawardee staff, including faculty, visiting faculty, industrial fellows, postdoctoral researchers, and graduate and undergraduate students. Training topics should include the nature of the research, methodologies used, ownership of research and ideas, and roles and responsibilities regarding intellectual property.

g. Assure effective management of the Center, including mechanisms for merging individual researchers and institutions into a cohesive Center, focusing Center activities, selecting and integrating related research projects, allocating funds and equipment across all Center activities and among partners, and managing the involvement of other scientific and educational groups. When the allocation of funds among the Center's participants involves an internal proposal and review process, the review criteria used by the Center should be consistent with the first two criteria (intellectual merit and broader impacts) listed in the STC Program Solicitation (NSF 00-67). The plan should include a clear description of both the organizational structure of the Center and the diverse external advisory group (see Section II.B.4.a.) that will provide guidance and advice on all Center activities.

h. Identify key personnel for the essential work of the Center (in accordance with Section II.G.), including a management structure with succession and back-up plans in the event of the absence or loss of key personnel.

3. The Center Director is responsible for serving as the liaison between the Center and the National Network of STC Directors. The STC Directors are responsible for developing, implementing, and maintaining a liaison structure with active participation of each Center. The network is charged with addressing common goals, problems and opportunities, and facilitating personnel and resource exchanges as well as integrated partnerships and cooperation among Centers. Typical functions of the National Network of STC Directors include:
a. Fostering complementarity and balance among research, education, and knowledge transfer activities, and avoidance of duplication of effort;

b. Facilitating interactions to address research, education, and management issues and opportunities which transcend individual Center capabilities;

c. Liaison with private sector, state, local, and national laboratories to identify needs and opportunities and to plan joint implementation strategies, workshops, and other fora;

d. Cooperation and liaison with NSF staff in the development and maintenance of databases and other effective metrics in response to the requirements of the Government Performance and Results Act (GPRA); and

e. Preparing documents to enhance public understanding about the importance of science, engineering, technology, and education advances in service to society.

4. In addition, the Center Director must assure that the Center:

a. Establish, maintain, and convene at least annually an external advisory committee. The NCED Advisory Board, (External Advisory Board), shall hold its first meeting within the first year of funding. The advisors shall include representation from those served by the Center (e.g., academic institutions, industry, state and local agencies, national laboratories) and display diversity in its membership (e.g., women and underrepresented groups). Those with a financial, institutional, or collaborative connection to the Center may not serve as members of the NCED Advisory Board. The function of this NCED Advisory Board is to provide guidance, advice, and oversight for all the Center's activities, consistent with its vision, goals, and objectives. The NCED Advisory Board shall develop a charter and submit it with the first annual progress report.

b. Develop the ability to communicate with the NSF and the other STCs electronically, including Web-based distribution of information and videoconferencing capability. The Center is required to establish and maintain a Web Site by the end of the first year of this Agreement that describes the mission, goals, activities, and accomplishments of the Center, including substantial parts of the Center's annual progress report to NSF (see Section II.F.1.).

c. Develop and maintain a database to be used in providing information for the Center's Annual Report as part of the reporting requirements described in Section II.F.1.

d. Maintain an auditable system of records, including checks and balances to increase accuracy in reporting, to support the information reported in the database described in Section II.B.4.e., the management and performance indicators described in Section II.D.2., actual and in-kind cost sharing as described in Section II.E.4., and the annual progress report described in Section II.F.1. The Awardee shall be solely responsible for the validity of this system of records.

e. Ensure that all institutional support related to the Center (e.g., facilities, equipment, salaries, matching funds, etc.) and/or other support (e.g., private sector, state or local government, etc.) listed in its proposal and subsequent submissions is obtained. If such support is not obtained, NSF must be notified immediately and advised of the impact of this change on the Center's objectives. NSF may wish to reduce its level of support or terminate this Agreement entirely if this support is not obtained or is substantially reduced.
f. The costs for Section II.B.4.a-e. shall be borne by the Center.

C. NSF Responsibilities

In accordance with the NSF's responsibilities under this Agreement, the following conditions apply:

1. In order to facilitate the work done by the Awardee under this Agreement, the NSF will provide general oversight and monitoring and, where necessary and appropriate, will contact and negotiate with other Government agencies to further the efforts of the Center.

2. Performance of work under this Agreement shall be subject to the general oversight and monitoring of the cognizant NSF Program Officer. This NSF involvement may include, but is not limited to, the following:

   a. provision of advice especially with regard to integration and coordination with other Science and Technology Centers' activities; and

   b. review and, where required by the Agreement, approval of required reports and plans submitted by the Awardee.

3. NSF involvement must be consistent with the General "Statement of Work & Awardee Responsibilities" as stated in Section II.B. of this Agreement. The Program Officer does not have the authority to and may not:

   a. request additional work outside the general scope of the Agreement;

   b. issue instructions which constitute a change as defined in Article 8, "Significant Project Changes," of the Grant General Conditions (GC-1);

   c. cause an increase or decrease in the estimated cost or time required for performance under the Agreement; and

   d. change any of the expressed terms and conditions of the Agreement.

4. If, in the opinion of the Awardee, any instructions or requests issued by the Program Official are within one of the categories as defined in (a) through (d) in the above paragraph, the Awardee shall not proceed but shall notify the Grants and Agreements Officer and shall request, of appropriate, modification of the Agreement in accordance with Article 42, "Changes--Limitation of Funds," of the Cooperative Agreement General Conditions (CA-1).

5. All NSF approvals required by this Agreement must be made in writing to the Grants and agreements Officer unless otherwise specified.

D. Joint NSF-Awardee Activities
1. NSF will assist Center staff in serving a regional and/or national role in the research and education in its field of focus.

2. The Center Director (possibly with the aid of the NCED Advisory Board) will develop and maintain a set of management and performance indicators for submission annually to NSF via an evaluation technical assistance contractor. [The evaluation technical assistance contractor, to be provided by NSF, will collect data to evaluate the STC Program and its future viability, focus, and direction.] These indicators will assist in gauging the progress of the Center in meeting its planned goals and timetable as described in Section II.B.2. The indicators will be developed in time for the first reporting period described in Section II.F.1.b.

These indicators are both quantitative and descriptive and may include, for example, the characteristics of Center personnel and students; sources of financial support and in-kind support; expenditures by operational component; characteristics of industrial and/or other sector participation; research activities; education activities; knowledge transfer activities; patents, licenses; publications; degrees granted to students involved in Center activities; descriptions of significant advances and other outcomes of the STC effort. Part of this reporting will take the form of a database, which will be owned by the institution and eventually made available to an evaluation contractor. This database will capture specific information to demonstrate progress towards achieving the goals of the program. These indicators of activity and progress, meeting the requirements of NSF, should be designed to assist the NSF and Awardee in:

   a. monitoring the Center's progress toward the general goals listed in Section II.B. of this Agreement and the specific goals of the proposal on which this award was based;

   b. documenting research results, participation of students, outreach and knowledge transfer efforts, and other data called for in this Agreement;

   c. preparing for the fourth-year evaluation described in Section II.E.3. of this Agreement; and

   d. contributing to the long-term evaluation of NSF's Science and Technology Centers Program.

3. The Center Director and key staff will attend cross-Center meetings, workshops organized by NSF, and annual meetings of STC Directors. These meetings will serve as means to identify issues common to the Centers, facilitate cross-Center communication, and identify innovative means to approach common problems. Costs for attending these meetings will be borne by the Center.

E. Funding and Funding Schedule

1. Funding

It is the intent of the Foundation to provide a total of up to $19,271,727 to support the Center over the next 5 years. Funds in the amount of $4,709,660 are hereby provided to support the Center for the period August 1, 2002 through July 31, 2003, in accordance with the revised
Cooperative Agreement NO. EAR-0120914

budget dated July 30, 2002. For the remaining four years, continued NSF support will be provided annually with the second increment to be awarded in FY 2003.

a. Consistent with Article 3, "Pre-Award Costs," of the GC-1, approval for pre-award expenditures will be contingent upon receipt and review by NSF of supporting documentation of costs incurred in support of the Statement of Work as stated in this agreement.

2. Funding Schedule

The level of continued NSF support will be negotiated with the Awardee annually based on the revised budget submitted July 30, 2002. Continuation of NSF support will depend upon an annual evaluation of scientific progress, accomplishments, and availability of funds. The annual progress report, submitted by the Center as described in Section II.F.1., will provide much of the information required for this evaluation. Annual evaluations will include site visits with external reviewers who will produce a written report. A summary of the site visit schedule for each year is provided in Section II.A. In the event that the anticipated level of NSF support cannot be awarded because of budgetary constraints, NSF and the Awardee will negotiate a change in the scope of Center activities.

3. Review of Renewal Proposal

If the Center seeks renewed support, the Center must submit a renewal proposal on November 1, 2005, of the fourth year of current support for consideration of continued NSF support for the five-year period beginning August 1, 2007. After receipt of the renewal, NSF will conduct an in-depth review of the Center to determine whether NSF will continue to support full Center operations for another five-year period or will provide decreased funding to phase out NSF support of the Center over the remaining one year of this Agreement. This review will consist of ad hoc mail review and a formal, on-site review with external reviewers who will produce a written report. NSF will endeavor to provide notification of the decision for renewed support no later than July 1, 2006, but a delay in notification is not to be interpreted that an award will or will not be made.

If, as a result of the fourth-year review, NSF renews support for the Center, the five-year Cooperative Agreement will be amended to include an additional five years of support, at levels to be negotiated at that time, commencing at the beginning of the sixth year, effective August 1, 2007. The amendment to the Cooperative Agreement will include a specifically planned two-year phase out period for NSF support of the Center during its final two years of operation. The Center will continue to be monitored at least every 18 months during its second five-year period of support. The NSF will support the Center for a maximum of ten (10) years.

If as a result of the fourth-year review, continued Center operation is not recommended, NSF will provide a decreased level of funding (at 75% of the levels for the fourth year) to phase out NSF support over the remaining one year of the Agreement.

The decision to renew or phase out funding will be based on the following merit review criteria from the Science and Technology Centers (STC): Integrative Partnerships Program Solicitation (NSF 00-67):
a. the progress made by the Center in accomplishing the goals articulated in its plans (as described in Section II.B.2.) as measured by the performance and management indicators (developed in accordance with Section II.D.2.);

b. intellectual merit and importance of the Center's activities in advancing knowledge and understanding within its own field or across different fields; research accomplishments and performance of the Center team; creativity and originality in formulating new concepts;

c. broader impacts of the Center's activities in advancing discovery and understanding while promoting teaching, training, and learning; the Center's record of broadening the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.); the Center's enhancement of the infrastructure for research and education, such as facilities, instrumentation, networks, and partnerships; broad dissemination of results to enhance scientific and technological understanding; benefits of the proposed activity to society;

d. fostering the integration of research and education through the Center's programs, projects, and activities; provision of opportunities where individuals may concurrently assume responsibilities as researchers, educators, and students and where all can engage in joint efforts that infuse education with the excitement of discovery and enrich research through the diversity of learner perspectives; development of effective educational programs that broaden the career paths of involved students; fostering a climate of interaction and effective knowledge transfer both among diverse university departments and between the university and its partners in academia, industry, and/or other sectors;

e. integrating diversity into the Center's programs, projects, and activities; developing human resources, broadening opportunities, and increasing the participation of United States citizens, nationals, or lawfully admitted permanent resident aliens of the United States, particularly women and underrepresented minorities and persons with disabilities; in research and education, formation of substantive and long-term partnerships and collaborations with minority-serving institutions and/or women's colleges;

f. value added by the Center in addressing science and technology challenges of sufficient import, scale, and complexity to justify a center-mode investment; in educational programs that make a special contribution to the achievement of a diverse, highly competent, and globally-engaged technical and instructional workforce and of an educated populace; in providing new instruments, shared experimental facilities (when appropriate), and/or databases of significant value to a broad community of users; in establishing partnerships that achieve significant intellectual exchange with the school, public, industry, federal and/or international sectors to foster science and technology in service to society;

g. integrative nature of the Center which should assure that the research, educational, and knowledge transfer activities are strategically integrated such that the whole is greater than the sum of the parts; and that partners are vital participants in an integrated whole;

h. leadership, management plan, institutional support, and budget, including the vision, experience, and capacity of the Center Director and the Center leadership team in managing a complex, multifaceted, and innovative research, education, and knowledge-transfer enterprise; effectiveness of the management plan, including the mechanisms for topic selection, resource allocation, evaluation of progress, and project termination; documentation of institutional and other commitments to the Center; appropriateness of the budget.
Accordingly, as described in Section II.D.2., of this Agreement, the Center Director will assure the Center develop and maintain a system of management and performance indicators to be used in determining the overall effectiveness of the Center, based on the above criteria.

4. Cost Sharing: As a condition of this award, the awardee agrees to provide cost sharing as specified in revised budget dated July 30, 2002, in the amount of $5,781,518 (of this amount, cost sharing for Year 1 is $1,412,898). No Federal funds may be used to meet the awardee's cost sharing obligation for this project.

The amount of cost sharing must be documented on an annual and final basis, certified by the Authorized Organizational Representative, and reported to the cognizant NSF Program Officer.

While it is understood that the cooperating partners will contribute significantly to this cost sharing, Awardee is responsible for satisfying the cost share obligation. Acceptable forms of cost sharing contributions are those that meet the criteria established in Section .23 of OMB Circular A-110.

5. Nothing in these terms supersedes NSF's rights under Article 41, "Suspension or Termination for Convenience," of Cooperative Agreement General Conditions (CA-1).

F. Reporting Requirements

1. The reporting requirements are currently undergoing Paperwork Reduction Act review and will be available for viewing in September. Please contact the program officer, H. Richard Lane at (703) 292-8551, for a copy of the requirements (or, alternatively, you may view them at {http://www.nsf.gov/od/oia/programs/stc/cid.htm}). The final reporting requirements will be mailed to each recipient after the Paperwork Reduction Act review and approval from the Office of Management and Budget.

G. Lead Personnel

The following responsibilities are considered essential to the work of the Center: Center direction, Center management, education and knowledge transfer. Both Center management and education will require full-time (i.e., 100% annual level of effort) lead personnel paid by the Center. If personnel for Center management and for education are not in place when the award begins, the Center Director has an obligation to recruit for these positions immediately and to hire as soon as possible, but not later than one year after the award begins. In case of the departure of any of the four lead personnel, the STC in consultation with NSF will find a suitable replacement. Any new lead personnel or substantive change in the level of effort of existing lead personnel require the prior written approval of the NSF Grants and Agreements Officer, with concurrence of the NSF Program Officer. The following are the lead personnel with the responsibilities.

<table>
<thead>
<tr>
<th>Personnel &amp; Title</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gary Parker, Center Director</td>
<td>Center Direction</td>
</tr>
<tr>
<td>Efi Foufoula-Georgiou, co-Center Director</td>
<td></td>
</tr>
</tbody>
</table>
H. Other Conditions

1. Subawards: Any proposed subaward, other than those identified in the approved budget, must be forwarded to the cognizant NSF Program Officer for review. The proposed subaward must be approved by the NSF Grants and Agreements Officer prior to its issuance. Substantive changes to approved subawards must be forwarded to the cognizant NSF Program Officer and approved by the Grants and Agreements Officer. In case of the withdrawal or addition of subawardee institutions to the Center, the Awardee institution will notify NSF in advance.

2. The Foundation authorizes the awardee to enter into the proposed contractual arrangements and to fund such arrangements with award funds up to the amount indicated in the approved budget. Such contractual arrangements should contain appropriate provisions consistent with Articles 8.a.3 and 9 of the NSF Grant General Conditions (GC-1)(dated 07/02) or Section 5 the FDP III General Terms and Conditions (dated 07/01/00) and any special conditions included in this award.

   The awardee hereby agrees to administer/monitor all subcontracts/subawards it enters into and supports with NSF funds in accordance with the applicable federal cost principles and the applicable federal administrative requirements.

3. In accordance with sections 1869a and 1869b of title 42 of the United States Code, the awardee will do the following:

   a. Obtain from the school board or comparable authority responsible for the schools considering participation in the project, written approval prior to involvement of pre-college students in pre-college education research and development, pilot-testing, evaluation, and revision of experimental and innovative pre-college curriculum.

   b. Include in every publication, testing, or distribution agreement involving instructional materials developed under this grant (including, but not limited to, teachers’ manuals, textbooks, films, tapes, or other supplementary material) a requirement that such material be made available within the school district using it for inspection by parents or guardians of children engaged in educational programs or projects using such material of that school district.

4. Fees: Should the Center require any fees from persons or organizations utilizing the Center, a fee schedule and justification for those fees shall be submitted in writing in advance to the NSF Grants and Agreements Officer for approval with an information copy to the NSF Office of Integrative Activities and the cognizant Program Officer. Any fees realized are to be used for support of the Center's work in accordance with Article 19, "Program Income," of Grant General Conditions (GC-1). Fees will not be a part of the Center's cost share.

5. International Cooperation:
a. The Center is encouraged to engage in cooperative activities with foreign scientists and organizations whenever it deems that such activities will benefit science or engineering and not harm United States competitiveness. Before the Center engages in any cooperative international activities, the Center Director must notify the cognizant NSF Program Officer for review and approval.

b. The Awardee will use its best efforts to ensure that any collaboration between the Center and a foreign individual or organization will be conducted on a comparable access basis.

c. The Center will include information about its international activities in the summary of research and educational accomplishments required in the annual report [Section II.F.1.e.(2) of this Agreement].

6. Intellectual Property Rights: Awardee is responsible for ensuring that disposition of rights to intellectual property created at the Center is consistent with NSF policy, Article 21, "Patent Rights," of Grant General Conditions (GC-1).

7. Publications:

   a. Acknowledgment of Support: The Awardee is responsible for assuring that an acknowledgement of NSF support is made in any publication of any material based on or developed in whole or in part under this project. All materials produced as part of this project, including electronic components such as World Wide Web pages, must include a clear indication of sources of support as follows:

      Either:
      "This material is based upon work supported by the STC Program of the National Science Foundation under Agreement Number EAR-0120914."

      Or:
      "This material is based upon work supported in part by the STC Program of the National Science Foundation under Agreement Number EAR-0120914."

      Or for research supported by other sources, but making use of STC shared experimental facilities:

      "This work made use of STC shared experimental facilities supported by the National Science Foundation under Agreement Number EAR-0120914.

   b. Disclaimer: The Awardee is responsible for assuring that every publication of material (including World Wide Web pages) based on or developed under this Agreement, except scientific articles or papers appearing in scientific, technical, or professional journals, contains the following disclaimer:

      "Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation."

8. Students and Postdoctoral Fellows: Funding for salary/stipends/tuition of undergraduate students, graduate students, and postdoctoral fellows may be used only for that purpose. If the
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Awardee desires to reduce total funds in this category by more than 10%, prior written approval from the cognizant NSF Program Officer is required.

SECTION III. GENERAL CONDITIONS

A. Grant General Conditions (GC-1) at http://www.nsf.gov/home/grants/gc102.pdf


C. Order of Precedence

1. This Agreement consists of the Statement of Purpose as set forth in Section I; the Special Conditions as set forth in Section II; and the General Conditions [Cooperative Agreement General Conditions, CA-1 and the Grant General Conditions, GC-1] enclosed herewith. In case of any conflict between the Special Conditions and the General Conditions, the Special Conditions shall take precedence.