Sustainable Digital Data Preservation and Access Network Partners (DataNet)

PROGRAM SOLICITATION
NSF 07-601

National Science Foundation

Office of Cyberinfrastructure

Directorate for Computer & Information Science & Engineering

Preliminary Proposal Due Date(s) *(required)* (due by 5 p.m. proposer's local time)***:***

January 07, 2008

November 13, 2008

Full Proposal Target Date(s):

March 21, 2008

May 15, 2009

IMPORTANT INFORMATION AND REVISION NOTES

NOTE: Deadline dates for preliminary and full proposals have been changed to: Preliminary Proposals due November 13, 2008 and Full Proposals due May 15, 2009. The page limit for the project description has been increased to 20 pages.

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:

Sustainable Digital Data Preservation and Access Network Partners (DataNet)

Synopsis of Program:

Science and engineering research and education are increasingly digital and increasingly data-intensive. Digital data are not only the output of research but provide input to new hypotheses, enabling new scientific insights and driving innovation. Therein lies one of the major challenges of this scientific generation: how to develop the new methods, management structures and technologies to manage the diversity, size, and complexity of current and future data sets and data streams. This solicitation addresses that challenge by creating a set of exemplar national and global data research infrastructure organizations (dubbed DataNet Partners) that provide unique opportunities to communities of researchers to advance science and/or engineering research and learning.

The new types of organizations envisioned in this solicitation will integrate library and archival sciences, cyberinfrastructure, computer and information sciences, and domain science expertise to:

- provide reliable digital preservation, access, integration, and analysis capabilities for science and/or engineering data over a decades-long timeline;
- continuously anticipate and adapt to changes in technologies and in user needs and expectations;
- engage at the frontiers of computer and information science and cyberinfrastructure with research and development to drive the leading edge forward; and
- serve as component elements of an interoperable data preservation and access network.

By demonstrating feasibility, identifying best practices, establishing viable models for long term technical and economic sustainability, and incorporating frontier research, these exemplar organizations can serve as the basis for rational investment in digital preservation and access by diverse sectors of society at the local, regional, national, and international levels, paving the way for a robust and resilient national and global digital data framework.

These organizations will provide:

- a vision and rationale that meet critical data needs, create important new opportunities and capabilities for discovery, innovation, and learning, improve the way science and engineering research and education are

conducted, and guide the organization in achieving long-term sustainability;
- an organizational structure that provides for a comprehensive range of expertise and cyberinfrastructure capabilities, ensures active participation and effective use by a wide diversity of individuals, organizations, and sectors, serves as a capable partner in an interoperable network of digital preservation and access organizations, and ensures effective management and leadership; and
- activities to provide for the full data management life cycle, facilitate research as resource and object, engage in computer science and information science research critical to DataNet functions, develop new tools and capabilities for learning that integrate research and education at all levels, provide for active community input and participation in all phases and all aspects of Partner activities, and include a vigorous and comprehensive assessment and evaluation program.

Potential applicants should note that this program is not intended to support narrowly-defined, discipline-specific repositories.

Cognizant Program Officer(s):

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Applicable Catalog of Federal Domestic Assistance (CFDA) Number(s):

- 47.070 --- Computer and Information Science and Engineering
- 47.080 --- Office of Cyberinfrastructure

Award Information

Anticipated Type of Award: Cooperative Agreement

Estimated Number of Awards: 5 - Two to three awards are anticipated in each of two review cycles (one review cycle for fiscal year FY2008 awards and one for FY2009) for a total of five awards, contingent on the quality of proposals received and pending the availability of funds. Each award is limited to a total of up to $20,000,000 (direct plus indirect costs) for up to 5 years. The initial term of each award is expected to be 5 years with the potential at NSF's sole discretion for one terminal renewal for another 5 years, subject to performance and the availability of funds. Such performance is to include serving the needs of the relevant science and engineering research and education communities and catalyzing new opportunities for progress. If a second five-year award is made, NSF funding is expected to decrease in each successive year of the award as the Partner transitions to a sustainable economic model with other sources of support. The actual amount of the annual decrease in NSF support will be established through the cooperative agreement. Note that the maximum period NSF will support a DataNet Partner is 10 years.

Anticipated Funding Amount: $100,000,000 – Up to $100,000,000 over a five year period is expected to be available contingent on the quality of proposals received and pending the availability of funds.

Eligibility Information

Organization Limit:

Proposals may only be submitted by the following:

- Academic Institutions located in the U.S.: U.S. universities and colleges located in the U.S.
- Non-profit, non-academic organizations: Independent museums, observatories, research labs, professional societies and similar organizations in the U.S. associated with educational or research activities.

PI Limit:

None Specified

Limit on Number of Proposals per Organization:

None Specified

Limit on Number of Proposals per PI:

None Specified

Proposal Preparation and Submission Instructions

A. Proposal Preparation Instructions

- **Letters of Intent:** Not Applicable
- **Preliminary Proposals:** Submission of Preliminary Proposals is required. Please see the full text of this solicitation for further information.
- **Full Proposal Preparation Instructions:** This solicitation contains information that supplements the standard NSF Proposal and Award Policies and Procedures Guide, Part I: Grant Proposal Guide (GPG) proposal preparation guidelines. Please see the full text of this solicitation for further information

B. Budgetary Information

- **Cost Sharing Requirements:** Cost Sharing is not required under this solicitation.
- **Indirect Cost (F&A) Limitations:** Not Applicable

- **Other Budgetary Limitations:** Not Applicable

C. Due Dates

- **Preliminary Proposal Due Date(s)** ***(required)*** (due by 5 p.m. proposer's local time)***:***

  January 07, 2008

  November 13, 2008

- **Full Proposal Target Date(s):**

  March 21, 2008

  May 15, 2009

Proposal Review Information Criteria

Merit Review Criteria: National Science Board approved criteria. Additional merit review considerations apply. Please see the full text of this solicitation for further information.

Award Administration Information

Award Conditions: Standard NSF award conditions apply.

Reporting Requirements: Standard NSF reporting requirements apply.

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I. INTRODUCTION

Chapter 3 (Data, Data Analysis, and Visualization) of NSF's Cyberinfrastructure Vision for 21st Century Discovery (http://www.nsf.gov/pubs/2007/nsf0728/index.jsp) presents a vision in which "science and engineering digital data are routinely deposited in well-documented form, are regularly and easily consulted and analyzed by specialists and non-specialists alike, are openly accessible while suitably protected, and are reliably preserved." The goal of this solicitation is to catalyze the development of a system of science and engineering data collections that is open, extensible and evolvable.

For purposes of this solicitation, data are defined as any information that can be stored in digital form and accessed electronically, including, but not limited to, numeric data, text, publications, sensor streams, video, audio, algorithms, software, models and simulations, images, etc. Digital data are not only the products of research but provide input to new hypotheses, enabling new scientific insights and driving innovation. This requires developing new methods, management structures and technologies to manage the diversity, size, and complexity of current and future data sets and data streams. This solicitation addresses that challenge by creating a set of exemplar national and global data research infrastructure organizations that provide unique opportunities to communities of researchers to advance science and/or engineering research and learning.

The new types of organizations envisioned in this solicitation will integrate library and archival sciences, cyberinfrastructure, computer and information sciences, and domain science expertise to:

- provide reliable digital data preservation, access, integration, and analysis capabilities over a decades-long timeline;
- continuously anticipate and adapt to changes in technologies and in user needs and expectations;
- engage at the frontiers of computer and information science and cyberinfrastructure with research and development to drive the leading edge forward; and
- serve as component elements of an interoperable data preservation and access network.

Characteristics of DataNet Partners

The goal of this program solicitation is to support creation of a small set of full-scale exemplars of these new types of organizations (dubbed 'DataNet Partners' or 'Partners' for purposes of this solicitation). By demonstrating feasibility, identifying best practices, establishing viable models for long term technical and economic sustainability, and incorporating frontier research, these exemplar organizations can serve as the basis for rational investment in digital preservation and access by diverse sectors of society at the local, regional, national, and international levels. If broadly made, the result of such investments would be a robust and resilient national and global digital data framework for preservation and access to the resources and products of the digital age.

One defining feature of the new types of organizations envisioned in this solicitation is the capacity to be at once both risk-averse and risk capable. The goal of preserving digital information for periods of decades to centuries requires that an organization not risk loss of its holdings. At the same time, the organization must operate in a swift, disruptive current of technological change. Both the hardware and software components of the organization and the expectations of its users will change rapidly and continuously. Thus, the organization must be adept at scanning the horizon, constantly planning for and then embracing new technologies. Further, the organization must be fluent and engaged in the deep research issues that support all aspects of the data management life cycle (including data creation, access, use, and preservation). Successfully providing stability for long-term preservation and agility both to embrace constant technological change and to engage evolving research challenges requires a novel combination of expertise in library and archival sciences, computer, computational, and information sciences, cyberinfrastructure, and the other domain sciences and engineering. A goal of this solicitation is to support the creation of new types of organizations that fully integrate all of these capabilities.

A second essential feature is that of sustainability. The organization must adopt economic models and technology strategies that allow it to meet its decades-long mission for preservation and access. A key goal of this program solicitation is to develop implementation models and a body of underlying information and experience to facilitate other efforts in developing long-term digital preservation and access organizations. Thus, the solicitation envisions an initial five-year period of building capability followed by the possibility of a second, five-year period focused on achieving sustainability as NSF support is ramped down.

A third critical feature is the ability to engage at the frontiers of science and engineering research and education. This includes functioning as an information resource for students and researchers across a wide variety of disciplines, serving as an object of research, and possessing its own active and engaged research capability. Serving as an effective information resource requires close interaction with the relevant domain science communities, along with appropriate domain expertise within the organization itself to understand the needs, practices, and expectations of the communities it serves and to provide the technical and intellectual context to inform all aspects of the data preservation and access lifecycle. Serving as an object of external research includes providing access to large and complex data sets as test beds for research in data mining, information extraction, fusion, integration, visualization, and analysis; facilitating research in concepts and technologies that support long-term preservation and access for complex digital objects and assets; and enabling research in digital security, trust, authentication, and authorization. Maintaining an engaged research capability requires that computer and information scientists and cyberinfrastructure researchers be an integral part of the organization at all levels.

Finally, a key capacity to be created by these new types of organizations is the ability to support the re-purposing of digital data in innovative ways and in novel combinations not envisioned by the data authors. To provide for revolutionary new information integration capabilities and to promote broadly interdisciplinary research and education, the organizations created under this solicitation must be both individually heterogeneous in content and collectively interoperating. The former – content heterogeneity – requires that each awardee create a resource that serves a broad disciplinary and subject matter range, manages a diverse array of data types and formats, and provides the capability to support collections at the research, resource, and reference levels (see the report of the National Science Board on Long-lived Digital Data Collections; NSB 05-40; http://www.nsf.gov/pubs/2005/nsb0540/). The latter characteristic – operating as a data network – requires cooperation, coordination, and close interaction both among the members of this program portfolio and with other preservation and access organizations, national and international. Participation in data networking activities, including activities focused on the development of plans for shared governance structures, will be a requirement for awards. Potential applicants should note that this program is not intended to support narrowly-defined, discipline-specific repositories.

II. PROGRAM DESCRIPTION

Program Goals

The specific goals of this program are to support the development of a small set of full-scale exemplars of new types of digital data preservation and access organizations that: (1) combine expertise in library and archival sciences, computer, computational, and information sciences, cyberinfrastructure, and domain sciences and engineering; (2) develop models for economic and technological sustainability over multiple decades; (3) engage at the frontiers of science and engineering research and education as an information resource, an object of research, and a research entity; and (4) work cooperatively and in coordination to create a functional data network with revolutionary new capabilities for information access, use, and integration without regard to conventional barriers such as data type and format, discipline or subject area, and time and place.

Responsibilities of DataNet Partners

The responsibilities of a DataNet Partner include the following:

1. **Vision and Rationale**

    - Opportunity and Impact - Identify and meet specific scientific needs and create new opportunities and capabilities for discovery, innovation, and learning.
    - Sustainable economic and technology models – Develop and continuously assess and revise a vision and rationale, with a corresponding organizational framework and implementation plan, that provides for economic and technological sustainability over a decades-long timeline. Develop metrics and an

implementation timeline with milestones that will be used during the period of the proposed award in assessing progress towards achieving economic sustainability. Conduct ongoing planning for regular and reliable migration to new systems and execute migrations without disruption of service or risk to preservation.

2. **Activities**

- Support the full data preservation and access lifecycle, including acquisition; documentation; protection; access, analysis and dissemination; migration; and disposition as follows:
    - Data deposition/acquisition/ingest – Provide systems, tools, procedures, and capacity for efficient data and metadata deposition by authors and others; acquisition from appropriate sources; and ingest in accordance with well-developed and transparent policies and procedures that are responsive to community needs, maximize the potential for re-use, and ensure preservation and access over a decades timeline.
    - Data curation and metadata management – Provide for appropriate data curation and indexing, including metadata deposition, acquisition and/or entry and continuing metadata management for use in search, discovery, analysis, provenance and attribution, and integration. Develop and maintain transparent policies and procedures for ongoing collection management, including deaccessioning of data as appropriate.
    - Data protection – Provide systems, tools, policies, and procedures for protecting legitimate privacy, confidentiality, intellectual property, or other security needs as appropriate to the data type and use.
    - Data discovery, access, use, and dissemination – Provide systems, tools, procedures, and capacity for discovery of data by specialist and non-specialist users, access to data through both graphical and machine interfaces, and dissemination of data in response to users needs.
    - Data interoperability, standards, and integration – Promote the efficient use and continuing evolution of existing standards (e.g. ontologies, semantic frameworks, and knowledge representation strategies). Support community-based efforts to develop new standards and merge or adapt existing standards. Provide systems, tools, procedures, and capacity to enhance data interoperability and integration.
    - Data evaluation, analysis, and visualization – Provide systems, tools, procedures, and capacity to enable data driven visual understanding and integration and to enhance the ability of diverse users to evaluate, analyze, and visualize data.
- Engage at the frontiers of science and engineering research and education - Engage in research central to DataNet responsibilities, addressing the evolving technical challenges, and fully integrate computer and information scientists and cyberinfrastructure researchers at all levels of the organization. Facilitate research both as an information resource and as an object of research. Establish and maintain close interactions with the relevant domain science and education communities, fully integrate relevant domain expertise within the organization, and facilitate access by and interaction with researchers using the resources of the organization and studying its functions.
- Education and training – Provide systems, tools, and resources that enhance: (1) the use of digital data for educational and training purposes at all levels (K/12, undergraduate, graduate, professional, and public); and (2) capabilities for integration of research and education at all levels, including mechanisms that allow students and the lay public to participate in and contribute to science data activities, that facilitate the use of research data and information in science-based learning, and that enhance the ability of others to use scientific data as a means to forge a closer link between the classroom and the research environment.
- Community and user input and assessment – Provide policies, procedures, systems, tools, and forums (including workshops and conferences) for continuously obtaining input and responding to users and to the community on the mission, strategies, and policies of the Partner, including its effectiveness in meeting its responsibilities, and in planning and implementing the tools and services it provides. Develop and implement a vigorous and comprehensive assessment program including policies, metrics, procedures and tools for continuously assessing the effectiveness of the Partner in meeting the responsibilities listed in this section and in responding to the needs of users and the community.
- International Participants - Collaborate and coordinate closely with other preservation and access organizations, both domestic and foreign, with the long-term goal of catalyzing the formation of a global data network. In keeping with this goal, NSF strongly encourages active international collaboration by the DataNet Partners. DataNet funds may be used to support U.S. investigators and students to work in international settings and foreign investigators and students to work in the U.S. However, foreign collaborators are expected to secure support for their activities at their home or other non-U.S. institutions from their own national sources.

3. **Organizational Structure**

- Comprehensive expertise and infrastructure capacity/capabilities - Possess expertise in library and archival sciences; computer, computational, and information sciences; cyberinfrastructure; and domain sciences. Integrate this expertise into a single, functional unit through an organizational structure that enables shared responsibility, close coordination and cooperation, and catalyzes the exchange of ideas. Possess the computational and storage resources, network fabric (resources for internal and external access, dissemination, interaction, and communication), and expert support and administrative staff for meeting the goals for digital data preservation, access, and integration. This capacity must support the ability to visualize and explore massive and/or heterogeneous data sets and to support analyses of data sets whose size or protection needs prevent their being moved to another site for analysis.
- Diverse, multisector participation – Include as active project participants and/or key project partners organizations from a variety of sectors such as academic organizations of diverse geographical, programmatic, and institutional types; governmental organizations at the federal, state, and local levels; non-profit organizations; commercial entities; and international organizations. Envision the user base to include individuals and organizations from a diverse spectrum of sectors and institutional, geographical, and cultural settings with a wide range of needs, expectations, practices, and capabilities in pursuing their research and learning goals. Maintain a resource that serves a broad range of disciplinary and topic areas; manage a wide range of data types and formats; and provide advanced capabilities for searching and integrating information from various elements of the collection. Develop policies and practices that increase the participation of women and individuals from groups underrepresented in science and engineering at all levels and in all Partner activities.
- Data Network - Collaborate and coordinate closely with other DataNet Partners and digital preservation/access organizations nationally and internationally with the goal of achieving a level of interoperability that allows seamless, single entry point discovery, access, and use of data from across the network. Work with other DataNet Partners and digital preservation/access organizations to develop

and disseminate best practices and principles. It is anticipated that cooperative agreements under this program will encourage the establishment of a shared governance or coordination framework among the DataNet Partners and including representation among users and the community. Participation in this process is a requirement of an award.

DataNet Partner Leadership and Management

Strong central leadership is critical to the success of a DataNet Partner in order to insure a unified vision and strategy to provide for reliable preservation and access while embracing continuous technological change. The Director of a DataNet Partner should have a broad, integrated vision, familiarity with the diverse areas that are part of the goals and the ability to lead interdisciplinary teams. Proposals should either identify an individual with demonstrated management skills to be designated as Director or describe a recruitment and selection process for retaining an appropriate person. A DataNet Partner will need to pursue a wide range of activities simultaneously. This will require an effective management plan with clear lines of responsibility and authority, as well as appropriate advisory or oversight boards and user groups.

III. AWARD INFORMATION

Anticipated Type of Award: Cooperative Agreement

Estimated Number of Awards: Two to three awards are anticipated in each of two review cycles (one review cycle for fiscal year FY2008 awards and one for FY2009) for a total of five awards, contingent on the quality of proposals received and pending the availability of funds. Each award is limited to a total of up to $20,000,000 (direct plus indirect costs) for up to 5 years. The initial term of each award is expected to be 5 years with the potential at NSF's sole discretion for one terminal renewal for another 5 years, subject to performance and the availability of funds. Such performance is to include serving the needs of the relevant science and engineering research and education communities and catalyzing new opportunities for progress. If a second five-year award is made, NSF funding is expected to decrease in each successive year of the award as the Partner transitions to a sustainable economic model with other sources of support. The actual amount of the annual decrease in NSF support will be established through the cooperative agreement. Note that the maximum period NSF will support a DataNet Partner is 10 years.

Anticipated Funding Amount: Up to $100,000,000 over a five year period is expected to be available contingent on the quality of proposals received and pending the availability of funds.

Estimated program budget, number of awards and average award size/duration are subject to the availability of funds.

IV. ELIGIBILITY INFORMATION

Organization Limit:

Proposals may only be submitted by the following:

- Academic Institutions located in the U.S.: U.S. universities and colleges located in the U.S.
- Non-profit, non-academic organizations: Independent museums, observatories, research labs, professional societies and similar organizations in the U.S. associated with educational or research activities.

PI Limit:

None Specified

Limit on Number of Proposals per Organization:

None Specified

Limit on Number of Proposals per PI:

None Specified

Additional Eligibility Info:

Although the DataNet Partners are expected to be multi-organizational, a single organization must serve as the lead with all other organizations as subawardees. Proposals to this program must be submitted as a single proposal from the lead institution and may not be separately submitted as linked, collaborative proposals. Organizations eligible to serve as lead are U.S. academic institutions or U.S. non-profit research organizations that are directly associated with educational and/or research activities. Organizations eligible to serve as subawardees are all those organizations eligible under the provisions of the NSF Grant Proposal Guide (GPG).

V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

A. Proposal Preparation Instructions

Preliminary Proposals *(required):* Preliminary proposals are required and must be submitted via the NSF FastLane system, even if

full proposals will be submitted via Grants.gov.

Submission of a preliminary proposal is required for eligibility to submit a full proposal. Preliminary proposals must be received as a single submission with one organization serving as the lead and all others as subawardees. Linked preliminary proposals submitted using the collaborative mechanism of Fastlane will be returned without review. While the lead institution submitting the preliminary proposal must be a U.S. academic institution or U.S. non-profit, non-academic organization, subawardees may be any entity eligible under the provisions of the NSF GPG.

Preliminary proposals must be submitted via FastLane and must include the following:

- Information About Principal Investigators/Project Directors and Co-Principal Investigators/Co-Project Directors – Use standard GPG guidelines
- Fastlane Cover Sheet: Select this program solicitation number from the pull down list. Check the box for preliminary proposal. Entries on the Fastlane cover sheet are limited to the principal investigator/project director and a maximum of 4 co-principal investigators/project directors. All other senior project participants should be listed on the project summary page and entered into Fastlane as Senior Personnel (this latter provision allows their biographical sketches to be included in the Fastlane proposal).
- Title - The title of the proposal must begin with "DataNet Preliminary Proposal:".
- Project Summary (1 page) - The summary must consist of 3 parts: (1) At the top of this page, indicate the title of the project, the name of the PI and the lead organization, and list Co-PIs and Senior Personnel with institutional affiliation; (2) Provide a succinct summary of the intellectual merit including the vision and rationale for the DataNet Partner, the array of data types and primary topical/disciplinary areas to be served by the Partner, and an overview of plans for providing reliable, long-term preservation and access amid continuing technology change, achieving technical and economic sustainability, and providing for enhanced information integration capabilities; and (3) describe the broader impacts of the proposed work, including any exceptional opportunities for progress in research and education that may arise from the planned structure, composition, and/or organization of the proposed Partner, the educational and training activities, and plans for achieving a diverse organization serving a wide variety of users and communities.
- Project Description - The project description is **limited to a total of 7 pages** and must address the following:
    - Vision and rationale: Describe the over-arching vision for the DataNet Partner, including the nature of the needs and opportunities to be met and the expected impact. Provide an overview of the strategy for achieving long term economic and technological sustainability.
    - Activities: Provide an outline of the proposed activities of the Partner in managing the full data life cycle and enabling discovery, innovation, and learning with participation across a diversity of sectors.
    - Structure: Provide an overview of the structure of the proposed DataNet Partner, indicating which sectors will be actively involved, the nature of the expected user base, the anticipated diversity of participants and users, and the range of expertise and infrastructure to be included.
- References Cited – Indicate with an asterisk any cited publications resulting from prior research funded by NSF for the PI or Co-PIs when following the GPG guidelines for all references cited.
- Biographical Sketches - Provide biographical sketches for the PI, Co-PIs, and other Senior Personnel listed on the Project Summary page.
- Current and Pending Support – Provide this information for the PI, Co-PIs, and other Senior Personnel listed on the Project Summary page. Address any potential overlap between the federally funded projects that are listed and the proposed DataNet activities.
- Budget – No budget is required. However, please enter $2 in the Requested Amount box on the Fastlane Cover Sheet (this entry allows correct Fastlane processing).
- Special Information and Supplementary Documentation – The following additional information is required in addition to that allowed under the provisions of the GPG:
    - Key Personnel: Provide a list of key leadership personnel (maximum 3 pages), with a brief description of what each person uniquely brings to the DataNet Partner.
- Single Copy Documents: The following additional information is required in addition to that included within the provisions of the Grant Proposal Guide:
    - Integrated conflicts of interests list: Provide a list, in a single alphabetized table, of the full names and institutional affiliations of all people with conflicts of interest for the PI, Co-PIs, Senior Personnel and any named personnel for whom support is anticipated to be included in a full proposal budget. The table should specify the nature of the conflict including: (1) PhD thesis advisors or advisees; (2) collaborator or co-authors, including postdocs, for the past 48 months; and (3) any other individuals or institutions with which the PI or Co-PIs have financial ties, including advisory committees.
    - In addition to the Conflict of Interest List, other correspondence to the program not intended to be sent to reviewers, such as a list of potential reviewers, can be sent through the Single Copy Documents section of FastLane. Please note that key project personnel may be required, prior to an award, to submit copies of any intellectual property agreements or material transfer agreements they have signed, or are planning to sign, that would have an impact on the unrestricted and timely distribution of the outcomes of NSF funded research. Submission of a Single Copy Document will allow these materials to be reviewed by NSF officials only, and they will remain confidential.

Full Proposal Preparation Instructions: Proposers may opt to submit proposals in response to this Program Solicitation via Grants.gov or via the NSF FastLane system.

- Full proposals submitted via FastLane: Proposals submitted in response to this program solicitation should be prepared and submitted in accordance with the general guidelines contained in the NSF Grant Proposal Guide (GPG). The complete text of the GPG is available electronically on the NSF website at: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg. Paper copies of the GPG may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from nsfpubs@nsf.gov. Proposers are reminded to identify this program solicitation number in the program solicitation block on the NSF Cover Sheet For Proposal to the National Science Foundation. Compliance with this requirement is critical to determining the relevant proposal processing guidelines. Failure to submit this information may delay processing.

- Full proposals submitted via Grants.gov: Proposals submitted in response to this program solicitation via Grants.gov should be prepared and submitted in accordance with the NSF Grants.gov Application Guide: A Guide for the Preparation and Submission of NSF Applications via Grants.gov. The complete text of the NSF Grants.gov Application Guide is available on the Grants.gov website and on the NSF website at: (http://www.nsf.gov/bfa/dias/policy/docs/grantsgovguide.pdf). To obtain copies of the Application Guide and Application Forms Package, click on the Apply tab on the Grants.gov site, then click on the Apply Step 1: Download a Grant Application Package and Application Instructions link and enter the funding opportunity number, (the program solicitation number without the NSF prefix) and press the Download Package button. Paper copies of the Grants.gov Application Guide also may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from nsfpubs@nsf.gov.

The following exceptions and additions to the guidelines in the GPG or NSF Grants.gov Application Guide apply to full proposals

submitted to this Program:

Full proposals will be accepted only from PIs who have submitted preliminary proposals in the current review cycle. Eligible proposals must originate from principal investigators whose proposals are successful in the preceding preliminary proposal competition described above and must be based on those preliminary proposals. All proposals not meeting these requirements will be returned without review. Full proposals submitted by PIs whose preliminary proposals received a review recommendation of 'not invited' will be returned without review. Full proposals must be received as a single submission with one organization serving as the lead and all others as subawardees. Linked proposals submitted using the collaborative mechanism of Fastlane will be returned without review. While the lead institution submitting the proposal must be a U.S. academic institution or U.S. non-profit, non-academic organization, subawardees may be any entity eligible under the provisions of the NSF GPG.

- Information About Principal Investigators/Project Directors and Co-Principal Investigators/Co-Project Directors – Use standard GPG or NSF Grants.gov Application Guide guidelines
- Cover Sheet:
    - Fastlane Users - Select this program solicitation number from the pull down list. Entries on the Fastlane cover sheet are limited to the principal investigator/project director and a maximum of 4 co-principal investigators/project directors. All other senior project participants should be listed on the project summary page and entered into Fastlane as Senior Personnel (this latter provision allows their biographical sketches to be included in the Fastlane proposal).
    - Grants.gov Users - The program solicitation number will be pre-populated by Grants.gov on the NSF Grant Application Cover Page. NSF allows one principal investigator/project director and a maximum of 4 co-principal investigators/project directors to be identified on a proposal. Instructions for entering additional senior project participants are included in Section V.5. of the NSF Grants.gov Application Guide.
- Title - The title of the proposal must begin with "DataNet Full Proposal:".
- Project Summary (1 page) - The summary must consist of 3 parts: (1) At the top of this page, indicate the title of the project, the name of the PI and the lead organization, and list Co-PIs and Senior Personnel with institutional affiliation; (2) Provide a succinct summary of the intellectual merit, including the vision and rationale for the DataNet Partner, the array of data types and primary topical/disciplinary areas to be served by the Partner, and an overview of plans for providing reliable, long-term preservation and access amid continuing technology change, achieving technical and economic sustainability, and providing for enhanced information integration capabilities; and (3) describe the broader impacts of the proposed work, including any exceptional opportunities for progress in research and education that may arise from the planned structure, composition, and/or organization of the proposed Partner, the educational and training activities, and plans for achieving a diverse organization serving a wide variety of users and communities.
- Project Description – The project description is **limited to 20 pages** and must address the following:
    - Results from Prior Research - Describe only prior research of the PI or Co-PIs funded by NSF that is directly and immediately relevant to this DataNet proposal. Other results from prior research should be described in Appendix A6 (see below).
    - Vision and Rationale - Describe why the proposed DataNet Partner is needed, what new opportunities would be created by the establishment of the Partner, and the anticipated impact on discovery and learning. Provide the rationale for the choice of science and engineering research and education fields to be served. Describe the nature of the anticipated user base. Explain how the vision and rationale contribute to an effective strategy for achieving long term economic and technological sustainability (note that detailed sustainability plans should be included in Appendix A1 as described below).
    - Activities - Provide plans for managing the full data preservation and access life cycle. Describe how the Partner will engage at the frontiers of research and education, engaging in research central to DataNet responsibilities and facilitating and serving as an object of research. Describe the education and training plans and capabilities for integrating research and education. Describe plans for obtaining active user input in all phases of Partner activities, tools, and services (e.g. design, development, implementation, refinement, etc). Provide plans for developing and implementing a vigorous and comprehensive assessment and evaluation program.
    - Structure - Describe the structure of the proposed Partner and how its components will work together in achieving its vision. Provide an overview of the management plan with a diagram of reporting relationships and an outline of how the various project components interact and are brought together into a functional whole (note that this is an overview only with details of the management plan to be provided in Appendix A2 as described below). Provide an outline of the cyberinfrastructure components of the Partner and how these are integrated into a coherent and effective infrastructure framework (note that details of the individual cyberinfrastructure components should be provided in Appendix A3 as described below). List the types of expertise to be provided by project participants and how each contributes to the overall function of the Partner (note that a detailed description of key leadership personnel and their individual roles should be included in Appendix A4 as described below). Describe the various sectors (e.g. academic, government, non-profit, commercial, international, etc.) to be involved and how each contributes to and benefits from the project (note that the specific roles of each of the participating organizations should be described in Appendix A5 as described below). Provide plans for increasing the participation of women and individuals from underrepresented groups in all Partner activities. Describe plans for promoting the formation of a functional data network, including interactions with other digital preservation/access organizations and mechanisms for enabling interoperability across the network.
- References Cited – Indicate with an asterisk any cited publications resulting from prior research funded by NSF for the PI or Co-PIs when following the guidelines for all references cited.
- Biographical Sketches - Provide biographical sketches for the PI, Co-PIs, and other Senior Personnel listed on the Project Summary page.
- Current and Pending Support – Provide this information for the PI, Co-PIs and other senior personnel listed on the Project Summary page. Address any potential overlap between the federally funded projects that are listed and the proposed DataNet activities.
- Budget – Follow the instructions in the GPG or NSF Grants.gov Application Guide for preparing the budget. Multi-institutional proposals must be submitted through the lead organization with a single budget including all other participating organizations as subawardees (see GPG guidelines, Chapter II.D.3). Provide a detailed budget justification separately for the lead organization (up to 3 pages) and for each subawardee budget (up to 3 pages each). Funds for facility construction or renovation may NOT be requested. Participation in the annual meeting of DataNet Partners leadership, focused on coordination, collaboration, integration, best practices, and shared governance structures, will be a requirement of an award. Funds for travel by four project personnel to this annual meeting at NSF in Arlington, Virginia must be included in the budget.
- Special Information and Supplementary Documentation – The following additional information is required in addition to that allowed by the provisions of the GPG or NSF Grants.gov Application Guide:
    - Appendix A1, Sustainability Plans (maximum 4 pages): While it is recognized that achieving sustainability will be a process of experimentation, adaptation, and evolution and that only limited models currently exist, proposers should describe an initial strategy, and the organizational structures and processes to be used in pursuing that strategy, by which both economic and technological sustainability could be achieved over the long term. The former – economic sustainability – means an organization that is wholly or largely independent of continued NSF funding for this activity by year 11. The latter – technological sustainability – refers to an organization that can provide for reliable long-term data preservation and access while continuously adapting to new technologies and

user expectations.
    - Appendix A2, Management Plan (maximum 3 pages): Provide a detailed management plan describing key leadership positions, reporting relationships, means of communication and interaction among the members of the group and with the community, oversight and accountability mechanisms, external advisory committees, etc. If an external advisory committee is to be utilized, do not list individual names, but do list the number of members and describe the range of expertise needed to constitute an efficient and functional committee. Describe the key characteristics, expertise, and experience of the Director if an individual has been designated or describe the recruitment process and selection criteria for retaining a qualified Director.
    - Appendix A3, Cyberinfrastructure Capabilities (maximum 4 pages): Describe the hardware and software systems and technologies, networking and access capabilities, help-desk services, and the service, fail-over (i.e. alternate site in case of disruption to the primary site), and archiving provisions for the proposed DataNet Partner. Discuss the computer and information science and engineering capabilities of project personnel. Describe mechanisms (such as hardware and software replacement/development cycles, etc.) that will be used to ensure that the computational and cyberinfrastructure capabilities of the Partner remain at the leading edge of rapidly evolving technologies, concepts, and strategies in computer and information science.
    - Appendix A4, Key Personnel: Provide a list of key leadership personnel (maximum 3 pages), with a brief description of what each person brings uniquely to the DataNet Partner.
    - Appendix A5, Role of Participating Organizations and Sectors (maximum 3 pages): Describe the role, resources, and capabilities that the lead and subawardee organizations bring to the project. Describe plans for active participation by a diversity of sectors such as academic organizations of diverse geographical, programmatic, and institutional types, governmental organizations at the federal, state, and local levels, non-profit organizations, commercial entities, and international organizations.
    - Appendix A6, Results from Prior Research (maximum 4 pages): Describe results from prior research supported by NSF or other major funding sources for the PI, Co-PIs, Senior Personnel, and other senior project participants. Describe how these results provide evidence of the experience, expertise, and capabilities required for the project plan.
- Single Copy Documents: The following information is required in addition to that included within the provisions of the GPG or NSF Grants.gov Application Guide:
    - Integrated Conflicts of Interests List for Applicants: Provide a list, in a single alphabetized table or spreadsheet of the full names and institutional affiliations of all people with conflicts of interest for the PI, Co-PIs, and any named personnel whose salary is requested in the project budget. The table should specify the nature of the conflict including: (1) PhD thesis advisors or advisees; (2) collaborator or co-authors, including postdocs, for the past 48 months; and (3) any other individuals or institutions with which the PI or Co-PIs have financial ties.
    - In addition to the Conflict of Interest List, other correspondence to the program not intended to be sent to reviewers, such as a list of potential reviewers, can be sent through the Single Copy Document section of FastLane or Grants.gov. Please note that key project personnel may be required, prior to an award decision, to submit copies of any intellectual property agreements or material transfer agreements they have signed, or are planning to sign, that would have an impact on the unrestricted and timely distribution of the outcomes of the NSF funded research. Submission of a Single Copy Document will allow these materials to be reviewed by the NSF officials only, and they will remain confidential.

Checklist for Proposal Preparation

- Proposal submitted as a single proposal with one organization as the lead and all other participating organizations as subawardees. No linked, collaborative proposal submissions will be accepted.
- Title begins with "DataNet Preliminary Proposal: …" or "DataNet Full Proposal: …"
- Project Summary contains all requested information, including the broader impacts of the proposed work
- Project Description is 7 (preliminary) or 15 (full) pages or less in length, including figures and tables
- References Cited includes publications resulting from prior research funded by NSF (marked*)
- Biographical Sketches (2 pages each) included for PI, Co-PIs, and Senior Personnel listed in the Project Summary
- Current and Pending Support Statements included for PI, Co-PIs and Senior Personnel listed in the Project Summary
- For full proposal, appendices A1, A2, A3, A4, A5, and A6 uploaded in Supplementary Documents
- Single, alphabetized table listing conflicts of interests uploaded into Single Copy Documents

Proposers are reminded to identify the program solicitation number (NSF 07-601) in the program solicitation block on the NSF Cover Sheet For Proposal to the National Science Foundation. Compliance with this requirement is critical to determining the relevant proposal processing guidelines. Failure to submit this information may delay processing.

B. Budgetary Information

Cost Sharing: Cost sharing is not required under this solicitation.

C. Due Dates

- **Preliminary Proposal Due Date(s) *(required)*** (due by 5 p.m. proposer's local time)*:*

    January 07, 2008

    November 13, 2008

- **Full Proposal Target Date(s):**

    March 21, 2008

    May 15, 2009

NOTE: Deadline dates for preliminary and full proposals have been changed to: Preliminary Proposals due November 13, 2008 and Full Proposals due May 15, 2009. The page limit for the project description has been increased to 20 pages.

D. FastLane Requirements

Proposers are required to prepare and submit all proposals for this program solicitation through use of the NSF FastLane system. Detailed instructions regarding the technical aspects of proposal preparation and submission via FastLane are available at: http://www.fastlane.nsf.gov/a1/newstan.htm. For FastLane user support, call the FastLane Help Desk at 1-800-673-6188 or e-mail fastlane@nsf.gov. The FastLane Help Desk answers general technical questions related to the use of the FastLane system. Specific questions related to this program solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this funding opportunity.

Submission of Electronically Signed Cover Sheets. The Authorized Organizational Representative (AOR) must electronically sign the proposal Cover Sheet to submit the required proposal certifications (see Chapter II, Section C of the Grant Proposal Guide for a listing of the certifications). The AOR must provide the required electronic certifications within five working days following the electronic submission of the proposal. Further instructions regarding this process are available on the FastLane Website at: https://www.fastlane.nsf.gov/fastlane.jsp.

VI. NSF PROPOSAL PROCESSING AND REVIEW PROCEDURES

Proposals received by NSF are assigned to the appropriate NSF program where they will be reviewed if they meet NSF proposal preparation requirements. All proposals are carefully reviewed by a scientist, engineer, or educator serving as an NSF Program Officer, and usually by three to ten other persons outside NSF who are experts in the particular fields represented by the proposal. These reviewers are selected by Program Officers charged with the oversight of the review process. Proposers are invited to suggest names of persons they believe are especially well qualified to review the proposal and/or persons they would prefer not review the proposal. These suggestions may serve as one source in the reviewer selection process at the Program Officer's discretion. Submission of such names, however, is optional. Care is taken to ensure that reviewers have no conflicts of interest with the proposal.

A. NSF Merit Review Criteria

All NSF proposals are evaluated through use of the two National Science Board (NSB)-approved merit review criteria: intellectual merit and the broader impacts of the proposed effort. In some instances, however, NSF will employ additional criteria as required to highlight the specific objectives of certain programs and activities.

The two NSB-approved merit review criteria are listed below. The criteria include considerations that help define them. These considerations are suggestions and not all will apply to any given proposal. While proposers must address both merit review criteria, reviewers will be asked to address only those considerations that are relevant to the proposal being considered and for which the reviewer is qualified to make judgements.

What is the intellectual merit of the proposed activity?
How important is the proposed activity to advancing knowledge and understanding within its own field or across different fields? How well qualified is the proposer (individual or team) to conduct the project? (If appropriate, the reviewer will comment on the quality of the prior work.) To what extent does the proposed activity suggest and explore creative, original, or potentially transformative concepts? How well conceived and organized is the proposed activity? Is there sufficient access to resources?

What are the broader impacts of the proposed activity?
How well does the activity advance discovery and understanding while promoting teaching, training, and learning? How well does the proposed activity broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.)? To what extent will it enhance the infrastructure for research and education, such as facilities, instrumentation, networks, and partnerships? Will the results be disseminated broadly to enhance scientific and technological understanding? What may be the benefits of the proposed activity to society?

Examples illustrating activities likely to demonstrate broader impacts are available electronically on the NSF website at: http://www.nsf.gov/pubs/gpg/broaderimpacts.pdf.

Mentoring activities provided to postdoctoral researchers supported on the project, as described in a one-page supplementary document, will be evaluated under the Broader Impacts criterion.

NSF staff also will give careful consideration to the following in making funding decisions:

Integration of Research and Education
One of the principal strategies in support of NSF's goals is to foster integration of research and education through the programs, projects, and activities it supports at academic and research institutions. These institutions provide abundant 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 learning perspectives.

Integrating Diversity into NSF Programs, Projects, and Activities
Broadening opportunities and enabling the participation of all citizens -- women and men, underrepresented minorities, and persons with disabilities -- is essential to the health and vitality of science and engineering. NSF is committed to this principle of diversity and deems it central to the programs, projects, and activities it considers and supports.

Additional Review Criteria:

Preliminary Proposals:

- Vision and Rationale: How effective is the preliminary proposal in describing a compelling vision to meet important needs and opportunities and a credible strategy to achieve long term sustainability?
- Activities: How effective will the activities outlined in the preliminary proposal be in providing for management of the full data life cycle and enabling discovery, innovation, and learning with participation across a diversity of sectors?
- Organizational Structure: Does the structure outlined in the preliminary proposal provide for participation by an appropriate range of sectors, serve and engage an appropriate set of users and participants, and provide for the necessary expertise and infrastructure?

Full Proposals:

- Vision and Rationale: How effective will the plan described in the proposal be in: (a) meeting well-defined, critical data needs; (b) creating new opportunities and capabilities for discovery, innovation and learning; (c) improving the way science and engineering research and education are conducted; and (d) achieving long term economic and technological sustainability beyond the end of NSF funding?
- Activities: How effective will the plan described in the proposal be in: (a) providing for the full data management life cycle; (b) engaging in research central to DataNet responsibilities and facilitating research as resource and object; (c) developing new tools and capabilities for learning that integrate research and education at all levels; (d) providing for community input and participation in all phases and aspects of Partner activities; and (e) ensuring vigorous and comprehensive evaluation and assessment of all aspects of the project?
- Organizational Structure: How effective will the plan described in the proposal be in: (a) providing a comprehensive and appropriate range of expertise in library and archival sciences, cyberinfrastructure, computer and information sciences, and domain sciences; (b) providing the required cyberinfrastructure resources and capabilities; (c) serving a diverse user base; (d) ensuring active participation by a diverse range of individuals (including women and members of underrepresented groups), organizations, and sectors; (e) serving as an effective partner in an interoperable network of digital preservation and access organizations; and (f) providing a management plan for effective leadership with clear lines of authority, responsibility, accountability, community and user responsiveness, and the ability to adapt to new opportunities and technologies?

B. Review and Selection Process

Proposals submitted in response to this program solicitation will be reviewed by Ad hoc Review and/or Panel Review, or Site Visit Review.

The review process will take place in three stages as follows. First, all proposers must submit a preliminary proposal that provides the information described in Section V above. Following review of preliminary proposals by a panel of external reviewers, selected proposers will be invited to proceed to the next stage of review with submission of a full proposal. Those who did not submit preliminary proposals are ineligible to submit a full proposal in the current review cycle. Full proposals submitted without a corresponding preliminary proposal in the current review cycle will not be accepted. Eligible full proposals will be evaluated by both external mail-in and panel reviews. The outcomes of this evaluation will then be used to select proposals for the third stage of review consisting of a site visit by a panel of outside experts

Reviewers will be asked to formulate a recommendation to either support or decline each proposal. The Program Officer assigned to manage the proposal's review will consider the advice of reviewers and will formulate a recommendation.

After scientific, technical and programmatic review and consideration of appropriate factors, the NSF Program Officer recommends to the cognizant Division Director whether the proposal should be declined or recommended for award. NSF is striving to be able to tell applicants whether their proposals have been declined or recommended for funding within six months. The time interval begins on the deadline or target date, or receipt date, whichever is later. The interval ends when the Division Director accepts the Program Officer's recommendation.

A summary rating and accompanying narrative will be completed and submitted by each reviewer. In all cases, reviews are treated as confidential documents. Verbatim copies of reviews, excluding the names of the reviewers, are sent to the Principal Investigator/Project Director by the Program Officer. In addition, the proposer will receive an explanation of the decision to award or decline funding.

In all cases, after programmatic approval has been obtained, the proposals recommended for funding will be forwarded to the Division of Grants and Agreements for review of business, financial, and policy implications and the processing and issuance of a grant or other agreement. Proposers are cautioned that only a Grants and Agreements Officer may make commitments, obligations or awards on behalf of NSF or authorize the expenditure of funds. No commitment on the part of NSF should be inferred from technical or budgetary discussions with a NSF Program Officer. A Principal Investigator or organization that makes financial or personnel commitments in the absence of a grant or cooperative agreement signed by the NSF Grants and Agreements Officer does so at their own risk.

VII. AWARD ADMINISTRATION INFORMATION

A. Notification of the Award

Notification of the award is made to *the submitting organization* by a Grants Officer in the Division of Grants and Agreements. Organizations whose proposals are declined will be advised as promptly as possible by the cognizant NSF Program administering the program. Verbatim copies of reviews, not including the identity of the reviewer, will be provided automatically to the Principal Investigator. (See Section VI.B. for additional information on the review process.)

B. Award Conditions

An NSF award consists of: (1) the award letter, which includes any special provisions applicable to the award and any numbered amendments thereto; (2) the budget, which indicates the amounts, by categories of expense, on which NSF has based its support (or otherwise communicates any specific approvals or disapprovals of proposed expenditures); (3) the proposal referenced in the award letter; (4) the applicable award conditions, such as Grant General Conditions (GC-1); * or Research Terms and Conditions * and (5) any announcement or other NSF issuance that may be incorporated by reference in the award letter. Cooperative agreements also are administered in accordance with NSF Cooperative Agreement Financial and Administrative Terms and Conditions (CA-FATC) and the applicable Programmatic Terms and Conditions. NSF awards are electronically signed by an NSF Grants and Agreements Officer and transmitted electronically to the organization via e-mail.

*These documents may be accessed electronically on NSF's Website at http://www.nsf.gov/awards/managing/award_conditions.jsp?org=NSF. Paper copies may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from nsfpubs@nsf.gov.

More comprehensive information on NSF Award Conditions and other important information on the administration of NSF awards is contained in the NSF *Award & Administration Guide* (AAG) Chapter II, available electronically on the NSF Website at http://www.nsf.gov/publications/pub_summ.jsp?ods_key=aag.

C. Reporting Requirements

For all multi-year grants (including both standard and continuing grants), the Principal Investigator must submit an annual project report to the cognizant Program Officer at least 90 days before the end of the current budget period. (Some programs or awards require more frequent project reports). Within 90 days after expiration of a grant, the PI also is required to submit a final project report, and a project outcomes report for the general public.

Failure to provide the required annual or final project reports, or the project outcomes report will delay NSF review and processing of any future funding increments as well as any pending proposals for that PI. PIs should examine the formats of the required reports in advance to assure availability of required data.

PIs are required to use NSF's electronic project-reporting system, available through FastLane, for preparation and submission of annual and final project reports. Such reports provide information on activities and findings, project participants (individual and organizational) publications; and, other specific products and contributions. PIs will not be required to re-enter information previously provided, either with a proposal or in earlier updates using the electronic system. Submission of the report via FastLane constitutes certification by the PI that the contents of the report are accurate and complete. The project outcomes report must be prepared and submitted using Research.gov. This report serves as a brief summary, prepared specifically for the public, of the nature and outcomes of the project. This report will be posted on the NSF website exactly as it is submitted by the PI.

VIII. AGENCY CONTACTS

General inquiries regarding this program should be made to:

- Phil Bogden, telephone: (703) 292-7092, email: pbogden@nsf.gov
- Sylvia Spengler, telephone: (703) 292-8930, email: sspengle@nsf.gov

For questions related to the use of FastLane, contact:

- FastLane Help Desk, telephone: 1-800-673-6188; e-mail: fastlane@nsf.gov.

IX. OTHER INFORMATION

The NSF Website provides the most comprehensive source of information on NSF Directorates (including contact information), programs and funding opportunities. Use of this Website by potential proposers is strongly encouraged. In addition, National Science Foundation Update is a free e-mail subscription service designed to keep potential proposers and other interested parties apprised of new NSF funding opportunities and publications, important changes in proposal and award policies and procedures, and upcoming NSF Regional Grants Conferences. Subscribers are informed through e-mail when new publications are issued that match their identified interests. Users can subscribe to this service by clicking the "Get NSF Updates by Email" link on the NSF web site.

Grants.gov provides an additional electronic capability to search for Federal government-wide grant opportunities. NSF funding opportunities may be accessed via this new mechanism. Further information on Grants.gov may be obtained at http://www.grants.gov.

ABOUT THE NATIONAL SCIENCE FOUNDATION

The National Science Foundation (NSF) is an independent Federal agency created by the National Science Foundation Act of 1950, as amended (42 USC 1861-75). The Act states the purpose of the NSF is "to promote the progress of science; [and] to advance the national health, prosperity, and welfare by supporting research and education in all fields of science and engineering."

NSF funds research and education in most fields of science and engineering. It does this through grants and cooperative agreements to more than 2,000 colleges, universities, K-12 school systems, businesses, informal science organizations and other research organizations throughout the US. The Foundation accounts for about one-fourth of Federal support to academic institutions for basic research.

NSF receives approximately 40,000 proposals each year for research, education and training projects, of which approximately 11,000 are funded. In addition, the Foundation receives several thousand applications for graduate and postdoctoral fellowships. The agency operates no laboratories itself but does support National Research Centers, user facilities, certain oceanographic vessels and Antarctic research stations. The Foundation also supports cooperative research between universities and industry, US participation in international scientific and engineering efforts, and educational activities at every academic level.

Facilitation Awards for Scientists and Engineers with Disabilities provide funding for special assistance or equipment to enable persons with disabilities to work on NSF-supported projects. See Grant Proposal Guide Chapter II, Section D.2 for instructions regarding preparation of these types of proposals.

The National Science Foundation has Telephonic Device for the Deaf (TDD) and Federal Information Relay Service (FIRS) capabilities that enable individuals with hearing impairments to communicate with the Foundation about NSF programs, employment

or general information. TDD may be accessed at (703) 292-5090 and (800) 281-8749, FIRS at (800) 877-8339.

The National Science Foundation Information Center may be reached at (703) 292-5111.

The National Science Foundation promotes and advances scientific progress in the United States by competitively awarding grants and cooperative agreements for research and education in the sciences, mathematics, and engineering.

To get the latest information about program deadlines, to download copies of NSF publications, and to access abstracts of awards, visit the NSF Website at http://www.nsf.gov

- **Location:** 4201 Wilson Blvd. Arlington, VA 22230
- **For General Information** (NSF Information Center)**:** (703) 292-5111
- **TDD (for the hearing-impaired):** (703) 292-5090
- **To Order Publications or Forms:**

  Send an e-mail to: nsfpubs@nsf.gov

  or telephone: (703) 292-7827
- **To Locate NSF Employees:** (703) 292-5111

PRIVACY ACT AND PUBLIC BURDEN STATEMENTS

The information requested on proposal forms and project reports is solicited under the authority of the National Science Foundation Act of 1950, as amended. The information on proposal forms will be used in connection with the selection of qualified proposals; and project reports submitted by awardees will be used for program evaluation and reporting within the Executive Branch and to Congress. The information requested may be disclosed to qualified reviewers and staff assistants as part of the proposal review process; to proposer institutions/grantees to provide or obtain data regarding the proposal review process, award decisions, or the administration of awards; to government contractors, experts, volunteers and researchers and educators as necessary to complete assigned work; to other government agencies or other entities needing information regarding applicants or nominees as part of a joint application review process, or in order to coordinate programs or policy; and to another Federal agency, court, or party in a court or Federal administrative proceeding if the government is a party. Information about Principal Investigators may be added to the Reviewer file and used to select potential candidates to serve as peer reviewers or advisory committee members. See Systems of Records, NSF-50, "Principal Investigator/Proposal File and Associated Records," 69 Federal Register 26410 (May 12, 2004), and NSF-51, "Reviewer/Proposal File and Associated Records, " 69 Federal Register 26410 (May 12, 2004). Submission of the information is voluntary. Failure to provide full and complete information, however, may reduce the possibility of receiving an award.

An agency may not conduct or sponsor, and a person is not required to respond to, an information collection unless it displays a valid Office of Management and Budget (OMB) control number. The OMB control number for this collection is 3145-0058. Public reporting burden for this collection of information is estimated to average 120 hours per response, including the time for reviewing instructions. Send comments regarding the burden estimate and any other aspect of this collection of information, including suggestions for reducing this burden, to:

Suzanne H. Plimpton
Reports Clearance Officer
Division of Administrative Services
National Science Foundation
Arlington, VA 22230