Awards for the Integration of Research and Education at Baccalaureate Institutions

Solicitation

OFFICE OF SCIENCE AND TECHNOLOGY INFRASTRUCTURE

DEADLINES: *LETTERS OF INTENT (Requested), February 4, 1998*
                            PRELIMINARY APPLICATIONS (Required), March 17, 1998
                            FULL APPLICATIONS, June 17, 1998

NATIONAL SCIENCE FOUNDATION

The National Science Foundation has a vision for enriching the Nation's future through research and education in science and engineering. This vision, articulated in the Foundation's Strategic Plan "NSF in a Changing World," and NSF's Government Performance Results Act Strategic Plan , is anchored in the process of discovery -- discovery by researchers, teachers, professors, their students, and all citizens, whether or not they are in the academic sector of society. By enabling excellence in education and research, the Foundation is working to serve society in many ways through discoveries in science and engineering.

This NSF vision for the future is the basis for its three far-reaching goals:
- Enable the United States to uphold a position of world leadership in all aspects of science, mathematics, and engineering;
- Promote the discovery, integration, dissemination, and employment of new knowledge in service to society; and
- Achieve excellence in U.S. science, mathematics, engineering, and technology education at all levels.

Among the Foundation's core strategies for attaining these goals, one strategy -- the integration of research and education in science and engineering -- stands out as an emerging challenge to both NSF and the academic community. This linkage between research and education has never been more important than it is right now. Today's students will spend most of their careers in the 21st Century, coping with open-ended challenges and opportunities. The demands that will confront tomorrow's scientists and engineers are vastly different from those faced by today's researchers. Several recent studies of U. S. undergraduate and graduate research and education in science and engineering have stressed the importance of educating today's students in a discovery-rich environment.

NSF agrees with these studies in asserting that both research and education are enriched by their mutual integration. The Foundation places a high priority on encouraging a stronger linkage between research and education in science and engineering. The Foundation has established several programs that promote the integration of research and education, a list of which is provided at the end of this solicitation. These programs have focused primarily on supporting integration efforts by individual faculty members or by academic departments. The integration of research and education at these levels is critically important and NSF remains committed to supporting these efforts. Nevertheless, efforts at these levels are not enough to ensure continued U.S. leadership in science and engineering. The challenges now facing the Nation's colleges and universities require responses from the top levels of institutional leadership.

This activity will focus on the Nation's Baccalaureate I and II institutions, and those Specialized Institutions of Engineering and Technology that award only baccalaureate degrees, as defined by the Carnegie Foundation for the Advancement of Teaching. It is critical that baccalaureate institutions provide an undergraduate experience that is rooted in inquiry and discovery. This undergraduate foundation can provide the next generation of leaders with an appreciation for the discovery process on which science and engineering depend, and can set the stage for life-long inquiry and learning. These are essential

characteristics not only of future scientists and engineers in particular, but for effective members of the 21st Century workforce in general. Integrating high quality research efforts at these institutions with their already strong science and engineering education has the potential for profound effect on the Nation's undergraduate education, including the preparation of future K-12 teachers. For these reasons the Foundation is particularly interested in exploring and promoting the integration of research and education at baccalaureate institutions.

There are many characteristics that mark those academic institutions that are committed to the integration of research and education. These characteristics represent conditions for effectiveness, signs of active implementation, or indications of successful outcomes and impacts. They include, but are not restricted to, the following:

- The highest levels of administration within the institution are outspoken champions for both the research and education missions of their institutions and a strong linkage between them.
- The institution acknowledges the barriers created by limited physical facilities and limited faculty resources, and seeks to overcome these obstacles by establishing enriching linkages with other institutions.
- Promotion and tenure policies reflect commitment to the synergistic integration of research and education.
- The policies and practices of the institution value, encourage, develop, recognize, and reward individuals who are attempting to build careers that balance and combine research and education.
- The institution makes tangible and persistent investments in the people and facilities that comprise a rich and integrated research/education environment.
- Faculty members feel free to explore new and integrative approaches to their teaching and research.
- Organizational structures, administrative procedures, curricula, and courses are in a process of continuous re-examination and change to achieve more innovative and effective integration of research and education in science and engineering.
- Undergraduate education, including preparation of future K-12 teachers, has a hands-on component that puts faculty and students together in a discovery experience.
- Students are encouraged to pursue intellectual problems and career paths that challenge them to venture across the boundaries that separate traditional disciplines.

The integration of research and education could also be illustrated by a series of specific examples. However, the purpose of this solicitation is not to create a rigid and confining definition. Its purpose is to expand the definition by eliciting from the academic community the most innovative and exciting examples of the effective integration of research and education.

Awards for the Integration of Research and Education

This solicitation describes an NSF award to baccalaureate institutions for institutional leadership for the integration of research and education. In making these awards, NSF hopes to expand the successful integration of research and education within the awardee institutions and to disseminate knowledge of their success to all U.S. academic institutions and the general public.

The Nation's baccalaureate institutions have a long tradition of preparing undergraduate students for diverse careers, including professions rooted in science and engineering. As undergraduate enrollment has grown and sources of research support have decreased, baccalaureate institutions have found it increasingly difficult to maintain both educational excellence and programs of high quality research.

However, many institutions have found innovative ways to integrate their education and research activities, thereby maintaining high levels of activity and quality in both. In most cases, the innovations that help to overcome limited resources have involved collaborations with other institutions, including but not limited to research universities, government laboratories, and industrial R&D organizations. NSF is also open to considering other innovations for integrating research and education that applicants have found to be effective in the past.

NSF will allocate $5 million to this activity in Fiscal Year 1998. Based on competitive merit review of applications, up to twenty baccalaureate institutions will receive three-year. Awards will be for $500,000 or less depending on the number of awards made.

Future NSF support for the integration of research and education will reflect the knowledge gathered through this activity. In focusing on baccalaureate institutions, this activity complements several other NSF activities for which institutions in other categories of higher education are eligible.

Use of Award Funds

Awardees must devote their grants to the following three activities. Awardees will have considerable flexibility in designing and implementing these activities, but all three activities must be pursued.

1. Pursue the institution's vision for the integration of research and education in science and engineering by building on past achievements. Award funds may be used to support new activities, including extensions of the institution's prior approach to the integration of research and education or new experiments suggested by earlier experiences. These new activities can expand the scope and volume of high quality research conducted collaboratively by students and faculty, or they can expand the portion of the student and faculty populations who are involved in integrated research and education activities. Examples of appropriate activities include but are not limited to:

- providing science and engineering students with expanded opportunities for high quality research within the context of their education;
- establishing new collaborations for high quality research with other institutions, such as research universities, industry, and government labs;
- creating new programs that integrate high quality research and education; and
- engaging new segments of the faculty and student body, including individuals outside the sciences and engineering, in activities that integrate research and education in science and engineering.

2. Gather and disseminate information on the institution's established efforts to integrate research and education and the outcomes and impacts that resulted from these efforts. This effort should provide a summary of the institution's approaches and activities to date, the results of evaluative studies, and a useful knowledge base of the effectiveness, outcomes, and impacts of the institution's past efforts to integrate research and education in science and engineering. These activities should result in:
- publication of articles, for the academic community and for the general public, concerning the importance of integration of research and education in science and engineering;
- publication of more detailed documentation of the institution's activities that integrate research and education, and their outcomes and impacts; and
- creation of World Wide Web sites documenting the institution's integration activities.

3. Conduct outreach activities. This award for leadership and innovation brings with it a responsibility to serve as a visible and proactive exemplar for the academic community and a source of relevant information for the general public. Examples of appropriate outreach activities include but are not limited to:
- hosting workshops and conferences on the subject;
- sponsoring sessions in professional society meetings;
- producing and disseminating videotapes about integration activities;
- hosting visits by representatives from other academic institutions; and
- conducting other outreach activities that engage industry, K-12 schools, government laboratories, and other institutions in the integration of research and education.

Institutional Eligibility

All Baccalaureate I and II institutions (as classified by the Carnegie Foundation for the Advancement of Teaching, and defined as primarily undergraduate colleges with major emphasis on baccalaureate programs) are eligible to apply. In addition, those primarily undergraduate Specialized Institutions for Engineering and Technology in the Carnegie classification that have a major emphasis on baccalaureate programs are also eligible. However, only those institutions that have actively promoted the integration of high quality research and education will be in a position to submit competitive applications. More than 650 institutions are eligible to apply for a very limited number of awards. As described below, the review of applications will examine both past accomplishments and proposed future activities. NSF urges potential applicants to consider the degree to which they have made tangible commitments to and investments in institution-wide programs

that promote high quality research that is integrated into education activities. Without a history of such commitments and investments, applicants will not be competitive and are discouraged from applying.

Letters of Intent

Any institution intending to submit a preliminary application is encouraged to submit an optional letter of intent. E-mail letters of intent should be addressed to aire@nsf.gov by **February 4, 1998.** The purpose of this notice is to enable NSF to determine the composition of its review panels.

Review of applications

Applicants compete for support in a two-stage process. In the first stage institutions submit a preliminary application describing past activities related to the integration of research and education. These preliminary applications will first be reviewed by an internal panel consisting of NSF scientists and engineers. Meritorious applications will be further evaluated by a review panel consisting of NSF personnel and outside experts. Based on the merit review of the preliminary applications, approximately 30 to 50 institutions will be invited to submit full applications.

In the second stage of review, only invited applicants will submit a full application that includes documentation of the effectiveness of past activities and future plans for integrating research and education. Full applications will be reviewed by a panel of external experts with diverse backgrounds in higher education and academic research. These reviewers will see neither the preliminary applications that preceded the full applications nor the reviews of the preliminary applications.

Application Format and Electronic Submission

Correspondence between NSF and submitting organizations during the review process will rely on electronic mail. Preliminary applications and full applications must be submitted electronically using the NSF FastLane system for electronic proposal submission and review, available through the World Wide Web at the FastLane home page (http://www.fastlane.nsf.gov). Instructions for electronic submission can be found by accessing (http://www.nsf.gov/od/osti/aire/instruct.htm. Since this process is fairly new, potential applicants are advised to prepare and submit applications early. General information about NSF's policies and procedures on proposals, declinations, and awards is contained in Grant Proposal Guide (NSF 98-2) located on the NSF Homepage.

In order to use NSF FastLane to prepare and submit a proposal, you must use a browser that supports multiple buttons and file upload (e.g., Netscape 2.0 or Microsoft Internet Explorer 4.0). In addition, Adobe Acrobat Reader is needed to view and print forms. Adobe Acrobat 2.0 or above, or Aladdin Ghost Script 5.10 or above, is needed for creating PDF files. To access the FastLane Proposal Preparation application, your

institution needs to be a registered FastLane institution. A list of registered institutions and the FastLane registration form are located on the FastLane home page.

For questions or problems concerning submitting an AIRE application via FastLane, or registering as a FastLane institution, please contact a FastLane User Support person at electronic mail: airefl@nsf.gov or phone (703) 306-1040. For non-FastLane questions related to the AIRE competition, please contact the AIRE program at aire@nsf.gov or at (703) 306-1040.

Both preliminary applications and full applications must be prepared following margin and other quality requirements described in the NSF's Grant Proposal Guide (NSF 98-2). Each must contain only the materials requested by this solicitation.

Content and Review Criteria for Preliminary Applications

The preliminary application should be submitted with the president, provost, or equivalent officer of the submitting organization as the Principal Investigator. A single Project Director may be listed as Co-Principal Investigator. The following information items must be included in the preliminary application:

1) NSF cover page (Form 1207). Applicants should specify $500,000 as the requested award amount.

2) Information about the Principal Investigator (NSF Form 1225) is automatically entered by FastLane using information from the NSF PI database. First-time PIs should refer to Instructions for Use of FastLane provided in this solicitation.

3) Project Summary (two-page limit). Describe the Institutional Vision for the Integration of Research and Education in Science and Engineering. Describe how the college views the importance of the integration of research and education and how this view relates to the mission and culture of the institution.

In addition, provide a description of desired outcomes and impacts the institution seeks as it pursues its vision for the integration of research and education. Describe the most meaningful outcomes and impacts that the institution has selected in designing efforts to integrate research and education in science and engineering. These outcomes and impacts should reflect the "added value" benefits from the integrated research/education activities to one or more of the following: research, faculty, the institution, students, their employers or other institution constituencies, or to policies, procedures, or components of campus life. These outcomes and impacts should be sufficiently explicit and relevant to allow the institution and others to appreciate the value and importance of the integration of research and education.

       Review Criteria: Is there a clear vision for the integration of research and education in science and engineering at the institutional level? Has the institution defined

meaningful desired outcomes and impacts for its efforts to integrate research and education in science and engineering?

4) Project Description (three-page limit). This narrative should be brief and concise, and must include items A and B.

      A. Nature, History, and Scope of Integration Activities. Applicants should describe concisely the innovative ways that the institution has tried to integrate high quality research and education in science and engineering. These activities can include a wide variety of research and educational initiatives, as well as changes in institutional policies, procedures, organizational structures and other aspects of campus culture. Whenever appropriate, the narrative should highlight the degree to which the integration efforts:

- expand the scope and amount of high quality research activities conducted within the context of a baccalaureate institution,
- involve partnerships with other academic organizations and other sectors of society beyond academia,
- cross organizational and disciplinary boundaries,
- impact on faculty recruitment and development,
- affect the learning experiences of undergraduate students, and
- take advantage of new educational technologies.

Specify which organizational units of the institution have been involved in the activities described above and the duration and depth of their involvement. Whenever possible, specify the number and proportion of the faculty and students within that unit that have participated in the initiative.

      Review Criterion: To what extent have the integration activities attempted to combine high quality research and education, and been innovative in nature and institution-wide in scope?

      B. Commitments and Investments. Briefly describe the top administration's explicit and visible commitment to the effort, and the current institutional investment of tangible resources in the effort. The history of commitments and investments associated with each of the integration activities described above should be presented.

      Review Criterion: Is there a record of significant institutional commitment to and investment in the integration of research and education in science and engineering?

5) Biographical Sketches. For the Principal Investigator and Co-Principal Investigator, provide a brief biographical sketch or curriculum vitae. This section must not exceed two pages per person.

Preliminary Application Deadline

Preliminary applications for the Awards for the Integration of Research and Education competition must be submitted electronically to NSF no later than 5:00 PM EST, on **March 17, 1998**. A paper copy of the Cover Sheet and signed Certification Page must be mailed to the address below to arrive by **March 24, 1998**.

> Office of Science and Technology Infrastructure
> AIRE
> National Science Foundation
> Room 1270
> 4201 Wilson Blvd.
> Arlington, VA 22230

Principal Investigators will be notified of the results of the review of preliminary applications on or before May 15, 1998.

Content and Review Criteria for Full Applications

The full application should address the same topics presented in the preliminary application and must include the following information. The review criteria associated with the three sections of the preliminary application (see above) will be used in greater depth in evaluating the corresponding sections in the full application.

1) NSF cover page (Form 1207). Applicants should specify $500,000 as the requested award amount.

2) Information about the Principal Investigator (Form 1225) is automatically generated by FastLane**.**

3) Project Summary (two-page limit). Describe the Institutional Vision for the Integration of Research and Education in Science and Engineering and the institution's definition of desired outcomes and impacts it seeks as it pursues its vision for the integration of research and education.

4) Project Description (15-page limit, including tables and graphs). In addition to more detailed treatments of items A and B (described in the project description of the preliminary application), the narrative must also contain items C-G described below.

> **A. Nature, History, and Scope of Integration Activities**

> **B. Past Commitments and Investments**

> **C. Documentation of Past Efforts.** Describe past systematic efforts by the institution to gather information for the purpose of documenting its integration activities and their outcomes and impacts. The parties charged with these information gathering efforts should be identified and their approaches described.

Review Criterion: Has the institution attempted to document its efforts to integrate research and education in science and engineering and the outcomes and impacts that have resulted from these activities?

D. Evidence of Achievements. Provide clear and tangible evidence of at least partially successful attainment of the desired outcomes and impacts of the efforts to integrate research and education in science and engineering. Describe successful data collecting efforts used by the institution. Information that demonstrates trends over time is encouraged.

Review Criterion: Has the institution been successful in producing the desired outcomes and impacts through its past efforts to integrate research and education in science and engineering?

E -G. Use of Award Funds. The full application should briefly specify the institution's proposed plan for use of the award funds over the three year award period. This plan should specify, in approximate terms, how the award funds will be allocated among different activities and organizational units. NSF funds should be used as a catalyst, not a sole support of these new activities. Information on these budget allocations should be embedded in an explanation of the following three allowable activities.

E. Plans to Advance Institutional Goals of Integration of Research and Education. Describe new efforts to pursue the institution's vision for the integration of research and education in science and engineering by building on past achievements. New initiatives may seek to broaden and deepen past activities or they may be new experiments suggested by the institution's past experiences.

Review Criterion: Does the institution have appropriate plans to pursue the institution's vision by advancing efforts to integrate research and education in science and engineering?

F. Plans to Gather and Disseminate Information to the Academic Community. The approaches, experiences, and achievements of the awardee institutions will be valuable to NSF, the academic community, and the general public. Describe activities that will provide these benefits to the widest possible audience, including systematic information gathering, evaluation studies, and publication through print, Internet, and other modes of dissemination. Awardee institutions should plan to publish these studies in peer reviewed professional journals and other venues. A scholarly approach to studying organizational change efforts related to the integration of research and education is consistent with the goals of this activity.

Review Criterion: Does the institution have appropriate plans to create a useful and accessible knowledge base of specific activities, procedures, policies, and investments as well as their outcomes and impacts?

G. Plans to Conduct Outreach Activities. In addition to gathering and disseminating information, the recipients of these awards will be in a unique position to expand the integration of research and education through outreach activities. Awardee institutions can transmit information through outreach, and can guide other institutions seeking to build greater integration between high quality research and education.

Review Criteria: Does the institution have plans to provide other academic institutions with useful models and approaches? Does the institution have plans to raise public awareness of the importance and value to society of integrating research and education in science and engineering?

5) Biographical Sketches. For the Principal Investigator and Co-Principal Investigator, provide a brief biographical sketch or curriculum vitae. This section must not exceed two pages per person.

6) Budget. Applicants should **not** include a formal budget page with either the preliminary or full application. An NSF budget page (NSF Form 1030) and budget explanation will be requested only from the institutions recommended for an award following review of full applications. This budget page must be consistent with the allocation of award funds described in the full application. If the award amount is reduced from $500,000, applicants will be asked to submit revised versions of sections E-G of the Project Description that reflect a reduced scope of work.

The Foundation expects that following an award, recipient institutions will continue or expand their investments in activities that integrate research and education. NSF funds should not be used to replace the institution's investment role.

Full Application Deadline

Full applications must be submitted electronically to NSF no later than 5 PM EST, by **June 17, 1998**. A signed paper copy of the Application Cover Sheet and Certification Page must be submitted to the same address given above for the preliminary applications to arrive by **June 24, 1998**.

Award Administration

NSF expects to award a total of $5 million, evenly distributed among ten to twenty awardees. Awards will not exceed three years in duration. Cost sharing required under this activity is limited to a minimum of one percent of the award amount. It is anticipated that award decisions will be announced by September 30, 1998.

Grant awards resulting from this solicitation will be administered in accordance with terms and conditions of NSF GC-1, "Grant General Conditions" or FDP-III, "Federal Demonstration Partnership Terms and Conditions," depending on the grantee organization. Information regarding these terms and conditions can be found by accessing (http://www.nsf.gov/home/grants.htm). More comprehensive information is contained in the NSF Grant Policy Manual (NSF 95-26) also located on the NSF Homepage.

Reporting Requirements

The experiences, approaches, and achievements of the awardees represent a valuable knowledge source. NSF, the academic community, and the general public will benefit greatly from access to this knowledge. For this reason, NSF intends to facilitate interactions among the awardee institutions to ensure that this knowledge is made readily available through web-based publication. To minimize the burden on these institutions, the annual reporting requirements that attend the awards will be aligned as much as possible with the awardees' plans to gather information and document their activities.

Inquiries

Inquiries about NSF's Awards for the Integration of Research and Education activity should be addressed to:

> Office of Science and Technology Infrastructure
> Awards for the Integration of Research and Education
> National Science Foundation, Room 1270
> 4201 Wilson Boulevard Arlington, VA 22230
> Telephone: (703) 306-1040
> E-mail: aire@nsf.gov.
> Website: http://www.nsf.gov/od/osti

References

The following reports provide background information on the importance and value of integrating research and education in science and engineering.

"NSF in a Changing World: The National Science Foundation's Strategic Plan," 1995, NSF Publication 95-24.

"Stresses on Research and Education at Colleges and Universities: Institutional and Sponsoring Agency Responses," 1994, Joint Report of the National Science Board and Government-University-Industry Research Roundtable, National Research Council.

"Reshaping the Graduate Education of Scientists and Engineers," 1995, Committee on Science, Engineering, and Public Policy, National Academy Press.

"Graduate Education and Postdoctoral Training in the Mathematical and Physical Sciences," 1996, NSF Publication 96-21.

"Renewing the Promise: Research-Intensive Universities and the Nation," 1992, President's Council of Advisors on Science and Technology, U.S. Government Printing Office.

"Science and Technology Centers: Partners in Science, Engineering, and Mathematics Education," 1994, Report of NSF's Science and Technology Centers.

"Assessment of the National Science Foundation's Engineering Research Centers Program," 1989, National Academy of Engineering.

"America's Academic Future: A Report of the Presidential Young Investigators Colloquium on U.S. Engineering, Mathematics, and Science Education for the Year 2010 and Beyond," 1992, NSF Publication 91-150.

The National Science Foundation provides a variety of funding opportunities that support the integration of research and education. NSF invites you to explore the activities listed below by accessing the NSF Homepage at http://www.nsf.gov.

- The **Faculty Early Career Development (CAREER) Program** (97-87)supports junior faculty in their efforts to develop careers which balance and integrate research and education. Contact each NSF Directorate for additional information.

- **Research at Undergraduate Institutions** (NSF 94-79) provides research and research equipment support to faculty at predominantly undergraduate institutions through all NSF research programs. RUI proposals highlight the educational impact of the research activities. Inquiries should be made to the appropriate research division and program.

- The **Collaborative Research at Undergraduate Institutions Program** (NSF 96-116) supports the development of quality, hands-on approaches to undergraduate

science education and research by collaborative groups of faculty and students. The program, sponsored by the Directorate for Biological Sciences (BIO) targets cross-disciplinary research and education.

- The **Research Experiences for Undergraduates Program** (NSF 96-102) supports undergraduate student involvement in hands-on research activities, either through supplements to existing research grants or through special awards for site-based group research experiences. These opportunities for undergraduate research experience are provided by all NSF disciplinary based group research experiences. These opportunities for undergraduate research experience are provided by all NSF disciplinary research divisions. Inquiries concerning REU Supplements should be directed to the program that made the awards; information on REU Sites may be obtained from the relevant research division.

- The **Graduate and Minority Graduate Research Fellowship Program** (NSF 97-133) promotes the future strength and diversity of the Nation's scientific and technological base through recognition and three-year support to outstanding graduate students in all fields of science, mathematics, and engineering. This program is administered by the Division of Graduate Education, (703/306-1694).

- **Integrative Graduate Education and Research Training Program** (NSF 97-112) provides support to enable the development of innovative, research-based, graduate education and training activities that will produce a diverse group of new scientists and engineers well-prepared for a broad spectrum of career opportunities. The IGERT Program replaces the Graduate Research Traineeship (GRT) program.

- **Postdoctoral Fellowships in Science, Mathematics, Engineering, and Technology Education** (NSF 97-166) is aimed at preparing recent Ph.D. graduates in science, mathematics, engineering or technology with the necessary skills to assume leadership roles in science education in the Nation's academic institutions.

- **Research Award Supplements from the Informal Science Education Program** (NSF 96-34) is an experimental activity that provides support to investigators with active grants from the Biological Sciences (BIO) Directorate to disseminate the results of their research to the general public in out-of-school settings including community-based organizations and museums, and through diverse media. Division of Elementary, Secondary, and Informal Education, Room 885 (703/306-1616)

- The **Grant Opportunities for Academic Liaison with Industry (GOALI) Program** is an NSF-wide activity (see NSF 97-116 directorate-specific guidelines) that supports a variety of industry university linkages that create opportunities for faculty, postdoctoral fellows, and students to conduct research and gain experience in an industrial setting. GOALI also supports development of innovative industry-university educational programs. Directorate for Engineering (703/306-1371 or -1330)

- The **Combined Research-Curriculum Development Program** (NSF 96-36) supports the incorporation of recent research advances in important areas of technology into upper level undergraduate and graduate engineering curricula. Division of Engineering Education and Centers, Room 585 (703/306-1380)

- The **Engineering Education Coalitions Program** (NSF 95-62 fact sheets) supports development of innovative and comprehensive models for the reform of undergraduate engineering education. Division of Engineering Education and Centers, Room 585 (703/306-1380)

NSF also supports several centers programs whose missions include the integration of research and education. These are:

- The **Engineering Research Centers Program** (NSF 97-5) Division of Engineering Education and Centers (703/306-1380)

- The **Science and Technology Research Centers Program** (NSF 98-13) Office of Science and Technology Infrastructure (703/306-1040)

- The **Materials Research Science and Engineering Centers Program** (NSF 97-98) Division of Materials Research (703/306-1815)

- The **Centers of Research Excellence in Science and Technology Program** (NSF 96-144) Division of Human Resource Development (703/306-1633)

The Foundation provides awards for research and education in the sciences and engineering. The awardee is wholly responsible for the conduct of such research and preparation of the results for publication. The Foundation, therefore, does not assume responsibility for the research findings or their interpretation.

The Foundation welcomes proposals from all qualified scientists and engineers and strongly encourages women, minorities, and persons with disabilities to compete fully in any of the research and education related programs described here. In accordance with federal statutes, regulations, and NSF policies, no person on grounds of race, color, age, sex, national origin, or disability shall be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity receiving financial assistance from the National Science Foundation.

Facilitation Awards for Scientists and Engineers with Disabilities (FASED) provide funding for special assistance or equipment to enable persons with disabilities (investigators and other staff, including student research assistants) to work on NSF projects. See the program announcement or contact the program coordinator at (703) 306-1636.

Privacy Act. The information requested on proposal forms is solicited under the authority of the National Science Foundation Act of 1950, as amended. It will be used in connection with the selection of qualified proposals and may be disclosed to qualified reviewers and staff assistants as part of the review process; to applicant institutions/grantees; to provide or obtain data regarding the application review process, award decisions, or the administration of awards; to government contractors, experts, volunteers, and researchers as necessary to complete assigned work; and to other government agencies in order to coordinate programs. See Systems of Records, NSF 50, Principal Investigators/Proposal File and Associated Records, and NSF-51, 60 Federal Register 4449 (January 23, 1995), Reviewer/Proposal File and Associated Records, 59 Federal Register 8031 (February 17, 1994).

Public Burden. Submission of the information is voluntary. Failure to provide full and complete information, however, may reduce the possibility of your receiving an award.

The 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 this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Gail A. McHenry, Reports Clearance Officer, Information Dissemination Branch, National Science Foundation, 4201 Wilson Boulevard, Suite 245, Arlington, VA 22230.

The National Science Foundation has TDD (Telephonic Device for the Deaf) capability, which enables individuals with hearing impairment to communicate with the Foundation about NSF programs, employment, or general information. To access NSF TDD, dial (703) 306-0090; for FIRS, 1-800-877-8339.

Catalog of Federal Domestic Assistance Numbers:

47.041   Engineering Grants
47.049   Mathematical and Physical Sciences
47.050   Geosciences
47.070   Computer and Information Science and Engineering
47.074   Biological Sciences
47.075   Social, Behavioral, and Economic Sciences
47.076   Education and Human Resources
47.078   Polar Programs

Instructions for Preparing and Submitting an
Awards for the Integration of Research and Education
Preliminary Application via FastLane

NOTE: Because FastLane is fairly new to users, it is advised that application preparation be done early.

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INTRODUCTION

The required content of an AIRE preliminary application is described in the AIRE solicitation (NSF 98-35). The preliminary application must be prepared and submitted via FastLane, NSF's system for electronic proposal submission, tracking and review. The FastLane system uses the World Wide Web to exchange information between NSF and its external community, including proposers and reviewers. The instructions provided in the first three pages of this document generally assume knowledge of the use of FastLane to prepare an NSF proposal. Following these, a set of more detailed instructions are provided. The detailed instructions include information about registering to use FastLane for proposal preparation and about acquiring the software necessary for this use of FastLane.

USING FASTLANE AND GETTING HELP

To use FastLane to prepare a preliminary application, you must be registered with NSF as a Principal Investigator (PI), your institution must be a registered FastLane Institution, and you must have a FastLane personal identification number (PIN) which you obtain from your institution's Sponsored Research Office (SRO), or equivalent. If you are not familiar with FastLane, including its software and user registration requirements, you may want to access the FastLane Homepage or to go directly to the detailed instructions below (Detailed Instructions for Use of FastLane). You may send technical questions and comments to the FastLane staff using the 'Send Comments to NSF' feature on each FastLane screen. **If you have any questions about this procedure, please contact a FastLane User Support person at airefl@nsf.gov, or phone (703) 306-1142 (If you reach the automated attendant, please dial extension 4686). Questions concerning content of the preliminary application should be addressed to the Office of Science and Technology Infrastructure at aire@nsf.gov or (703) 306-1040, not to FastLane staff.**

ACCESSING AIRE FORMS

1. Access the NSF FastLane Home Page (http://www.fastlane.nsf.gov) and select Proposal Preparation. Enter your required login information (last name, SSN and the PIN provided by your SRO), and then select the Proposal Preparation button. This will take you to the "PI Information" section. Please verify that the information is correct. If not, click on the Edit Information button, change the information and click OK. Then scroll down to the "Proposal Actions" section, select the Standard Proposal option and click on the OK button.

2. If you have never started a standard proposal on FastLane, you will get a screen entitled "New Proposal Information." Click on the Create New Proposal button and the "Proposal Actions" screen will appear. If you have previously used FastLane for proposal preparation, you will go directly to the "Proposal Actions" screen.

3. Scroll down to "New Proposals" and select the AIRE button. This moves you to the "Form Selector" screen, which lists and provides access to the forms needed to prepare the preliminary application.

COMPLETING THE FORMS

4. Entering Information.

    Select the form and click on Go to Form. To save a partially or fully completed form, click on OK. This saves the form and returns you to the "Form Selector" screen. To edit a partially completed form that you have previously saved, follow the same steps used to access a blank form. Once a Co-PI has been added to the Cover Sheet, the Co-PI can access the proposal by entering his/her last name, SSN, and FastLane PI PIN. You can allow other authorized FastLane users to enter and edit information by creating a specific PIN for the preliminary application (see providing access to an "In Progress" Proposal).

5. Completing the Cover Sheet (NSF Form 1207).

6. The "Program Announcement/Solicitation No." and the requested award amount fields have been filled; these fields cannot be altered. The awardee and performing institution fields are already filled using the institution and institution code from the PI's record in the NSF PI database. Verify that the awardee and performing institutions are correctly shown. Changes may be made by selecting the Awardee Institution Search or Performing Institution Search button. Please enter requested information in the other fields as appropriate. "PI /Co-PI Information" Form (NSF Form 1225).

    This form is automatically completed by FastLane using information from the PI's and Co-PI's records in the NSF PI database. Please verify that the information in the fields are correct. The information can be corrected, but only by the named individual. If correction is needed, follow the steps to edit information as described in Instruction #1 above.

NOTE: The following three ways can be used to prepare the Project Summary, and Biographical Sketches:

- The user can cut and paste text from a word processed document. However, doing so will only transfer text. Special formatting such as bold-facing, italicizing, and underlining will be lost in the cut-and-paste process.

- The user can type text directly into the form using the interface provided. Special formatting such as bold-facing, italicizing, and underlining cannot be included in a web text block. When the Project Summary is complete, choose OK to save the data.

- The user can upload the Project Summary as a Portable Data Format (PDF) file which the user creates by saving a file to disk using PDF Writer as the printer driver. Doing so will preserve the exact formatting created by the user. To use the PDF file upload capability or the automatic word wrap for text blocks, you must use a browser which supports these capabilities. See below for more details about "Converting Files to PDF and Uploading PDF Files." PDF Writer is a commercial product provided with Adobe Exchange, Adobe Distiller, and Adobe Acrobat 3.X (see Adobe's Website for information (http://www.adobe.com).

1. Project Summary.

2. Project Description.

    This section of the preliminary application must be prepared and uploaded as a single PDF file.

    The Project Description must contain the following two items of the preliminary application: a) Nature, History, and Scope of Integration Activities; and b) Commitments and Investments.

3. Completing Biographical Sketches.

    As with the project summary, any of the three methods may be used to enter information. If the PDF upload method is followed, a separate PDF file will have to be created and uploaded for each individual. After you save an individual form, you may complete another sketch, or else you may return to the "Form Selector" screen by clicking on Return to Kit Index.

SUBMITTING THE AIRE PRELIMINARY APPLICATION

Your SRO (or equivalent) submits the AIRE preliminary application to NSF electronically and also prints a copy of the submitted Cover Sheet and Certification Page. The printed copy must be signed and mailed to NSF. To allow your SRO access to the preliminary application, you access the Proposal Forms Preparation function, select the desired proposal and then click on the Allow SRO Access button. This informs your SRO that it can now access the preliminary application.

After you select the Allow SRO Access button, but before the preliminary application is submitted, you can still edit the preliminary application. For further information on submission by the SRO, see the detailed instructions (Submitting the AIRE preliminary application).

The Preliminary application must be submitted electronically no later than 5 PM, EST, on March 17, 1998. A signed paper copy of the Application Cover Sheet and Certification Page, must be mailed to the address below in time to arrive by March 24, 1998, a week after the electronic submission of the preliminary application.

> Office of Science and Technology Infrastructure
> AIRE Program
> National Science Foundation
> 4201 Wilson Blvd.,
> Room 1270
> Arlington, VA 22230

SAVING A COPY OF YOUR SUBMITTED PRELIMINARY APPLICATION TO PREPARE A FULL AIRE PROPOSAL

You can save a copy of your submitted preliminary application which will allow you to use your preliminary application to prepare a full AIRE application. In order to save a copy of your submitted preliminary application, access the FastLane Homepage. Select proposal preparation and enter the required login information. After clicking the proposal preparation button the next screen to appear will be the "PI Information" screen. Scroll down to the "Proposal Action Box" and under View, click on Submitted and then OK. Under submitted proposals, select the desired proposal and click on the Copy button. This will add a copy of the submitted proposal to the "Proposals in Progress" list on the "Proposal Action" screen. You can then select it and click on the Edit button to start your full proposal.

Detailed Instructions for Use of FastLane
to Prepare and Submit an AIRE Preliminary application

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OVERVIEW OF FASTLANE

Both AIRE preliminary applications and full applications must be submitted via FastLane, NSF's system for electronic proposal submission and review, available through the World Wide Web at (http://www.fastlane.nsf.gov). Your preliminary application must be submitted via FastLane by 5:00 PM EST 17, 1998. Please note that your signed cover sheet, and certification page must arrive at NSF by March 24, 1998. No additional information is permitted; preliminary applications containing items other than those required will not be reviewed. For questions concerning FastLane, please send an e-mail to airefl@nsf.gov.

The FastLane project, in existence since February 1995, uses the Internet and World Wide Web to exchange information between NSF and its external community. FastLane consists of eleven applications located on the FastLane Homepage (http://www.fastlane.nsf.gov).

Principal Investigators (PIs) at Registered FastLane institutions can use the NSF FastLane Proposal Preparation application located at (http://www.fastlane.nsf.gov) to prepare their proposal and allow their Sponsored Research Office (SRO) access to the proposal. Once the SRO is granted access to a proposal, the SRO can submit the proposal to NSF using the "Submit Proposal" module found within the Institutional Management of FastLane application. After a proposal is submitted, the cover sheet and certification page must be printed, signed, and mailed to NSF.

REGISTERING AS A FASTLANE INSTITUTION

To have access to the various FastLane applications, your institution must register with NSF as a FastLane institution. Registration is required for several reasons including: NSF's assurance that the proper individual from each institution is identified as the primary institutional user, the ability to notify PIs whether or not their institution is a FastLane institution, and to assure that the necessary instructions and documents are

received by the primary institutional user. The primary institutional user should be someone from the sponsored research office who will be the NSF's primary contact person and who will be responsible for initializing FastLane access. In many institutions, the primary institutional user is the Authorized Organizational Representative or a designee. To register, access the FastLane Homepage (http://www.fastlane.nsf.gov), and click on FastLane Registration Information. Scroll down to the section entitled: "FastLane Registration Form - Conditions of Registration". The designated primary user will be notified by NSF once registration is completed.

GETTING HELP WITH FASTLANE

Users may send technical questions and comments to the FastLane staff using the 'Send Comments to NSF' feature on each FastLane screen. **If you have any questions about this procedure, please contact a FastLane User Support person at airefl@nsf.gov or at (703) 306-1142 (If you reach the automated attendant, please dial extension 4686).**

REQUIREMENTS FOR ACCESSING FASTLANE PROPOSAL PREPARATION

The following are required in order to access the FastLane Proposal Preparation application.

1. To access the FastLane proposal preparation application as a Principal Investigator (PI) or Co-PI, you have to be known to NSF as a PI.

   PIs/Co-PIs who have never submitted a proposal to NSF cannot use the FastLane Proposal Preparation application until their information is provided to NSF. To provide information on first-time PIs or Co-PIs, send an e-mail message to aire@nsf.gov with the following information about each individual:

   Name
   Highest Degree and Year Conferred
   Present Institution
   Department
   Street Address
   City, State, Zip
   Social Security Number
   E-mail Address
   Business Phone
   Fax Number

   An e-mail message confirming that the data have been entered will be sent to the individual who initiated the request. The PI will be able to prepare the proposal on the following business day after the request has been submitted.

2. To access the FastLane proposal preparation application, you have to be at a Registered FastLane Institution.

3. To access the FastLane proposal preparation application, you have to have a FastLane PI PIN. Your institution's Sponsored Research Office (SRO), or equivalent, is responsible for creating a Personal Identification Number (PIN) for each individual FastLane user. This PIN will be required each time that an individual wishes to make FastLane transactions. SRO officials should read the instructions on adding FastLane users and initializing and changing user PINs which is located in the **Institutional Management** (http://www.fastlane.nsf.gov/a0/instructions/insappin.htm) of FastLane Instructions section of the **Information About FastLane** (http://www.fastlane.nsf.gov/a0/instructions/welcome.htm) document.

Note: After being entered on the cover sheet, the Co-PI can access the FastLane proposal by entering his/her last name, SSN, and PIN.

SOFTWARE REQUIREMENTS

To work with the FastLane Proposal Preparation application, you will need:
- Netscape Navigator 3.0 or above
- Adobe Acrobat Reader 2.1 or above
- Either of these following three products include the PDF Writer which is needed to create PDF Files.
    * Adobe Acrobat 3.X (which includes Adobe Exchange and Adobe Distiller)

         or
    * Adobe Acrobat Exchange 2.0 or above **or**
    * Adobe Acrobat Distiller 2.0 or above

Note: You will need Netscape 3.0 or above because it is the only browser which supports file upload at this time. If you have Netscape 3.0 or above, do not click on a word wrap button {Netscape 3.0 and above include automatic word wrap capability which FastLane employs.}

Downloading Netscape Navigator 3.01 Standard from the Web

1. Go to the FastLane home page (http://www.fastlane.nsf.gov).
2. Click on the How to Use FastLane button. This will take you to a page labeled Using NSF's World Wide Web Applications.
3. Scroll down, if necessary, to find the heading Recommended Client Capabilities, and click on the bulleted Netscape link.

Downloading Microsoft Internet Explorer 4.01 from the Web

1. Go to the FastLane home page (http://www.fastlane.nsf.gov).
2. Click on the How to Use FastLane button. This will take you to a page labeled Using NSF's World Wide Web Applications.
3. Scroll down, if necessary, to find the heading Recommended Client Capabilities, and click on the bulleted Microsoft link.

Note: Some MSIE users have reported difficulties in configuring MSIE to launch Adobe Reader from within NSF FastLane.

Downloading Acrobat Reader 3.0 from the Web

This program is needed for viewing and printing forms exactly like NSF will view and print them.

1. Go to the FastLane home page (http://www.fastlane.nsf.gov).
2. Click on the How to Use FastLane button. This will take you to a page labeled Using NSF's World Wide Web Applications.
3. Click on the Free Software from Adobe link in the first paragraph of text.

PDF Writer

This product is needed for converting files prepared on your word processor (e.g., Project Summary, Project Description) to PDF files for uploading to NSF. To submit a project description via FastLane, PDF Writer is required. **PDF Writer is a commercial product provided with Adobe Acrobat 3.0, Adobe Exchange, and Adobe Distiller.** The Project Description can only be submitted as a PDF file, and conversion to PDF is the only way to preserve formatting such as bold, underline, and italics. See below for more details about Converting Files to PDF and Uploading PDF Files.

Instructions on "Launching Adobe Reader from within FastLane to View/Print forms" are available on (http://www.fastlane.nsf.gov/a0/instructions/fladobe.htm.)

Obtaining PDF Writer

- PDF Writer is a commercial product provided with Adobe Exchange, Adobe Distiller, and Adobe Acrobat 3.X (but not with the free Acrobat Reader).
- Adobe Exchange and Adobe Distiller have been incorporated into Adobe Acrobat 3.0, and are no longer being sold individually.
- Adobe Acrobat 3.0 is not available for download on the web, but can be purchased at nearly all larger computer stores or by mail-order. Information about the product can be obtained from Adobe's website at (http://www.adobe.com) (click on Products, then on Adobe Acrobat).
- Another option is to contact the sponsored projects office at your institution or your department's administrative staff. They may have PDF Writer.

ACCESSING FASTLANE TO PREPARE AN AIRE PRELIMINARY APPLICATION

To prepare an AIRE preliminary application, the PI accesses the NSF FastLane Home Page and selects Proposal Preparation. After entering his or her login information (last name, SSN and the PIN provided by his or her Sponsored Research Office), the PI selects the Proposal Preparation button.

At this point the PI should check the accuracy of his or her PI information. An individual may modify only his or her own PI information. If any of the information is incorrect, select the Edit Information button and make the necessary changes. {If the proposal has a Co-PI, at some point in the proposal preparation process, the Co-PI should follow this same procedure to check his or her information and make any necessary corrections. The Co-PI can only do this if they have a FastLane PIN and are on the NSF mainframe as a PI or Co-PI.}

After the PI information has been verified, the PI should scroll down to the "Proposal Actions" section and select the Standard Proposal option and click on the OK button. NOTE: Throughout FastLane the OK button means save and/or continue and the Cancel button means do not save any changes. If the PI has never started a standard proposal on FastLane, the PI will get a screen entitled "New Proposal Information". The PI clicks on the Create New Proposal button and then the "Proposal Actions" screen will appear. On the Proposal Actions screen you then select the "AIRE" button to create an AIRE Preliminary application.

Note: There is an index at the top of the "Proposal Actions" screen (and subsequent screens) that allows the user to move quickly within a page without scrolling.

PROVIDING ACCESS TO AN "IN PROGRESS" PRELIMINARY APPLICATION

The forms of an "in progress" proposal may be accessed and modified by the PI or Co-PI of the proposal or by any other authorized FastLane user to whom the PI has given authority to access the proposal. The PI provides the Co-PI access to the proposal by adding the Co-PI to the cover sheet. The PI or Co-PI can provide access authority to another individual by creating a proposal PIN {this PIN is different than the PI PIN} for an "in progress" proposal. Creating a proposal PIN is an option available to the PI or Co-PI on the "Proposal Actions" screen. The PI/Co-PI can assign his/her proposal a PIN by clicking on the Proposal PIN button and then typing a proposal PIN of his/her choice, retyping it, and then clicking on the OK button.

An authorized FastLane user other than the PI or Co-PI can then access an "in progress" application by entering his/her login information and the Proposal ID {this is the number assigned by FastLane to the work in progress proposal} and PIN associated with that proposal. Unlike when the PI or Co-PI accesses his or her "in progress" proposal, another authorized user would bypass the "Proposal Actions" screen and would proceed directly to the "Form Selector" screen.

WORKING ON AN "IN PROGRESS" PREMLINARY APPLICATION

The following information must be provided in the preliminary application including these NSF Proposals forms: found in NSF's Grant Proposal Guide (GPG; NSF Publications 98-2) and can be prepared using FastLane:

Information About Principal Investigators/Project Directors (NSF Form 1225)
Cover Sheet (NSF Form 1207)
Project Summary
Project Description
Biographical Sketches

In subsequent FastLane sessions, the PI can modify an AIRE preliminary application that is "in progress" by selecting the application and clicking on Edit. This selection will take the user to the "Form Selector" screen that allows the user to work on any of the application forms. To work on a form, select the form to be filled out and click on Go to Form. The user can save a partially completed form by clicking on OK and editing it at a later time. The steps used to access and edit a partially completed form are the same steps used to begin filling out a blank form.

(Note: "Information About Principal Investigators and Project Directors" (NSF Form 1225) can only be edited by clicking on the "Edit Information" button immediately after logging into the FastLane system. The Table of Contents form cannot be edited by the user. It is automatically completed by FastLane.)

1. Cover Sheet (NSF Form 1207).

   • Awardee and Performing Institution. The institution and institution code from the PI's record in the NSF PI database will be used to fill in the awardee and performing institution fields on the cover sheet. Verify the awardee and performing institutions. Changes may be made by selecting the Awardee Institution Search or Performing Institution Search button.

   • Co-PIs. A Co-PI is added to a proposal by typing in that individual's Social Security Number on the cover sheet. If the Co-PI has not previously been a PI or Co-PI on an NSF proposal, then he or she must be entered in the NSF PI database before being assigned to the proposal (see instructions for first-time NSF PIs and Co-PIs, above). If the Co-PI has been on an NSF proposal, the Co-PI will appear on the cover sheet the next time the cover sheet is accessed or printed. Also, once the Co-PI has been added to the cover sheet and the Co-PI has been assigned a FastLane PIN by his/her Sponsored Research Office, he or she will be able to access and modify the proposal by entering his/her log-on information and clicking the Proposal Preparation button.

   • Certification for Authorized Organization Representative or Individual Applicant. This information is filled out by the Sponsored Projects Office within the "Submit

Proposal" module; before submitting the proposal. When the Cover Sheet is complete, choose OK to save the data entries and return to the "Form Selector" screen.

NOTE: The following three ways can be used to prepare the Project Summary, and Biographical Sketches:

- The user can cut and paste text from a word processed document. However, doing so will only transfer text. Special formatting such as bold-facing, italicizing, and underlining will be lost in the cut-and-paste process.

- The user can type text directly into the form using the interface provided. Special formatting such as bold-facing, italicizing, and underlining cannot be included in a web text block. When the Project Summary is complete, choose OK to save the data.

- The user can upload the Project Summary as a Portable Data Format (PDF) file which the user creates by saving a file to disk using PDF Writer as the printer driver. Doing so will preserve the exact formatting created by the user. To use the PDF file upload capability or the automatic word wrap for text blocks, you must use a browser which supports these capabilities (Netscape 3.0 or later). See below for more details about "Converting Files to PDF and Uploading PDF Files." PDF Writer is a commercial product provided with Adobe Exchange, Adobe Distiller, and Adobe Acrobat 3.X (see Adobe's Website for information (http://www.adobe.com).

2. Project Summary

3. Project Description

   The Project Description must contain the following two items of the preliminary application: a) Nature, History, and Scope of Integration Activities; and b) Commitments and Investments.

   The only way a Project Description can be submitted via FastLane is as a PDF file. The user can submit a Portable Data Format (PDF) file which the user creates by saving a file to a disk using PDF Writer as the printer driver. Doing so will preserve the exact formatting created by the user. To use the PDF file upload capability you must use a browser which supports this capability (Netscape 3.0 or later). See below for more details about "Converting Files to PDF and Uploading PDF Files." PDF Writer is a commercial product provided with Adobe Exchange, Adobe Distiller, and Adobe Acrobat 3.X (see Adobe Website for information (http://www.adobe.com).

4. Biographical Sketches

Note: The cover sheet must be accessed and saved at least once before the FastLane budget form can be accessed.

CONVERTING FILES TO PDF and UPLOADING PDF FILES

You can convert your files to PDF using Adobe Exchange, Distiller, or Adobe Acrobat 3.X. At this time most of our users have Adobe Acrobat 3.X or Adobe Exchange. The first step is to install the software. After that you can open your document in your word processor, spreadsheet etc. and select File/Print, and then select the Adobe PDF Printer Driver. Instead of printing the document to a printer, this procedure converts the file to PDF format.

Now that the file is on your hard drive, you can upload the file to FastLane. For the forms that can be uploaded as a PDF file, you will see a Transfer PDF button. To upload your file, type in the location and name of the file {if you do not know this, use the Browse button}, and select the Transfer PDF button. This will upload your file to the FastLane server. You must have Netscape 3.0 or above to upload a file to the FastLane server. You can then view and print your file by clicking on the Display PDF file button which now appears.

PDF files cannot be altered. Thus, if you want to change your file, you will need to change your source file, convert it to PDF, and then upload it. The second file that is uploaded replaces the first.

NOTE: The PDF file you upload will be printed out at NSF as is. The PDF file is NOT imported into the NSF form. Thus, for example, if you plan to upload a Project Summary as a PDF file within your word processor, you should type "Project Summary" at the top of your project summary and then convert it to PDF and upload it to FastLane.

Note: Upon start-up, users of Adobe Acrobat 3.0's Adobe Distiller are given the option of creating Adobe 2.1 compatible files and Adobe 3.0 compatible files. If you choose Adobe 3.0 compatible files, reviewers using Adobe 2.1 are unlikely to be able to view your proposal on FastLane. Thus, you should choose to create Adobe 2.1 compatible files (reviewers using Adobe 3.0 will be able to view your Adobe 2.1 files)

PRINTING THE PRELIMINARY APPLICATION

To print a preliminary application from the "Proposal Actions" screen, select the application, and click on the Print button. Then select the form that you want and click on the OK button. Adobe Reader will be launched with the form including your data. Then print out the form by selecting File/Print from Adobe's menu. To print out the entire preliminary application, select the Print Entire Proposal option and click on the OK button. To print the application from the "Forms Selector" screen, click on the Print button and follow the same procedure.

SUBMITTING THE AIRE PRELIMINARY APPLICATION

The Sponsored Research Office or equivalent submits the AIRE preliminary application to NSF electronically, prints a copy of the submitted Proposal Cover Sheet and Certification

Page. The cover sheet and certification page must be mailed to NSF. NSF will make the appropriate number of copies of the AIRE preliminary application. If you have any questions about this procedure, please contact airefl@nsf.gov.

1. In order to submit a preliminary application via FastLane, a PI/Co-PI must allow his/her SRO access to the preliminary application. This is done in the Proposal Forms Preparation function by selecting the desired proposal and then clicking on the Allow SRO Access button. Clicking on the Allow SRO Access button sends an e-mail to the SRO(s), who have been given the FastLane permission to submit proposals, saying that the SRO can now access the application using the Submit Proposals to NSF function. After the PI/Co-PI selects the Allow SRO Access button, the PI/Co-PI can still edit the proposal.

2. To submit the preliminary application to NSF, the SRO must access the Submit Proposals to NSF function of the "Institutional Management of FastLane" application found on the FastLane Home Page. In order for an SRO official to access the Proposal Submission function, he/she must have been granted the permission to "Submit Proposals". To initiate a submission, the SRO selects the Submit Proposals to NSF function and clicks on the OK button. The proposals that have been "Allowed SRO" access will be displayed in the "Proposals in Progress" list.

   The SRO official can check the preliminary application to be sure all required forms are completed, by clicking on the Check button. The SRO can view the individual application forms by clicking on the View button.

   To submit the preliminary application, the SRO selects the application and clicks on the Submit button. When the SRO official clicks on the Submit button, the Certification for Authorized Institutional Representative will be displayed. The SRO official must complete this information as a part of the submission process. After typing in the information, the SRO will be prompted with the question: "Submit Proposal # to NSF? "question. The SRO clicks on Yes to submit the proposal to NSF and an official NSF proposal number is generated.

3. After clicking on the OK button from the submission verification screen, the system will return to the list of proposals screen. The newly submitted proposal will now be in the lower portion of the screen in the list labeled "Submitted Proposals". The Proposal Cover Sheet and Certification Page then need to be printed, signed, and mailed to NSF.

To print the Application Cover Sheet, the SRO selects the preliminary application in the Submitted Proposals list and clicks on the View button. The system will display the various forms that can be printed for the preliminary application. The Application Cover Sheet and Certification page have to be printed. The SRO may optionally print the other l forms. To print both the Application Cover Sheet and Certification Page, the SRO selects the Application Cover Sheet form and clicks on the OK button.

The Application Cover Sheet, and signed Certification Page have to be mailed to the following address:

Office of Science and Technology Infrastructure
AIRE Program
National Science Foundation
4201 Wilson Blvd., Room 1270
Arlington, VA 22230

SAVING A COPY OF YOUR SUBMITTED PRELIMINARY APPLICATION TO PREPARE A FULL AIRE APPLICATION

You can save a copy of your submitted preliminary application which will allow you to use your preliminary application to prepare a full AIRE application. In order to save a copy of your submitted preliminary application, access the FastLane Homepage. Select proposal preparation and enter the required login information. After clicking the proposal preparation button the next screen to appear will be the "PI Information" screen. Scroll down to the "Proposal Action Box" and under View, click on Submitted and then OK. Under Submitted proposals, select the desired proposal and click on the Copy button. This will add a copy of the submitted preliminary application to the "Proposals in Progress" list on the "Proposal Action" screen. You can then select it and click on the Edit button to start your full application.