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CISE RESEARCH INFRASTRUCTURE PROGRAM

PROGRAM ANNOUNCEMENT

DIRECTORATE FOR COMPUTER AND INFORMATION SCIENCE AND ENGINEERING

DEADLINE DATE: ***November 24, 1998***

NATIONAL SCIENCE FOUNDATION

CISE Research Infrastructure Program

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1. BACKGROUND AND INTRODUCTION

The CISE (Computer and Information Science and Engineering) Research Infrastructure Program provides support to aid in the establishment, enhancement, and operation of major experimental facilities planned to support all of the research areas in the CISE Directorate. It may also assist activities for integration of research and education. The Research Infrastructure Program recognizes the emergence of research groups requiring strengthening of experimental facilities in a variety of environments - those solely within a single academic department, those drawing from several departments in a single institution, and those spanning several different institutions. The areas of research supported by this program are those supported by the CISE Directorate as described in the Guide to Programs (NSF 97-150).

In this document, the CISE Research Infrastructure Program will be abbreviated as "RI"; this designation will also include predecessors of the program: the Coordinated Experimental Research (CER) program, the Institutional Infrastructure - Large Scale program, and the Institutional Infrastructure - Small Scale program. Similarly, the statement "all of the research areas supported in the CISE Directorate" will be abbreviated as "CISE-research".

2. GOALS AND SCOPE OF THE PROGRAM

SUPPORT OF EXPERIMENTAL RESEARCH:

A primary objective of the RI program is to stimulate experimental work in CISE-research, as measured by increased scientific activity and increased participation in research of both faculty and graduate students. It also provides assistance to activities for integration of research and education.

FULL PARTICIPATION OF UNDERREPRESENTED GROUPS:

The NSF encourages proposers to address the full participation of women, minorities and persons with disabilities (hereinafter referred to as underrepresented groups) in research activities. Examples of activities appropriate to the RI program are: a departmental effort to recruit female graduate students, a research collaboration with a minority institution, or a project that is focused on designing a system to provide systems access to persons with a visual disorder.

AWARDS:

Support is provided for equipment, software, maintenance, and appropriate technical support staff. Awards generally range from $800,000 to $2,000,000 over a five-year period. In most cases, five-year continuing grants are awarded under the program but shorter term awards may be recommended if appropriate.

3. ELIGIBILITY

Proposals requesting support for acquisition of experimental facilities in CISE-research will be accepted from research groups associated with US institutions with PhD degree-granting departments that have research programs in any one or more areas of CISE-research. Only one proposal per institution will be accepted in any one year. Consortia of more than one institution are considered as distinct from the institutions comprising them and should have at least one CISE research area PhD granting institution associated with the consortia as a major participant.

To qualify for an RI grant, the proposing research group should have an existing core of active researchers and research projects in CISE-research. The RI program is open to all core CISE disciplines: Computer Science, Computer Engineering, Intelligent Systems, Information Science, Networking and Communications Research. The RI program is interested in promoting multidisciplinary applications in areas funded by other NSF Directorates. *However, a competitive, multidisciplinary RI proposal must contain a significant component in core CISE-research.*

The RI program provides support for acquisition of experimental facilities not normally available under individual research grants. Before applying for an RI grant, the proposing group is asked to consider whether individual research or equipment grants would be more appropriate. An important consideration in evaluating these proposals is whether the provided experimental facilities will enable the researchers to undertake important work that otherwise would not be possible under individual awards. Another important criterion is whether the provided support will likely result in more or better results than would separate support for the individual research projects at the same total funding level. Thus, RI proposals are expected to have strong synergism among researchers and among projects that requires the coordinated RI funding.

The leverage provided by NSF funds is a key element in the evaluation of RI proposals. The synergism present in an RI proposal should also be evidenced by enabling new sources of research support, appropriate recognition in the host(s) university, participation in new partnerships, or other ways.

4. ELIGIBLE PROJECT COSTS AND COST SHARING

The RI program provides support for the acquisition of major experimental facilities in CISE-research. Eligible project costs are equipment, software, maintenance and appropriate technical support. Appropriate technical support refers to technical personnel and associated indirect costs that are necessary for the operation and maintenance of the experimental facilities. Travel expenses necessary for training technical support staff in the operation and maintenance of the experimental facilities may be eligible project costs if appropriate justification is presented.

Students, research assistants, postdoctoral research associates, secretarial and clerical personnel are not eligible project costs. Faculty salaries are eligible project costs only in the case of the project director when one month per year of salary and associated indirect costs may be allowable if the requested experimental facilities are sufficiently complex and appropriate justification is presented.

There should be strong existing institutional or multi-institutional support through cost sharing for the RI projects. The institution(s) must be prepared to provide substantial cost-sharing for the proposed project equal to at least one third of the amount requested from NSF. The RI program requires that the institution(s) assume an increasing share of the maintenance and technical support personnel costs each year throughout the grant period as well as full support for the provided experimental facilities and

technical support personnel after the grant expires. The cost-sharing may be from any private or non-Federal public source and may be cash, or any eligible project item as described above. Equipment discounts are not eligible as cost sharing. Industrial supporting letters may be included with the budget justification (see section 8) or included with the cover sheet and certifications page that are mailed to the NSF (see section 9).

5. DEADLINE

The deadline for proposals to be submitted by FastLane in this program is November 24, 1998. (See Section 9 for further details.) Proposals submitted after this date will not be processed. Awards are planned for the following July of each competition year. See Proposal Submission (section 9) for additional information.

6. PROPOSAL EVALUATION

General criteria for the evaluation of proposals are given in the Grant Proposal Guide (NSF 99-2).

Proposals submitted in response to this program announcement will be subject to the new merit review criteria approved by the National Science Board on March 28, 1997 (NSB 97-72). The new merit review criteria are: What is the intellectual merit and quality of the proposed activity? What are the broad impacts of the proposed activity? These and other additional criteria are detailed in the Review Form as shown in Appendices 1 and 2

Additional considerations in evaluating these proposals include:

- Whether the provided experimental facilities will enable the researchers to undertake important work that otherwise would not be possible under individual awards.
- The leverage provided by NSF funds to enable additional research funding, university support for experimental computer science, and industry participation.
- Whether the provided support will likely result in more or better results than would separate support for the individual research projects at the same total funding level.
- Whether there is a strong synergism present in an RI proposal that would not be found in individual research grants.

Because of the size and importance of the RI program, the proposal evaluation process is particularly lengthy and thorough. This process is described in the following paragraphs. Guidelines for reviewers of each phase of the review process are included as Appendix 1.

Although in a given year the actual evaluation process may change in detail from that described below, the broad outline of the process is expected to remain constant. Proposing Principal Investigators will be kept informed of any changes as they occur.

The proposals are evaluated in multiple stages consisting of preliminary NSF staff screening, initial evaluation by panel review, initial NSF staff recommendations, site visits, final panel review, and NSF staff award recommendations. At each stage of the review process, the project or institutional activities designed to increase participation by underrepresented groups in CISE-research, will be examined.

INITIAL EVALUATION:

Shortly after the annual deadline, an Initial Evaluation Panel, formed of individuals representing all of the eligible research areas, is convened to examine the proposals. This panel screens the proposals in order to identify those that are inappropriate to this program, those that are severely technically flawed, and those proposals that, while of good quality, are not the strongest contenders. These proposals undergo no further evaluation, but feedback from the panel is provided to the institutions to assist them in preparing future proposals. Feedback is also provided to institutions whose proposals are selected for further evaluation, so that they can prepare for site visits or future proposals. The panelists provide individual written comments using Forms as shown in Appendix 2.

SITE VISITS:

The site visit typically is conducted by one or two NSF staff and two or three non-NSF consultants who are specialists in one or more of the research areas in the specific proposal. The purposes of these site visits are (1) to investigate in more detail questions that were raised by the Initial Evaluation Panel, (2) to evaluate the personnel as well as the research they are conducting and propose to conduct should they receive a grant, (3) to determine the institutional support and commitment, and (4) to acquire any additional information that might help the Final Panel (to be discussed later) to make their evaluations and the NSF staff to make their recommendations. Following the visit each site visitor prepares a written report and anonymous copies of these reports are sent to the institution. Following the site visits, additional proposals may be declined.

ADDENDA FROM PROPOSERS:

The remaining institutions then are invited to submit an addendum to their proposal in order to respond to the comments made by the Initial Evaluation Panel and the Site Visitors. The addenda are limited to 10 pages plus budget pages as necessary.

FINAL EVALUATION:

A Final Panel of external senior computer and information scientists and engineers, representing all of the included research areas, is then convened. The remaining proposals are discussed by the panel, and panelists prepare written evaluations of each proposal using a form similar to that shown in Appendix 3. At the RI program director's discretion, the final panel may be composed of NSF staff and a similar review process is followed.

SELECTION:

After this merit-review process, the RI Program Director considers the reviews prepared by the Initial and Final Panels, the Site Visitors' reports and the Institutions' addenda. The RI Program Director then makes recommendations for awards and declinations, and efforts are made to complete the process by about July 1.

7. INSTRUCTIONS FOR PROPOSERS

GENERAL INSTRUCTIONS

Proposals must be prepared following requirements described in Chapter I, Section F of the NSF Grant Proposal Guide (GPG), NSF 99-2. The GPG, as well many other NSF publications, can be obtained

from the NSF World Wide Web home page at the URL: http://www.nsf.gov. Paper copies of the GPG can be requested at no cost; see section 12.

Proposers are required to conform to the instructions in section 8 regarding page limits, section titles, and the ordering of sections in the proposal.

FastLane SUBMISSION

CISE Research Infrastructure Program proposals are required to be submitted electronically using the NSF FastLane system for electronic proposal submission and review. See section 9 for detailed information.

8. PROPOSAL FORMAT

A strict format and page limits, specified later in this section, is imposed on RI proposals. Research proposals not meeting these limits will be returned as inappropriate for the program.

INTRODUCTORY MATERIAL:

The following parts should be submitted as directed in the FastLane Instructions.

1. Cover page. The standard NSF cover page (Form 1207 in NSF 99-2), must be used and it will be the first page of the proposal. A printed copy of the cover sheet and certification page must be signed by the Principal Investigator(s) and the Authorized Organizational Representative and mailed to the NSF. (See section 9.)

2. The National Science Foundation has an obligation to monitor the operation of its award process to assess patterns of gender, race, ethnicity, or disability among proposed Principal Investigators and Project Directors. To provide the NSF with the information it needs for this important task, Principal Investigators and Project Directors are requested to complete Form 1225 on FastLane (see NSF 99-2).

PROPOSAL SUMMARY: (Fifteen page limit)

The following sections should be submitted together as the Project summary. The total limit for the Proposal Summary section will be 15 pages as indicated below.

Executive Summary (Three page limit)

A summary of the remaining sections in the proposal.

Research Infrastructure Description (Five page limit)

Include a summary description of the requested experimental facilities and an indication of how the research infrastructure will be developed over the five year period of the grant.

Resource Allocation (Five page limit)

Describe the way in which the requested funds will be used to acquire the experimental facilities needed to support the research projects, including:

1. The research equipment and computing facilities currently in the department or available to it for research.

2. A description of the equipment, software, maintenance and technical support requested for each year, including for equipment a representative manufacturer and model number if possible, with itemized costs and total cost.
3. Rationale for the requested equipment, software, maintenance and technical support.
4. Equipment and software maintenance costs per year, with method of computation.
5. A description of how the equipment will be accessed by the users, including details of the network/communication system for remote users.
6. A description of any space renovation needed to accommodate the requested equipment. Indicate the source of funds for the renovation, since RI funding is not normally granted for this purpose.
7. A description of the institutional cost-sharing.

Management Structure (One page limit)

A proposed management structure for managing the experimental facilities is to be included here. The plan should indicate not only how the proposed facilities would be managed but also how this research infrastructure would fit into and be integrated with the existing infrastructure in the unit.

Inter-Institutional Agreements (One page limit)

Proposals involving inter-institutional sharing arrangements must include a copy of the arrangement. This must detail the administrative and financial responsibility of each institution, and it must be formally approved by appropriate scientific and administrative officers of each institution

BUDGET:

1. Prepare appropriately labeled copies of NSF Form 1030, one for each year of the grant and one for the total for all years (generally five years), for the requested NSF budget.
2. For the budget justification, a detailed supplemental budget spreadsheet is required. In the left-most column list detailed description of items needed, followed by six columns. For each year of the grant and for the five year total give the itemized project costs in five columns. The total costs are summed in the sixth column. Each of these six columns is divided into subcolumns for the amounts requested from NSF, the institutional cost sharing, and other support (one-page limit).
3. In the case of a consortium, the budget information should be provided for each member institution of the consortium.

RESEARCH DESCRIPTION: (Fifteen page limit)

Provide a description and explanation of the proposed associated research with appropriate scientific justification and literature references. This should demonstrate how the research depends upon both the experimental facilities proposed and the requested level of support with particular emphasis given to identifying new directions, expansions and extensions not possible without such support. The scientific merit of the research made possible by the requested support is a particularly important selection criterion. The synergism of the research projects and the leverage of NSF forms should be explained. In addition, criteria for measuring success of the project and the expected impact to the departments, institutions and CISE community should be provided. The proposed facilities may also be used in support of activities for integrating research and education. All proposals must contain sufficient detail for an evaluation of the intrinsic scientific merit of the proposed research.

The intention is that this section of the proposal be structured by the proposing institution so as to present its case in the best possible light. Therefore, the structure and sub-sections within this section are not specified.

All diagrams, references, bibliographies etc., are included in the 15 page limit. No appendices will be accepted.

BIOGRAPHICAL SKETCHES:

In no more than two pages each, include the current curriculum vitae and a brief summary of their research accomplishments over the past five years for each faculty member who will be directly involved in the use, development or formation of the research facility, or in the research projects. These sketches should include the name of the investigators thesis advisor, names and institutions of past PhD students, and names and institutions of current collaborators.

If there are other senior personnel who will be responsible for the purchasing, management or operation of the requested equipment, provide their names and recent accomplishments in one page for each person.

CURRENT AND PENDING SUPPORT (FORM 1239):

Supply the information requested in Form 1239 of the Grant Proposal Guide (NSF 99-2) i.e., indicate all current and pending research support for each investigator listed in the biographical sketches section above.

RESULTS FROM PRIOR RI AWARD(S): (Two-page limit)

If an institution has received RI funding in the past five years, whether an initial award or continuing award, a summary of that project including a compilation of the significant research results, with a listing of pertinent publications, is to be included.

9. PROPOSAL SUBMISSION BY FASTLANE

CISE Research Infrastructure Program proposals are required to be submitted electronically using the NSF FastLane system for electronic proposal submission and review, available through the World Wide Web on the FastLane Home Page (**http://www.fastlane.nsf.gov**). Instructions for preparing and submitting a standard NSF proposal via FastLane are located at **http://www.fastlane.nsf.gov/a1/newstan.htm**. In order to use NSF FastLane to prepare and submit a proposal, you must have the following software: Netscape Navigator 3.0 or above, or Microsoft Internet Explorer 4.01 or above; Adobe Acrobat Reader 3.0 or above for viewing PDF files; and Adobe Acrobat 3.X or Aladdin Ghostscript 5.10 or above for converting files to PDF.

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. To register an organization, authorized organizational representatives must complete the registration form. Once an organization is registered, PIN for individual staff are available from the organization's sponsored projects office.

Proposals must be submitted via FastLane no later than 5:00 PM (submitter's local time) on the deadline date (See section 5) and the signed (paper) cover sheet must be mailed in time to arrive at the following address within five working days of the deadline:

- CISE Research Infrastructure Program
  National Science Foundation, Room 1160N
  4201 Wilson Boulevard
  Arlington, VA 22230

For questions or problems concerning submitting a proposal via FastLane, please send an e-mail message to fastlane@nsf.gov or call (703) 306-1142."

10. ADDENDUM FORMAT (Ten-page limit)

Certain of the proposing institutions receiving a site visit will be invited to submit 10 copies of an Addendum addressing the issues raised by the Initial Evaluation Panel and by the Site Visitors. The Addendum may optionally include modified budget sheets, equipment and/or proposed research, as appropriate. The Addendum must not be a substitute proposal and should not duplicate material in the Proposal. These are to be submitted to the cognizant program director directly.

11. AWARD ADMINISTRATION AND REPORTING

Awards resulting from proposals submitted to this program will be administered in accordance with Grant General Conditions (GC-1) or Federal Demonstration Project General Terms and Conditions (FDP-II) as applicable.

The Government Performance and Results Act (GPRA) of 1993 requires every federal agency to establish strategies and performance measurement. To comply with GPRA NSF must have knowledge as to the Input, Output, Outcome, and Impact of its funding. Thus awardees will be required to submit information for Government Performance and Results Act (GPRA) reports, such as degree of success, unmet goals (if any), impact, significant publications, and students whose work is supported directly or indirectly by the awards. This information will enable the program officer to consider whether the goals were met and what was accomplished with the resources expended.

Awardees are expected to participate in an annual workshop sponsored by the NSF for principal investigators of the CISE Research Infrastructure and CISE Minority Institutions Infrastructure programs.

12. ADDITIONAL INFORMATION

NSF PUBLICATIONS

The brochure Grant Proposal Guide (NSF 99-2), and NSF Guide to Programs (NSF 97-150) are available at no cost from:

- NSF Publication Clearinghouse
  P.O. Box 218
  Jessup, MD 20794-0218
  Phone: 301-947-2722.
  Email: pubs@nsf.gov

If you are a user of electronic mail and have access to the Internet, you may order publications electronically. Internet users should send requests to pubs@nsf.gov. In your request, include the NSF publication number and title, number of copies, your name, and a complete mailing address. Publications should be received within 3 weeks after receipt of request.

CISE RESEARCH INFRASTRUCTURE PROGRAM

For more information on the CISE RI Program, contact the program director at (703) 306-1981.

Information on current projects supported under the RI Program is contained in the annual publication of the Summary of Awards Report, copies of which are mailed to each PhD degree-granting computer and information science and engineering department. Additional copies of the this publication are available from the Division of Experimental and Integrative Activities upon request. Some information is available on-line at the CISE/EIA WWW site at: **http://www.cise.nsf.gov/eia/index.html**

Programs described in this publication are in Category 47.070 (Computer and Information Science and Engineering) in the Catalog of Federal Domestic Assistance.

NSF INFORMATION

The National Science Foundation (NSF) funds research and education in most fields of science and engineering. Grantees are wholly responsible for conducting their project activities and preparing the results for publication. Thus, the Foundation does not assume responsibility for such findings or their interpretation.

NSF welcomes proposals from all qualified scientists, engineers and educators. The Foundation strongly encourages women, minorities, and persons with disabilities to compete fully in its programs. 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 subjected to discrimination under any program or activity receiving financial assistance from NSF (unless otherwise specified in the eligibility requirements for a particular program).

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-supported projects. See the program announcement or contact the program coordinator at (703) 306-1636.

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 regarding NSF programs, employment, or general information. TDD may be accessed at (703) 306-0090 or through FIRS on 1-800-877-8339.

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; 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 review process; to applicant 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 needing information as part of the review process or in order to coordinate programs; 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," 63 Federal Register 267 (January 5, 1998), and NSF-51, "Reviewer/Proposal File and Associated Records," 63 Federal Register 268 (January 5, 1998). Submission of the information is voluntary. Failure to provide full and complete information, however, may reduce the possibility of receiving an award.

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 and any other aspect of this collection of information, including suggestions for reducing this burden, to: Reports Clearance Officer; Information Dissemination Branch, DAS; National Science Foundation; Arlington, VA 22230.

YEAR 2000 REMINDER

In accordance with Important Notice No. 120 dated June 27, 1997, Subject: Year 2000 Computer Problem, NSF awardees are reminded of their responsibility to take appropriate actions to ensure that the NSF activity being supported is not adversely affected by the Year 2000 problem. Potentially affected items include: computer systems, databases, and equipment. The National Science Foundation should be notified if an awardee concludes that the Year 2000 will have a significant impact on its ability to carry out an NSF funded activity. Information concerning Year 2000 activities can be found on the NSF web site at **http://www.nsf.gov/oirm/y2k/start.htm**.

APPENDIX 1:

GUIDELINES FOR ALL REVIEWERS

REVIEW CRITERIA

In meeting its statutory responsibilities, NSF seeks to support the most meritorious research, whether basic or applied. Proposals submitted in response to this program announcement will be subject to the NEW merit review criteria approved by the National Science Board on March 28, 1997 (NSB 97-72). The new merit review criteria are:

- *What is the intellectual merit and quality of the proposed activity?*
  The following are suggested questions that the reviewer will consider in assessing how well the proposal meets this criterion. Each reviewer will address only those questions which he/she considers relevant to the proposal and for which he/she is qualified to make judgments.
  How important is the proposed activity to advancing knowledge and understanding within its own field and 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 prior work.) To what extent does the proposed activity suggest and explore creative and original 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?*
  The following are suggested questions that the reviewer will consider in assessing how well the proposal meets this criterion. Each reviewer will address only those questions which he/she considers relevant to the proposal and for which he/she is qualified to make judgments.
  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, 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?

These review criteria and others are included in the Review Forms in the following Appendices.

For additional information on NSF's new merit review criteria, see the Merit Review Task Force Final Report on the NSF Home Page at **http://www.nsf.gov/cig-bin/getpub?nsbmr975.**

The results of prior NSF-supported research are taken into account for all proposals.

CONFLICT OF INTEREST AND CONFIDENTIALITY

In our selection of panelists and site visitors we make an effort not to include persons with conflicts of interest. However, if as a panelist or visitor you have any affiliation or financial connection with a proposing institution or person that might be construed as creating a conflict of interest, please bring it to our attention.

NSF receives proposals in confidence and is responsible for protecting the confidentiality of their contents. For this reason, please do not copy, quote or otherwise use material from a proposal. The names of the proposing institutions, the principal investigator(s), as well as the panel members and site visitors are strictly confidential.

It is the policy of the Foundation that reviews will not be disclosed to persons outside the Government, except that verbatim copies without the name or affiliation of the panelist or site visitor will be sent to the principal investigator. The Foundation considers reviews to be exempt from disclosure under the Freedom of Information Act (5 USC 552) but cannot guarantee that it will not be forced to release reviews under this or other laws.

INITIAL EVALUATION PANEL GUIDELINES

The main purposes of the Initial Evaluation Panel are (1) to screen the proposals in order to eliminate those that are severely technically flawed, those that are inappropriate to the program and those proposals that, while of good quality, are not the strongest contenders, and (2) to provide feedback to the proposing institutions either for the preparation for a site visit or for a future proposal.

The NSF staff will send proposals to you with the expectation that you will read them prior to the panel meeting and write your own individual comments on a form similar to that shown in Appendix 2. You will have the opportunity to discuss each of the proposals that you have received with other panel members. Following this discussion period you may modify your own individual comments if you wish. For each proposal, one member of the panel will be asked to write a summary review describing the panel discussion of that proposal.

In your comments at the panel meeting, if you believe that the proposal should be considered further in the review process, we ask that you emphasize questions that should be asked of the proposing institution at a site visit. If, on the other hand, you believe that a proposal should not be considered further, a forthright statement to that effect, together with your reasoning, will be most helpful.

SITE VISITOR'S GUIDELINES

Unlike the Initial Evaluation Panel and the Final Panel, you, as a Site Visitor, typically see only one proposal and proposing institution. Prior to the one-day visit you will be provided with the proposal and several anonymous written comments (Appendix 2) made by members of the Initial Evaluation Panel. The purposes of the site visit are (1) to examine in much more detail the same subjects that were treated by the Initial Evaluation Panel, (2) to try to resolve any questions or reservations that were raised by that panel, (3) to observe the proposing institution's research staff as well as its present and proposed research activities, and (4) to determine at first hand the planned degree of support to the project on the part of the institution. In addition to providing feedback to the institution, it is your task to provide the Final Panel with all of the additional information that you believe is needed to fully evaluate this proposal. Prior to actually beginning the site visit, there will be a short strategy caucus with the other site visitors and the NSF staff.

At this meeting any issues will be discussed that the NSF staff members or site visitors consider relevant. At any time during the visit you are urged to ask for an additional caucus if you believe that it would be desirable. Following the visit, we ask that you prepare an approximately two-to-four-page report on the proposal and the institution. Anonymous copies of this report will be provided both to the proposing institution and to the members of the Final Panel.

The proposing institution may have the opportunity to prepare an Addendum to its proposal. This Addendum also will be made available to the Final Panel. In your report we ask that you address the questions and reservations that were raised by the Initial Evaluation Panel, and bring up all other issues - both positive and negative - that might be of relevance to the Final Panel and to the institution.

FINAL PANEL GUIDELINES

As a Final Panelist, you will have the maximum amount of information available to you on each proposal. Thus your reviews of the remaining proposals are weighted heavily by the NSF staff. You will be provided with the proposals, the written comments made by members of the Initial Evaluation Panel, the Site Visitor's reports and the Addenda. We request that for each proposal you consider all of this information in preparing your evaluation. Each proposal will be discussed by the panel, and following this you will be asked to prepare an independent written or oral review. Should a review that you prepare differ substantially from one made by an Initial Panelist or a Site Visitor, or with issues addressed in the institution's Addendum, we ask that you include a brief explanation of your position in order to provide the NSF staff with sufficient guidance to make its recommendations for awards and declinations.

Appendix 2

NATIONAL SCIENCE FOUNDATION

CISE RESEARCH INFRASTRUCTURE PROGRAM

Initial Evaluation Panel - FY 1999

Review Form

Proposal: EIA-

Institution:

Principal Investigator(s):

Title:

Verbatim but anonymous copies of this review will be sent only to the principal investigator/project director. Subject to this NSF policy and applicable laws, including the Freedom of Information Act, 5 USC 552, and formal requests from Chairpersons of Congressional committees having responsibility for NSF, reviewers' comments and identities will be given maximum protection from disclosure.

Some of the questions below call for a "yes" or "no" answer which you may wish to provide directly in the space below each series of questions. In addition, you may wish to provide a narrative answer to some or all of the questions, referencing them with an ordinal numeral, starting with 1. In any case, we will appreciate a narrative giving the reasoning for your evaluations following each set of related questions; these narratives will provide important guidance both to the applicants and to the NSF staff.

INTELLECTUAL MERIT AND QUALITY OF THE PROPOSED ACTIVITY

1. How important is the proposed activity to advancing knowledge and understanding within its own field and across different fields?

2. How well qualified is the proposer (individual or team) to conduct the project? 3. To What extent does the proposed activity suggest and explore creative and original concepts.

4. How well conceived and organized is the proposed activity? Is there sufficient access to resources?

[Space is provided here for a narrative response]

BROADER IMPACTS OF THE PROPOSED ACTIVITY

1. How well does the activity advance discovery and understanding while promoting teaching, training, and learning?

2. How well does the proposed activity broaden the participation of underrepresented groups (e.g., gender, ethnicity, geographic, etc.)?

3. To what extent will the project enhance the infrastructure for research and education, through activities or facilities such as instrumentation, networks, and partnerships?

4. Will the results be disseminated broadly to enhance scientific and technological understanding?

5. What may be the benefits of the proposed activity to society?

[Space is provided here for a narrative response]

EFFECT ON RESEARCH CAPABILITY

1. If funded, will this project have a strong impact on the research group's experimental research capabilities?

2. Is there a synergism present in the proposed projects or does the proposal consist of projects that are unrelated to the main thrust of the proposal and could be funded better through separate individual research or equipment grants?

3. Was a previous (if any) Institutional Infrastructure award successful?

4. Is there leverage with the university, government agencies, or industry that will be facilitated by funding this project?

5. Will the project increase the participation in research by graduate students?

[Space is provided here for a narrative response]

GENERAL EVALUATION

Please check one of the following actions for this proposal:

___ 1. Highly recommend further consideration
___ 2. Recommend further consideration
___ 3. Do not recommend further consideration

Please provide any additional information in the space below.

[Space is provided here for a response]

If your choice above was 3, then please skip the remaining questions and go to the signature line.

FACILITIES MANAGEMENT

1. Does the proposal contain a good and realistic management plan?

2. Are the issues of planning, equipment selection and installation properly addressed?

3. Is the equipment appropriate to the research projects?

4. Are the equipment choices realistic?

5. Are maintenance and operational staff issues properly considered?

[Space is provided here for a response]

BUDGET

1. Is the itemized budget detailed enough for proper evaluation?

2. Is the budget realistic and properly justified? Do equipment prices reflect appropriate discounts?

3. Are the percentages of the budget that are applied to equipment, staff, faculty, students and maintenance appropriate?

[Space is provided here for a response]

INSTITUTIONAL COMMITMENT

1. Is the environment at the institution(s) conducive to substantial growth in CISE experimental research if this project is funded?

2. Is there adequate and appropriate cost sharing?

[Space is provided here for a response]

ADDITIONAL COMMENTS

This space is for any additional comments that you may wish to supply.

[Space is provided here for a response]

Reviewer:

Signature:

Date:

Appendix 3

NATIONAL SCIENCE FOUNDATION

CISE RESEARCH INFRASTRUCTURE PROGRAM

Final Evaluation Panel - FY 1999

Review Form

Proposal: EIA

Institution:

Principal Investigator(s):

Title:

Verbatim but anonymous copies of this review will be sent only to the principal investigator/project director. Subject to this NSF policy and applicable laws, including the Freedom of Information Act, 5 USC 552, and formal requests from Chairpersons of Congressional committees having responsibility for NSF, reviewers' comments and identities will be given maximum protection from disclosure.

Strengths:

[Space is provided here for a narrative response]

Weaknesses:

[Space is provided here for a narrative response]

Additional Comments:

[Space is provided here for a narrative response]

OVERALL RATING:

___ Excellent ___Very Good ___Good ___Fair ___Poor

Reviewer:

Signature:

Date:

Date:

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