MEMORANDUM
DATE:
TO: Bernice Anderson**,** Senior Advisor on Evaluation
Directorate for Education and Human Resources
FROM:
SUBJECT: COV for ISE (+ ITEST)
COI and Diversity Memo

The Committee of Visitors report for the ISE Program was approved at the EHR Advisory Committee meeting held at NSF in November 2005. The COV consisted of 9 members selected for their expertise related to the goals of the program. They provided a balance with respect to the type of institutions supported through the program, gender, and representation from underrepresented groups. The following table shows the main features of the COV's diversity.

Category of COV Membership	**No. of COV Members in Category**
Member of EHR Advisory Committee……	……1…….
Institution Type:	
❑ University……	……3
❑ Four-year College……	…….
❑ Two-year College……	…….
❑ K-12 School or LEA……	…….
❑ Industry……..	… 1
❑ Federal Agency……	…….
❑ Museums	3
❑ Media Organizations	2
Location	
❑ East……..	…… 5
❑ Midwest/North ……	…….
❑ West……	…….
❑ South……	…… 4
Gender	
❑ Female……	……6
❑ Male……	……3
Race/Ethnicity	
❑ White……	……6
❑ Black……	……3
❑ Hispanic……..	…….
❑ Asian…….	…….
❑ Pacific Islander……..	…….

The COV was briefed on Conflict of Interest issues and each COV member completed a COI form. COV members had no conflicts with any of the proposals or files. (or, if they did, use 'Proposals and files were not available to COV members in those cases where the member had a COI and members were not allowed to participate in discussions of actions with which they had conflicts.')

INFORMATION TECHNOLOGY EXPERIENCES FOR STUDENTS AND TEACHERS (ITEST) PROGRAM FINAL REPORT

CORE QUESTIONS and REPORT TEMPLATE for FY 2005 NSF COMMITTEE OF VISITOR (COV) REVIEWS

Guidance to NSF Staff: This document includes the FY 2005 set of Core Questions and the COV Report Template for use by NSF staff when preparing and conducting COVs during FY 2005. Specific guidance for NSF staff describing the COV review process is described in Subchapter 300-Committee of Visitors Reviews (NSF Manual 1, Section VIII) that can be obtained at http://www.inside.nsf.gov/od/gpra/.

NSF relies on the judgment of external experts to maintain high standards of program management, to provide advice for continuous improvement of NSF performance, and to ensure openness to the research and education community served by the Foundation. Committee of Visitor (COV) reviews provide NSF with external expert judgments in two areas: (1) assessments of the quality and integrity of program operations and program-level technical and managerial matters pertaining to proposal decisions; and (2) comments on how the outputs and outcomes generated by awardees have contributed to the attainment of NSF's mission and strategic outcome goals.

Many of the Core Questions are derived from NSF performance goals and apply to the portfolio of activities represented in the program(s) under review. The program(s) under review may include several subactivities as well as NSF-wide activities. The directorate or division may instruct the COV to provide answers addressing a cluster or group of programs – a portfolio of activities integrated as a whole – or to provide answers specific to the subactivities of the program, with the latter requiring more time but providing more detailed information.

The Division or Directorate may choose to add questions relevant to the activities under review. NSF staff should work with the COV members in advance of the meeting to provide them with the report template, organized background materials, and to identify questions/goals that apply to the program(s) under review.

Guidance to the COV: The COV report should provide a balanced assessment of NSF's performance in two primary areas: (A) the integrity and efficiency of the ***processes*** related to proposal review; and (B) the quality of the ***results*** of NSF's investments in the form of outputs and outcomes that appear over time. The COV also explores the relationships between award decisions and program/NSF-wide goals in order to determine the likelihood that the portfolio will lead to the desired results in the future. Discussions leading to answers for Part A of the Core Questions will require study of confidential material such as declined proposals and reviewer comments. *COV reports should not contain confidential material or specific information about declined proposals.* Discussions leading to answers for Part B of the Core Questions will involve study of non-confidential material such as results of NSF-funded projects. It is important to recognize that the reports generated by COVs are used in assessing agency progress in order to meet government-wide performance reporting requirements, and are made available to the public. Since material from COV reports is used in NSF performance reports, the COV report may be subject to an audit.

We encourage COV members to provide comments to NSF on how to improve in all areas, as well as suggestions for the COV process, format, and questions.

FY 2005 REPORT TEMPLATE FOR
NSF COMMITTEES OF VISITORS (COVs)

Date of COV:	**April 4-6, 2005**
Program/Cluster:	**Information Technology Experiences for Students and Teachers (ITEST)**
Division:	**Elementary, Secondary, and Informal Education (ESIE)**
Directorate:	**Education and Human Resources (EHR)**
Number of actions reviewed by COV[1]:	**Awards: 34 Declinations: 16 Other: 1**
Total number of actions within Program/Cluster/Division during period being reviewed by COV[2]:	**Awards: 35 Declinations: N/A Other: N/A**
Manner in which reviewed actions were selected:	**Except for one proposal in which one of the COV members was involved, all proposals were reviewed.**

PART A. INTEGRITY AND EFFICIENCY OF THE PROGRAM'S PROCESSES AND MANAGEMENT

Briefly discuss and provide comments for *each* relevant aspect of the program's review process and management. Comments should be based on a review of proposal actions (awards, declinations, and withdrawals) that were *completed within the past three fiscal years*. Provide comments for *each* program being reviewed and for those questions that are relevant to the program under review. Quantitative information may be required for some questions. Constructive comments noting areas in need of improvement are encouraged.

A.1 Questions about the quality and effectiveness of the program's use of merit review procedures.

Provide comments in the space below the question**.** Discuss areas of concern in the space provided.

QUALITY AND EFFECTIVENESS OF MERIT REVIEW PROCEDURES	YES, NO, DATA NOT AVAILABLE, or NOT APPLICABLE[3]
1. Is the review mechanism appropriate? (panels, ad hoc reviews, site visits) **Comments:** All of the reviews were handled through the panel system. There was a notable case of a site visit by a Program Officer (PO) to a location of a new performer to establish a working relationship that contributed to the PI successfully negotiating the NSF system**.** The panel system seems to be most appropriate. Issues arose in the panel summaries that did not	**Yes**

[1] To be provided by NSF staff.
[2] To be provided by NSF staff.
[3] If "Not Applicable" please explain why in the "Comments" section.

Section A.1.1, continued surface in the individual reviews. The complexity of the panel discussion contributed to a richer understanding of the total proposal than the sum of the individual reviews.	
2. Is the review process efficient and effective? **Comments:** The review process is an effective means of assessing proposals. Although time consuming on its face, this procedure allows thorough assessment of a wide range of proposal issues. The time from proposal submission to the time that the PIs receive questions from the PO is efficient when looking at the massive number of proposals to be processed. There is variability in the amount of time to award that may be due to the complexity of some proposals' idiosyncratic features. There is a nice balance between efficiently processing large amounts of proposals and giving individual attention to PIs as needed. Thoughtful, critical, constructive comments were consistently provided to projects on important strategic issues.	**Yes**
3. Are reviews consistent with priorities and criteria stated in the program's solicitations, announcements, and guidelines? **Comments:** Reviews consistently addressed the ITEST program and larger Foundation strategic goals. Guidelines provided to the reviewers that summarized the key points are helpful to keep these as a priority for the panelists.	**Yes**
4. Do the individual reviews (either mail or panel) provide sufficient information for the principal investigator(s) to understand the basis for the reviewer's recommendation? **Comments:** In general reviewers provide specific discussion of strengths and weaknesses of the proposals. They also provide clear direction for improvement, questions to be asked, and constructive concerns for the project. Individual reviews varied from very thorough to rather sparse. The variability was not too alarming since the nature of the criticisms was very similar. It was apparent that the reviewers had taken adequate time to read and review the proposal.	**Yes**
6. Is the documentation for recommendations complete, and does the program officer provide sufficient information and justification for her/his recommendation? **Comments:** For the most part, each project has significant documentation of the process and tells the story well of what was necessary to address issues raised by the panel. Projects that are rated by panel as a medium priority for funding need more documentation to indicate why some "mediums" are recommended for funding	**Yes**

Section A.1.6, continued while others are not. This may provide important program documentation of the Foundation's efforts to balance its portfolio. The COV did not feel that further documentation was needed for the declinations, only on the rationale for the selection of certain projects for funding.	
7. Is the time to decision appropriate? **Comments:** In almost every case, time to decision was within 6 months. Two noteworthy exceptions were "new performers" who needed time to learn how to work within a new system, and the failure to meet the six-month goal was produced by dialogue between the PO and the PI.	**Yes**
8. Discuss any issues identified by the COV concerning the quality and effectiveness of the program's use of merit review procedures. **Comments:** There were several instances of admirable performance by NSF staff, and POs specifically, to thoroughly and efficiently move proposals through the process. Declinations are also efficiently handled. The PIs are notified within several months of the panel review and the PO letters are crisp and often cite and quote (anonymously) specific concerns of the panel reviewers.	

A.2 Questions concerning the implementation of the NSF Merit Review Criteria (intellectual merit and broader impacts) by reviewers and program officers.

Provide comments in the space below the question. Discuss issues or concerns in the space provided.

IMPLEMENTATION OF NSF MERIT REVIEW CRITERIA	YES, NO, DATA NOT AVAILABLE, or NOT APPLICABLE[4]
1. Have the individual reviews (either mail or panel) addressed both merit review criteria? **Comments:** Panelist's reviews systematically and dependably address these criteria.	**Yes**
2. Have the panel summaries addressed both merit review criteria? **Comments:** Same as above.	**Yes**
3. Have the *review analyses* (Form 7s) addressed both merit review criteria? **Comments:** Absolutely.	**Yes**
4. Discuss any issues the COV has identified with respect to implementation of NSF's merit review criteria. **Comments:** It is clear that the POs are insuring due diligence of the panelists to be thorough, thoughtful and clear in addressing the merit review criteria.	

[4] In "Not Applicable" please explain why in the "Comments" section.

A.3 Questions concerning the selection of reviewers. Provide comments in the space below the question. Discuss areas of concern in the space provided.

SELECTION OF REVIEWERS	YES , NO, DATA NOT AVAILABLE, or NOT APPLICABLE[5]
1. Did the program make use of an adequate number of reviewers? **Comments:** Panels were typically comprised of 7 panelists and this provides for multiple perspectives, variety of expertise, and a "critical mass" for good discussions.	**Yes**
2. Did the program make use of reviewers having appropriate expertise and/or qualifications? **Comments:** There is a nice balance between content and education expertise in the panels for ITEST. In reviewing the sample panel grid, it might be important to consider including an additional category that distinguishes between "formal" and "informal" educators. This is particularly salient in the Youth-based Projects of ITEST to ensure appropriate informal expertise in reviewing the proposals	**Yes**
4. Did the program recognize and resolve conflicts of interest when appropriate? **Comments:** No conflicts were noted.	**Not applicable**
5. Discuss any issues the COV has identified relevant to selection of reviewers. **Comments:** None reported.	

[5] If "Not Applicable" please explain why in the "Comments" section.

A.4 Questions concerning the resulting portfolio of awards under review. Provide comments in the space below the question. Discuss areas of concern in the space provided.

RESULTING PORTFOLIO OF AWARDS	APPROPRIATE, NOT APPROPRIATE[6], OR DATA NOT AVAILABLE
1. Overall quality of the research and/or education projects supported by the program. **Comments:** In ITEST projects there is overall very high quality as it relates to IT education research. Evaluation is a key element of each project and its importance to the field of youth development, informal education evaluation, and IT skill development.	**Yes**
2. Are awards appropriate in size and duration for the scope of the projects? **Comments:** Readers of this COV report should recall that the ITEST program is funded through a special allocation of H-1B visa fees and not from the regular NSF Appropriation. Awards are appropriate in size. A great deal of scrutiny is placed on the amount of awards given in ITEST and in their efficiency with funds. Multi-year projects are required in ITEST and are appropriate for long-term change in individuals. In the process of review, there were several instances of projects being brought into alignment with ITEST criteria for size and scope.	**Yes**
3. Does the program portfolio have an appropriate balance of: • **High risk projects?** **Comments:** The ITEST portfolio seems well balanced and has a relatively high number of projects in areas that typically receive few federal dollars. It seems that a relatively high number of projects in the portfolio have been awarded to "new performers." It might be interesting to uncover what it is about the ITEST solicitation that promotes these two outcomes.	**Yes**
4. Does the program portfolio have an appropriate balance of: • **Multidisciplinary projects?** **Comments:** Disciplines within the ITEST portfolio have a surprising number of IT applications. Due undoubtedly to the solicitation's expansive definition of what constitutes "IT," the outcome is a rich and productive landscape to	**Yes**

[6] If "Not Appropriate" please explain why in the "Comments" section.

Section A.4.4, continued examine what is effective teaching and learning in IT intensive fields. The project teams are typically composed of subject matter experts, educators, community-based organizations, and industry. This contributes to a strong multidisciplinary portfolio.	
5. Does the program portfolio have an appropriate balance of: • **Innovative projects?** **Comments:** ITEST projects typically represent a wide range of disciplines under the umbrella of IT. There is also a wide array of pedagogical and evaluation strategies that are apparent throughout the program. There are several and perhaps more important modes of innovation among the projects. Some are investigating IT fields that are themselves novel, e.g., bioinformatics (ESI-0323175, San Jose State, "Inquiry-based Marine Biotechnology and Bioinformatics for Teachers" and ESI-0422902, Rutgers University, Bioinformatics: The Rutgers Initiative in Teacher Enhancement (BRITE)"). Others are looking at the interface between IT and socio-culturally distinct communities (ESI-0323170, Oregon Museum of Science and Industry, "Salmon Camp Research Team: A Native American Technology Research and Science Career Exposure Program" and ESI-0423115, Texas State University, "Project LaCosta"). Still others are investigating creativity with IT rich tools and media in non-traditional environments (ESI-0323155, Science Museum of Minnesota, "MyBEST: Mentored Youth Building Employable Skills in Technology" and ESI-0322934, "DAPCEP: Engineering and Information Technology Education Project, Detroit Area pre-College Engineering Program"). These innovative projects complement other projects in the portfolio that are using proven methods to reach targeted populations (e.g., ESI-0423140, Chicago Academy of Sciences, "NatureWorks Studio") is using a proven method, but focusing on IT topics).	**Yes**
6. Does the program portfolio have an appropriate balance of: • **Funding for centers, groups and awards to individuals?** **Comments:** The solicitation was designed to support two centers with the option of combining them into one. The panel review determined that one Center was the best option, which was awarded to EDC.	**Yes**

7. Does the program portfolio have an appropriate balance of: • **Awards to new investigators?** **Comments:** ITEST has an exemplary record of awarding projects with new investigators. POs show extraordinary care in dealing with their specific needs to allow them every opportunity to succeed. We believe Eagle Vision is a good example in which the program officer traveled to the site to help the PI (ESI-0422885, "Eagle Vision: Employing Geographic Information Technology in Indian Schools and Communities," Pueblo Laguna Department of Education).	**Yes**
8. Does the program portfolio have an appropriate balance of: • **Geographical distribution of Principal Investigators?** **Comments:** ITEST has a commendable record for geographical distribution of awards. Four of the 22 states funded by ITEST are EPSCoR states. The program is also getting a number of proposals from EPSCoR states that are not funded. In examining the distribution of declined awards, there are a greater variety of states represented than states that have received awards. One would anticipate that in the future the geographic distribution would continue to diversify.	**Yes**
9. Does the program portfolio have an appropriate balance of: • **Institutional types?** **Comments:** ITEST demonstrates a significant diversity of institutional types including universities, science centers, museums, CBOs, government institutions, nonprofit organizations and even one professional organization.	**Yes**
10. Does the program portfolio have an appropriate balance of: • **Projects that integrate research and education?** **Comments:** There seems to be a strong emphasis on evaluation in all the projects. The ITEST LRC plays a significant role as a catalyst for improving the quality of each individual project's evaluation strategies and serving an integrative function to elevate the focus on research across the ITEST community (ESI-0323098, Educational Development Center, "ITEST Learning Resource Center/Educational Development Center"). This ITEST model for use of a technical assistance center within a program should be considered for other ESIE programs as well.	**Yes**

11. Does the program portfolio have an appropriate balance: • **Across disciplines and subdisciplines of the activity and of emerging opportunities?** **Comments:** The broad range of science and IT fields are represented and an equally rich collection of organizational types is included in the ITEST portfolio. In addition, there are some interesting emerging opportunities within the portfolio, e.g., educational game development and bioinformatics (ESI-0423195, Inland Northwest Community Access Network, "Rural School Science and Information Technology" and ESI-0422902, Rutgers University, "Bioinformatics: The Rutgers Initiative in Teacher Enhancement").	**Yes**
12. Does the program portfolio have appropriate participation of underrepresented groups? **Comments:** ITEST has a very strong record for working with underrepresented populations. Implicit in the Youth Project solicitation is a need to be sensitive to, and part of, the culture of the underrepresented target population. Interestingly, PI demographics indicate that these underrepresented groups are not participating evenly at that level within the program. For instance there are no PIs currently that are native Hawaiian, Hispanic, or American Indian. This was surprising given the diversity of program participants being reached. It may be the case that there is greater diversity among the co-PIs and senior staff, but there was no information provided about Co-PIs and senior staff of funded ITEST projects.	**Yes**
13. Is the program relevant to national priorities, agency mission, relevant fields and other customer needs? Include citations of relevant external reports. **Comments:** ITEST was developed in response to a strategic national need for IT workers. It meets NSF's strategic mission to bolster a national workforce that is scientifically, mathematically and technically strong. ITEST successfully targets groups underrepresented in IT fields and reaches out to investigators that understand those communities.	**Yes**
14. Discuss any concerns relevant to the quality of the projects or the balance of the portfolio. **Comments:** None reported.	

A.5 Management of the program under review. Please comment on:

1. Management of the program.

Comments:

The POs do a tremendous job of processing the grants and responding to the needs of individual investigators. The overall documentation within the jackets is superb. It gives a clear picture of the extent to which the POs monitor and provides guidance to the projects. Of particular note are examples where the PO traveled to the PI's location to support new investigators in the final stages of the award negotiation. The COV recommends that more funding be provided to POs so that there can be site visits to states and regions that are underrepresented. These visits can serve to inform communities of the NSF process and recruit new reviewers.

2. Responsiveness of the program to emerging research and education opportunities.

Comments:

The program is open to funding high quality programs in emerging areas. Highlighting innovation within the solicitations creates a moving framework to encourage projects in emerging areas. For example, there were several projects in Year 1 and Year 2 that focused on use of GIS technologies (e.g., ESI-0322958, "MAPTeach: Place-Based Geospatial Learning and Applications in Rural Alaska," A Collaborative of the University of Wisconsin-Madison, University of Alaska-Fairbanks, Alaska Division of Geological and Geophysical Surveys, and ESI-0323127, "Ocean Explorers: GIS, IPA, and Ocean Science for IT Literacy and Skills," Center for Image Processing in Education). As the program gains experience with a technology, it becomes more well-known and less innovative. Since NSF did not attempt to define innovation, it allows the field to define it through the application and review process. The interpretation of innovation will be emergent with each competition and review process.

3. Program planning and prioritization process (internal and external) that guided the development of the portfolio.

Comments:

The COV had the opportunity to discuss with the POs how the ITEST solicitation came to being. There seems to be a collegial atmosphere among all of the POs. Even with their tremendous workload, POs find the time to provide input on other programs. The negotiation among the POs after a panel is a critical process for guiding the development of the portfolio and for normalizing the ratings across panels.

4. Additional concerns relevant to the management of the program.

Comments:

None reported.

PART B. RESULTS : OUTPUTS AND OUTCOMES OF NSF INVESTMENTS

NSF investments produce results that appear over time. The answers to the first three (People, Ideas and Tools) questions in this section are to be based on the COV's study of award results, which are direct and indirect accomplishments of projects supported by the program. These projects may be currently active or closed out during the previous three fiscal years. The COV review may also include consideration of significant impacts and advances that have developed since the previous COV review and are demonstrably linked to NSF investments, regardless of when the investments were made. Incremental progress made on results reported in prior fiscal years may also be considered.

The following questions are developed using the NSF outcome goals in the NSF Strategic Plan. The COV should look carefully at and comment on (1) noteworthy achievements of the year based on NSF awards; (2) the ways in which funded projects have collectively affected progress toward NSF's mission and strategic outcomes; and (3) expectations for future performance based on the current set of awards. NSF asks the COV to provide comments on the degree to which past investments in research and education have contributed to NSF's progress towards its annual strategic outcome goals and to its mission:

- To promote the progress of science.
- To advance national health, prosperity, and welfare.
- To secure the national defense.
- And for other purposes.

Excellence in managing NSF underpins all of the agency's activities. For the response to the Outcome Goal for Organizational Excellence, the COV should comment, where appropriate, on NSF providing an agile, innovative organization. Critical indicators in this area include (1) operation of a credible, efficient merit review system; (2) utilizing and sustaining broad access to new and emerging technologies for business application; (3) developing a diverse, capable, motivated staff that operates with efficiency and integrity; and (4) developing and using performance assessment tools and measures to provide an environment of continuous improvement in NSF's intellectual investments as well as its management effectiveness.

B. Please provide comments on the activity as it relates to NSF's Strategic Outcome Goals. Provide examples of outcomes (nuggets) as appropriate. Examples should reference the NSF award number, the Principal Investigator(s) names, and their institutions.

B.1 OUTCOME GOAL for PEOPLE: Developing "a diverse, competitive and globally engaged workforce of scientists, engineers, technologists and well-prepared citizens."

Comments:

COV committee members were impressed with the diversity of the target audience within the portfolio of ITEST. The program is refreshingly focused on serving those underrepresented groups not typically served by NSF grants. The focus of the program is on preparation of IT professionals. The portfolio includes a wide range of approaches that will have direct and indirect impacts. The portfolio will have a direct impact on a large number of students and teachers (the projects estimate an aggregate of 18,831 students and 1,609 teachers). Based on the diversity of approaches the portfolio will have an indirect impact on the K12 community by developing best practices models on how to inspire the next generation of IT professionals.

B.2 OUTCOME GOAL for IDEAS: Enabling "discovery across the frontier of science and engineering, connected to learning, innovation, and service to society."

Comments:

As indicated in response to B.1, the ITEST program has the potential to have direct impact on the large number of People involved in the program. More importantly, ITEST has the potential to significantly contribute Ideas about the science and innovation of learning in IT fields. The portfolio provides a range of innovative approaches to IT education, which provides a testing ground for Ideas. The ITEST POs have done an excellent job of ensuring that each project incorporates evaluation as an integral component. The COV saw examples where POs asked PIs to improve the quality of their evaluation during the negotiation process.

One program component that sets ITEST apart from other NSF programs was the incorporation from the outset of a resource center to provide professional development to improve the quality of the programs and their evaluations. In addition, the resource center serves the integrative function to coordinate the development of Ideas. The Education Development Center was awarded the grant, through a competitive process, to run the resource center. A review of their annual report shows they have achieved success in their role to create a community of researchers around the ITEST network (ESI-0323098, Educational Development Center, ITEST Learning Resource Center). The COV feels that building in from the beginning a central organization to coordinate activities of the community is a significant step forward. Other NSF programs have implemented such a process after the programs were underway (e.g., LTER, CLT). Having the resource center from the outset has allowed EDC to establish the culture of collaboration that is critical for generating important Ideas.

B.3 OUTCOME GOAL for TOOLS: Providing "broadly accessible, state-of-the-art S&E facilities, tools and other infrastructure that enable discovery, learning and innovation."

Comments:

The ability of the ITEST community to generate Ideas could be significantly improved by the development of some common tools for measuring career development in both youth and comprehensive projects and teacher growth in the comprehensive projects. The projects have taken a range of approaches to measuring these two important constructs. EDC is fostering the development and sharing of instrumentation across projects. The COV recommends that a portion of ITEST funds be devoted to a competitive grant process for the development of instruments to support research within the ITEST community. It will be important to have a competitive process since there are a wide range of instrument development experts that are not currently a part of the ITEST community. Bringing together experts in survey development with the wide range of approaches in ITEST has the potential to advance the career development field while maintaining the ITEST programs strength in diverse approaches.

B.4 OUTCOME GOAL for ORGANIZATIONAL EXCELLENCE: Providing "an agile, innovative organization that fulfills its mission through leadership in state-of-the-art business practices."

Comments:

The COV finds that the business processes of the ITEST program results in a fair and efficient system. The POs process a large volume of proposals, but they maintain the personal contact with new PI's to allow all proposers an equal opportunity to win grant competitions. The NSF makes effective use of communications technology to increase the productivity of the POs. All jackets contain examples of the effective use of email correspondence to efficiently communicate with PI's. Fastlane is an excellent system for managing the flow of grant information. The use of paper jackets for organizing the portfolio for each grant seems to run contrary to NSF's leadership role in the use of IT for sate-of-the-art business practices. The COV recommends that NSF continue to emphasize the transition to the e-Jacket process.

PART C. OTHER TOPICS

C.1 Please comment on any program areas in need of improvement or gaps (if any) within program areas.

There are two types of IT related activities that did not seem apparent within the portfolio. The first is providing students with information about range of IT career fields. Most of the projects tended to focus on a slice of the IT field. Second is developing partnership with IT businesses so that graduates of ITEST programs could go to participate in IT internships.

C.2 Please provide comments as appropriate on the program's performance in meeting program-specific goals and objectives that are not covered by the above questions.

It will take many years before the ITEST program will be able to determine whether the program goal of increasing the number of IT professionals is met. Students in middle school now will take at least 8 years before they graduate from college with an IT degree. Another level of success will be whether the projects themselves are sustainable after the project funding is completed. It would be important for NSF to begin planning now how the program will be evaluated down the road. It may be useful in a few years to adopt the IMD model of applied research that would allow independent researchers to conduct research on the impact of the program on participants as they enter college. It may also be useful for projects to develop mechanisms for tracking participants after they leave the program.

Will these projects manage to show the changes that they suggest in the time they have? It certainly will be important for each project to take sustainability seriously. In youth development projects, longer-term projects are more effective than one-shot-wonders, and with inner city youth, one year is about the length of time necessary to develop trust, a necessary precursor to meaningful learning in IT fields.

C.3 Please identify agency-wide issues that should be addressed by NSF to help improve the program's performance.

The COV found that any imbalance that exists in ethnic or geographic diversity of PIs rests with a lack of quality proposals submitted. When proposals are received from underrepresented groups, the POs take every step to ensure that the process is fair and accommodating. The COV recommends that NSF develop mechanisms for POs to be proactive in reaching out to underrepresented groups so as to increase the number of proposals submitted from underrepresented groups.

C.4 Please provide comments on any other issues the COV feels are relevant.

C.5 NSF would appreciate your comments on how to improve the COV review process, format and report template.

For questions related to the balance of the portfolio and the representativeness of the review panels, it would be useful to have summary statistics as was done for the distribution of PI ethnicity.

SIGNATURE BLOCK:

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For the ITEST Committee of Visitors
Harry L. Shipman
Chair