

March 15, 2002

MEMORANDUM TO NATIONAL SCIENCE BOARD MEMBERS

SUBJECT: Preliminary Report of the March 13, 14 Meeting

The major actions of the Board at its 367th meeting on March 14, 15, 2002 are summarized for the information of those members absent and as a reminder to those present.

1. Board Actions

- a. The Board approved the Open and Closed Session minutes of the November 2001 meeting.
- b. The Board approved selections for the Vannevar Bush Award and the Alan T. Waterman Award for 2002, as recommended by the selection committees. Names will be announced when the NSB Chair and the NSF Director have contacted the recipients.
- a. The Board elected the members of the new NSB Nominating Committee. Members are Drs. Langford, Lubchenco, Savitz and Tapia. The new committee will elect its own Chair and coordinate the nomination of candidates for the election of the NSB Chair and Vice Chair in May.
- b. The Board received the Director's Annual Merit Review Report, NSB-02-22.
- c. The Chair named Vice Chairs for two committees; Dr. Richardson, Vice Chair for the Subcommittee on S&E Indicators and Dr. Langford, Vice Chair for the Task Force on National Workforce Policies.
- d. The Chair will set up a committee to respond to Congressional requests to examine a proposal for creating a Digital Opportunity Investment Trust.

2. Awards and Agreements

The Board approved the following awards:

Amount not
to exceed

Office of the Director

Office of Polar Programs

IceCube Neutrino Detector Observatory

University of Wisconsin, and

OPP Polar Support Contractors

(NSB-02-25)

\$15,000,000

12 Months

Directorate for Social and Behavioral Sciences

Division of Science Resources Statistics

Request for Proposals and Award
of a Contract for the Conduct of the
National Survey of Recent College
Graduates (NSRCG)
(NSB-02-37)

\$6,000,000
60 Months

3. Committee Reports

(Committee summaries are provided by executive secretaries.)

a. Executive Committee (EC)

The Chair, Dr. Colwell, commented on the status of the NSF budget, congressional activities, and key NSF management reports. The committee discussed congressional requests for Board comment on the proposed Digital Opportunity Investment Trust and concurred on the desirability of establishing a Board committee for this purpose. The Executive Committee also heard a report on the proposed Vannevar Bush and Alan T. Waterman Awards.

b. Audit & Oversight (A&O)

Regular

The committee was provided with briefings on the implementation status of the Administrative and Management Strategic Plan and the Grants Oversight and Risk Management Plan. It also was given a briefing on the FY 2001 Report on the NSF Merit Review Process, the FY2001 Audit as conducted by OIG and its contractor, and NSF management’s response to the audit. The meeting adjourned to Closed Supervisory Session and a subsequent Closed Executive Session.

Supervisory

The OIG made presentations to the committee on planned improvements to the Semiannual Report to Congress, the status of a review requested by Congress, and a government-wide initiative to establish audit committees at Federal agencies. Dr. Boesz informed the committee about various other administrative activities of the OIG.

c. Education and Human Resources (EHR)

The EHR Committee meeting began with reports from the Science and Engineering Indicators Subcommittee and the Task Force on National Workforce Policies.

Dr. Judith Ramaley briefed the committee on NSF’s Math and Science Partnership competition and two new activities: The Noyce Scholarships, which provide stipends and support for

undergraduate science, engineering and mathematics majors who wish to pursue teaching careers, via supplements to existing awards; and the Science, Technology, Engineering, and Mathematics Talent Expansion Program (STEP), which is aimed at increasing the number of U.S. students pursuing and receiving associate and baccalaureate degrees in STEM fields. It was noted that joint educational efforts are underway with other directorates.

EHR staff provided the Committee with an update on an ongoing, internal study of NSF diversity-related activities and programs. This was followed by a presentation by Ms. Yolanda George, the Deputy Director for Education and Human Resources Programs at the AAAS, who described the findings and recommendations of a recently published report entitled “*In Pursuit of a Diverse Science, Technology, Engineering, and Mathematics Workforce.*”

A presentation was made on a survey paper by Dr. Elaine Seymour, “*Tracking the Processes of Change in U.S. Undergraduate Education in SMET.*” The Committee will continue discussion of this paper at their next meeting.

In executive session the committee reviewed and recommended for approval by the Board an RFP for the conduct of the National Survey of Recent College Graduates.

d. Science and Engineering Indicators (SEI)

Mr. William Noxon, OLPA, updated the Subcommittee on current plans for the rollout of *Indicators-2002*. Approval from the White House is still pending, however rollout events are planned at the National Press Club on April 9.

Dr. Robert Bell discussed possible changes to the Public Attitudes chapter and options for future data collection. SRS plans more focus on knowledge in specific areas and less on attitudes and perceptions. NSF will explore the feasibility of using the Web to collect public attitudes data.

Dr. Lynda Carlson outlined possible options for future editions of *Indicators*, covering issues such as timing, content, and structure. SRS was asked to provide recommendations with more detailed information to the subcommittee at its May meeting.

SRS recommended that there not be a separate IT chapter in the 2004 report, but that IT be incorporated into the other chapters where appropriate. The Subcommittee concurred in this recommendation. SRS also proposed exploring the development of a state science and engineering chapter.

Dr. Bell updated the Subcommittee on the status of the feasibility and advisability of an Environment Chapter in *Indicators-2004*. He reported that a workshop was held on February 22 involving staff from NSF, NASA, EPA, Department of Energy and other interested organizations to discuss the planning process and data sources for the chapter. A contractor is preparing an options paper based on these discussions, which SRS will provide to the subcommittee for consideration at the May meeting.

e. EHR Task Force on National Policies for the S&E Workforce (NWP)

The task force reviewed ideas presented in its workshop of March 12, 2002, which engaged seven external speakers and Board members. The workshop focused on policies that will enable the U.S. to be more successful in developing domestic human resources for science and engineering at the undergraduate level. The task force laid out plans for an additional workshop, focusing on the international character of the advanced S&T workforce in industry and academia, including the implications of policies concerning immigration, foreign student visas, and high tech work restrictions. The task force will begin drafting its report in areas addressed in the March workshop and those examined in previous Task Force activities.

f. Programs and Plans (CPP)

The Committee on Programs and Plans (CPP) heard reports on the management and oversight of the Distributed Terascale Facility (DTF) presented by Dr. George Strawn, Acting Assistant Director for Computer and Information Science and Engineering and by Dr. Daniel Reed, University of Illinois, and Chief Architect, DTF. Dr. Strawn also updated the committee on the Terascale Computing System at Pittsburgh.

The committee considered a proposed award for the IceCube Neutrino Detector Observatory, for a one-year project focused on state-of-the-art ice drill and electronics development and acquisition. CPP recommended approval to the full Board.

The Polar Issues Subcommittee and the Infrastructure Task Force provided brief reports on their meetings.

The committee also received and discussed several information briefings and updates, including a status report on the competition for a new class of Science and Technology Centers, information on the National Consortium on Violence Research, a report on the interagency long range plan for renewal of the national academic research fleet, and a summary of new awards for Mathematical Sciences Research Institutes.

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

The task force reviewed a discussion paper on the long range planning implications of the draft INF report. A second draft of the introduction to the report was also discussed. The task force agreed to produce a second draft of the entire report by the May 2002 meeting, and anticipated sending a draft of the report to the CPP in July.

h. Polar Issues (PI)

The Director of OPP updated the subcommittee on recent action of the NSB Executive Committee on the South Pole Modernization project. The subcommittee was briefed on long-range plans for upgrading the Arctic research vessel fleet. The subcommittee received a report on the development of draft regulations to restrict collection of meteorites in the Antarctic by

U.S. citizens; results of studies of ecosystem changes in the Bering sea; and options being considered for using overland traverse from McMurdo to South Pole Station. The subcommittee was briefed on a proposed award for the Icecube Neutrino Detector Observatory, for a one-year focused state-of-the-art ice drill and electronics development and acquisition. The subcommittee recommended the proposal to CPP.

i. Committee on Strategy and Budget

The committee discussed two of the four new strategic initiatives that were identified as important at its November meeting.

The committee discussed increased support of Social and Behavioral Sciences as a priority area in NSF's FY2003 budget request. The committee discussed the adequacy of financial support for graduate and postdoctoral students, differences in the level of support provided to graduate students through research grants awards versus fellowship awards, and the adequacy of the cost of education allowance provided under NSF fellowships. The committee also discussed the need to develop a flexible mechanism to support the initiation of new, mid-size research facilities.

NSF staff provided an update on the status of two surveys being conducted to assess the adequacy of funding and duration of support provided under NSF research grants.

Marta Cehelsky
Executive Officer