

May 10, 2002

**MEMORANDUM TO MEMBERS AND CONSULTANTS OF THE NATIONAL SCIENCE BOARD**

**SUBJECT:** Preliminary Report of the May 7-9, 2002 Meeting

The major actions of the Board at its 368th meeting on May 7 - 9, are summarized for the information of those members absent and as a reminder to those present.

**1. Board Elections**

Dr. Warren Washington was elected to a two-year term as Chairman of the Board and Dr. Diana Natalicio was elected to a two-year term as Vice-Chair. Dr. Washington and Dr. Natalicio were elected by acclamation to two-year terms as members of the Executive Committee.

**2. Board Actions**

- a) The Board approved a statement on diversity in education, (NSB-02-83), attached.
- b) The Board received the annual report of the Executive Committee (NSB/EC-02-14) from the Chair, Dr. Rita Colwell.
- c) The Board approved a schedule of its meetings for 2003, (NSB-02-81) attached.
- d) The Board approved a response to Congressional inquiries about the Digital Opportunity Investment Trust (NSB-02-94) subject to final review by the Executive Committee.  
**Members should submit comments, if any, to the NSB Office by Monday, May 20.**
- e) The Board approved the management response to the Inspector General's Semi-Annual Report.

**2. Awards**

The Board approved the following awards:

Amount not  
to exceed

**Computer Sciences and Engineering**

Division of Advanced Computational Infrastructure  
Review of NSF High-End Computing Activities and  
Proposed Extension of the Cooperative Agreements  
for the Operations of the Partnerships for Advanced  
Computational Infrastructure NSB-02-68:

- |   |                           |
|---|---------------------------|
| 1. University of Illinois, Urbana-Champaign | \$35,250,000<br>12 months |
| 2. University of California, San Diego      | \$34,750,000<br>12 months |

## **Mathematical and Physical Sciences**

### Division of Astronomical Sciences

Management and Operations of the National  
Optical Astronomy Observatories and the  
National Solar Observatory

Association of Universities for Research  
in Astronomy, Inc. (AURA, Inc.)

\$216,000,000

NSB-02-67

60 months

### **NSB Committees**

The Chairman discharged the Vannevar Bush Award Committee, with thanks to the Chair, Dr. Langford, members Drs. Rossmann, Rubin and Savitz, and Executive Secretary Ms. Fannoney.

### **Committee Reports**

(Materials for committee summaries are provided by executive secretaries.)

#### **a. Executive Committee**

The Executive Committee approved its annual report for submission to the National Science Board, as required by law. It also heard reports on the status of budget and congressional activity and on the proposed NSB 2003 calendar.

#### **b. Audit & Oversight (A&O)**

The A & O Committee heard the following reports: information on follow up activities in response to the Gemini audit; a case study on facilities monitoring and oversight from both NSF's and an awardee's perspective; and an update on A & M strategic planning and work on the President's Management Agenda. Also, Dr. Boesz presented the OIG semiannual Report and Dr. Umminger provided the NSF Management Response to same. Dr. Umminger shared copies of the draft Congressional transmittal letter for the OIG semi-annual report. The Committee voted to recommend that the full Board approve the letter.

#### **c. Education and Human Resources (EHR)**

Dr. Judith Ramaley made a presentation on NSF's role in graduate and postdoctoral student support, which covered a range of issues from salary levels to what the nature of the postdoctoral experience should be. The committee requested further consideration of the topic at a future meeting. Dr. Ramaley also reported on the status of three competitions - the Science, Technology, Engineering, and Mathematics Talent Expansion Program (STEP), the Noyce Scholarships, and recent NSF interactions with the Department of Education regarding the Math and Science Partnership Program.

The committee reviewed a draft statement on NSF's role in promoting diversity. After adopting a minor wording change, the committee approved the statement (NSB-02-75) and recommended its approval by the full Board.

Two presentations by members of the EHR staff were follow-up to discussions at the March meeting. Dr. Norman Fortenberry recapped the key points in a paper by Dr. Elaine Seymour

entitled “*Tracking the Processes of Change in U.S. Undergraduate Education in SMET*” and then discussed how the ideas related to the current EHR portfolio. Dr. Roosevelt Johnson briefed the committee on how EHR is attempting to identify best practices for retaining both undergraduate and graduate students by closely examining some of the current successful EHR programs. This represented follow-on to the discussion of a recent AAAS report entitled “*In Pursuit of a Diverse Science, Technology, Engineering, and Mathematics Workforce*”.

After hearing reports from the Science and Engineering Indicators Subcommittee and the Task Force on National Workforce Policies, the committee discussed recommendations they wanted to make to the next EHR Committee on important issues to pursue.

#### **d. Subcommittee on National S&E Workforce Policy (NWP)**

The task force examined plans for a literature review of studies, reports, and other policy documents directly relevant to the Task Force charge. The review will be produced through an external contract. The task force completed plans for a workshop to be held on June 28, 2002, to examine the interplay between the international character of the advanced S&E workforce and national needs, particularly those of U.S. corporations and employment serving the U.S. government. Finally, the task force discussed a draft framework for its report, and agreed to continue to identify strategies that affect the development of the domestic workforce in science and engineering.

#### **e. Science and Engineering Indicators (SEI)**

Dr. Richard Tapia briefed the Subcommittee on the rollout of *Indicators-2002* at the National Press Club on April 30, which he attended with Dr. Anita Jones. He reported that press representation at the event was good, and that *Indicators-2002* has been covered widely in the media.

Dr. Lynda Carlson discussed three proposed changes to *Indicators-2004*. *First*, adding a chapter on state-level science, engineering, and R&D. *Second*, discontinuing the chapter on Information Technology and distributing the material throughout other relevant chapters. She said SRS will prepare a crosswalk for the August meeting showing where each section of the IT chapter in *Indicators-2002* would have been integrated into other *Indicators* chapters. *Third*, making changes to the Public Attitudes chapter to reflect ongoing redesign activities.

At the August meeting SRS will provide overarching themes for *Indicators-2004* and a basic production schedule for discussion. SRS will also explore methods for subcommittee members to review chapters online as they are developed.

Finally, Dr. Robert Bell, SRS, discussed options for covering environmental research and education in *Indicators-2004*. SRS will report back to the subcommittee at the August meeting on the availability and quality of data collected by industry, and on how limitations on data in the environmental area might be highlighted in the next volume.

## **f. Programs and Plans (CPP)**

CPP heard an update on NSF high-end computing activities and considered a proposed one-year extension of the awards for the operation of the Partnerships for Advanced Computational Infrastructure [PACI] (University of Illinois, Urbana-Champaign and University of California, San Diego.) The committee recommended approval of the PACI extensions to the full Board. CPP also considered a proposed award for the management and operations of the National Optical Astronomy Observatories and the National Solar Observatory (Association of Universities for Research in Astronomy, Inc.) and recommended approval to the full Board.

Two information items were presented and discussed: on the review of management of the National Radio Astronomy Observatory by Associated Universities, Inc., and on the review of management of the National Center for Atmospheric Research by the University Corporation for Atmospheric Research.

CPP then discussed experience since the National Science Board's 1997 Statement on Competition, Recompensation and Renewal of NSF Awards, and suggested continued discussion at a future meeting.

The committee received a report on the spring meeting of the Major Research Equipment and Facilities Construction Panel, part of the planning process for major facilities. The committee's Infrastructure Task Force also reported on its meeting and on plans to have a draft report for CPP at the August meeting.

CPP continued its series of presentations on the management and oversight of major facilities under construction. Reports on the South Pole Station Modernization project were presented by Mr. Erick Chiang, Office of Polar Programs, and Mr. Brian Kim, Head, Mechanical Engineering Branch Design Division; Pacific Division, Naval Facilities Engineering Command (PACDIV).

## **g. Committee on Strategy and Budget (CSB)**

Dr. Anita Jones, Chair of the CSB, reported that the committee discussed two of the strategic initiatives that the CSB has been reviewing as part of its role in the development of NSF budget requests.

The committee discussed how the NSB and the Foundation can best accommodate within future budget requests the initiation of new major research facilities that have been identified by the research community and by NSF as important to the advancement of science and engineering.

For the strategic issue of award size and duration, staff of Mathematica Policy Research, Inc, reported results of the survey of NSF principal investigators conducted to help NSF assess what the optimal level of support and award duration of NSF research grants should be.

## **h. Task Force on Digital Opportunity Investment Trust (DGT)**

Dr. Washington invited members of the task force to review a draft report to the National Science Board (NSB/DGT-02-12) and to make suggestions for revisions. A number of minor changes were suggested. In addition, the Task Force requested that the report be reformatted as a memorandum with an attached letter.

Procedures for reporting to the Board were discussed. Dr. Washington noted that, in making its recommendations, the task force had taken into account the positive opinions about the Trust held by many members of the community.

**i. CPP Task Force on S&E Infrastructure (INF)**

The task force reviewed the second draft of the report and proposed a number of changes to improve the document. A revision will be provided to task force members within a month, and then a conference call will be held to discuss it. The draft report will be presented to CPP at the August meeting.

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Marta Cehelsky  
Executive Officer

Attachment 1: NSB-02-83  
Attachment 2: NSB-02-81

STATEMENT BY THE  
NATIONAL SCIENCE BOARD  
AT ITS 368<sup>TH</sup> MEETING

CONCERNING NSF'S CONTINUING ROLE  
IN PROMOTING DIVERSITY  
IN SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS

The National Science Foundation (NSF) invests public resources to realize "... a diverse, internationally competitive and globally-engaged workforce of scientists, engineers and well-prepared citizens."<sup>1</sup> This goal, encompassing a variety of strategies, supports NSF's mission to strengthen scientific and engineering research and education and their integration. The National Science Board believes such a diverse science and engineering workforce is necessary to ensure the Nation's health, prosperity, and security.

As Congress declared in the Science and Engineering Equal Opportunities Act of 1980<sup>2</sup>, "the highest quality science and engineering over the long-term requires substantial support, from currently available research and educational funds, for increased participation in science and engineering by women and minorities." The National Science Board recognizes that an integral part of accomplishing NSF's strategic goals requires engaging those who are underrepresented in the Nation's science and engineering enterprise. Therefore, the Board strongly supports the Foundation's commitment to developing and strengthening its programs for this purpose, ensuring broader individual and institutional participation across all research and education programs.

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<sup>1</sup> NSF GPRA Strategic Plan for FY 2001-2006, p.3.

<sup>2</sup> 42 U. S. C. Section 1885.

May 7, 2002

MEMORANDUM TO MEMBERS OF THE NATIONAL SCIENCE BOARD

SUBJECT: NSB Meeting Dates for Calendar Year 2003

As part of its annual business conducted at the May meeting, the Board approves its meeting schedule for the next calendar year.

For the specified meeting times, we have polled Members' offices to assure attendance by the highest number of individuals possible. We have also taken into account possible conflicts with holidays and with major meetings of professional and scientific organizations.

**2003 Calendar of National Science Board Meetings**

February 5, 6 (Wednesday/Thursday)  
February 7 (Friday, Retreat)

March 12, 13 (Wednesday/Thursday)

May 21, 22 (Wednesday/Thursday)  
[Annual Meeting]

August 13, 14 (Wednesday/Thursday)

October 15, 16 (Wednesday/Thursday)

November 19,20 (Wednesday, Thursday)

**Executive Committee**

January (TBD)  
June/July (TBD)

The following resolution is proposed for your consideration.

The National Science Board approves the schedule of Board meeting dates for Calendar Year 2003 as contained in NSB-02-81.

Marta Cehelsky  
Executive Officer