

MEMORANDUM TO MEMBERS OF THE NATIONAL SCIENCE BOARD

SUBJECT: Summary Report of the March 26-27, 2008 Meeting

The major actions and approvals of the National Science Board (Board, NSB) and a preliminary summary of the proceedings at the Board's March 2008 meeting are provided. This memorandum will be publicly available for review. The minutes of the Plenary Open Session for the March 2008 meeting will be posted on the Board's public Web site (<http://www.nsf.gov/nsb/>), following Board approval at the May 2008 meeting.

1. Major Actions of the Board (not in priority order):

- a. The Board approved the minutes of the Plenary Open Session (NSB-08-23) for the February 2008 meeting (<http://www.nsf.gov/nsb/meetings/2008/0206/minutes.pdf>.) Minutes for the Plenary Executive Closed and Closed Sessions for the February 2008 meeting of the Board were also approved.
- b. The Board approved a resolution to close portions of the upcoming May 6-7, 2008 Board meeting dealing with staff appointments; future budgets; grants and contracts; specific Office of the Inspector General investigations and enforcement actions; and National Science Foundation (NSF) participation in a civil or administrative action, proceeding, or arbitration (<http://www.nsf.gov/nsb/meetings/2008/0506/closing.pdf>).
- c. The Board approved the recipient for the 2008 Alan T. Waterman Award. The awardee will be announced after he/she is notified.
- d. The Board consented to rescheduling the planned Board meeting for October 1-2, 2008 to September 22-23, 2008 to accommodate conflicts with a religious holiday and the end of the fiscal year.
- e. The Board delegated to the Director the authority to issue a Request for Proposal and award a support contract for the U.S. Antarctic Program.
- f. The Board authorized the Director, at his discretion, to approve the award for the Laser Interferometer Gravitational-Wave Observatory (LIGO) Laboratory operations and maintenance to the California Institute of Technology and the award for Advanced LIGO construction to the California Institute of Technology.
- g. The Board approved a letter to Congressman Rush Holt as a follow up to the Board's letter of January 31, 2007 relating to a review of NSF's Directorate for Education and Human Resources (EHR) programs with respect to evaluation procedures and results, and how they are used to enhance NSF's EHR programs.

- h. The Board elected the following Board Members to the *ad hoc* Committee on Nominating for NSB Elections, informally known as the Elections Committee: Drs. Ray Bowen, Elizabeth Hoffman, Douglas Randall, and Jo Anne Vasquez.

2. Board Chairman's Report

Dr. Steven Beering, Board Chairman, reported that the Board approved the 2008 Alan T. Waterman Award recipient. This award, along with the Vannevar Bush Award and the NSB Public Service Award, will be presented at the Board's annual awards dinner on May 6, 2008 at the Department of State's Diplomatic Reception Rooms. (See 1.c.)

Board Members were elected to the *ad hoc* Committee on Nominating for NSB Elections, otherwise known as the Elections Committee. Members of the committee are: Drs. Bowen, Hoffman, Randall, and Vasquez. (See 1.h.)

During February, Dr. Beering, along with Dr. Arden Bement, NSF Director, participated in two congressional hearings back-to-back. On February 26, 2008, they testified before the House Science and Technology Committee, Subcommittee on Research and Science Education. The following day, on February 27, 2008, they testified before the House Appropriations Committee, Subcommittee on Commerce, Justice, and Science.

Dr. Beering reported that he asked the Board Office to poll Board Members regarding a change in the date for the October 2008 off-site meeting and retreat. The scheduled October 1-2, 2008 date conflicted with a religious holiday and could cause problems for travel funding if NSF would be funded under a Continuing Resolution for the new fiscal year starting on October 1. The Board Office asked the University of Alaska, Fairbanks about a date change and the university recommended the week of September 22 as the best of the suggested dates. As most Board Members could accommodate this shift in their schedules, the off-site Board meeting and retreat at the University of Alaska, Fairbanks was rescheduled for September 22-23, 2008. (See 1.d.)

The Chairman announced the latest Board publication, *International Science and Engineering Partnerships: A Priority for U.S. Foreign Policy and Our Nation's Innovation Enterprise (NSB-08-4)*, now available on the NSB Web site: www.nsf.gov/pubs/2008/nsb084/index.jsp. The public release of this report took place after the Board meeting on March 27, 2008.

Dr. Beering announced that seven NSF individuals were honorably recognized at the American Association for the Advancement of Science (AAAS) annual meeting in February 2008. The following were elected by their peers as AAAS Fellows for meritorious efforts to advance science and technology: Dr. Arden Bement; Dr. Tony Chan, Assistant Director, Directorate for Mathematical and Physical Sciences (MPS); Dr. Machi Dilworth, Head, NSF Tokyo Office; Dr. Zakaya Kafafi, Division Director, MPS; Dr. Joan Maling, Program Director, Directorate for Social, Behavioral, and Economic Sciences (SBE); Ms. Marilyn Suiter, Program Director, Directorate for Education and Human Resources (NSF EHR); and Dr. Jeannette Wing, Assistant Director, Directorate for Computer Information Sciences and Engineering (CISE).

Dr. Beering recognized Mr. Arthur Reilly, who will be speaking on April 8, 2008 at the meeting of the President's Council of Advisors on Science and Technology (PCAST) at the National Academies in Washington, DC; and Dr. G. Wayne Clough, President of Georgia Institute of Technology, who was selected to be the 12th Secretary of the Smithsonian Institution.

3. NSF Director's Report

Dr. Arden Bement, NSF Director, reported on two current searches: one for the Director of the Office of Cyberinfrastructure (OCI), where a short list of candidates will be received the following week and the interview process will begin soon thereafter; and another search for a new Assistant Director for the Directorate for Engineering (ENG), which is collecting nominations.

Dr. Bement also reported on the congressional hearings that he and Dr. Beering attended. Additionally, Dr. Bement reported that the hearing of the Senate Committee on Appropriations, Subcommittee on Commerce, Justice, and Science scheduled for March 13, 2008 also on NSF's FY 2009 budget request to Congress was cancelled, and NSF submitted written and oral testimony to the subcommittee. Dr. Bement will testify on April 2, 2008 at the hearing for the House Committee on Science and Technology, Subcommittee on Research and Science Education.

4. Board Committee Reports

Note: The Executive Committee did not meet in March 2008.

a. Audit and Oversight (A&O) Committee

A&O Open Session

The Office of Inspector General (OIG) provided an NSB-requested report on January 25, 2008 regarding the Hawaii Joint Statement. The OIG report concluded that there were no actual conflicts of interest or any violation of the Government in the Sunshine Act and offered some recommendations. The Board Office acted on the recommendations.

Dr. Kathie Olsen, NSF Deputy Director, gave a presentation on the newly issued NSF Human Capital Strategic Plan and the issues that face NSF in sustaining a high quality workforce against an array of challenges. Mr. Thomas Cooley, the Chief Financial Officer, discussed the status of Corrective Action Plans in response to the FY 2007 Financial Statement Audit and the work to meet the requirements of OMB Circular A-123 "Management's Responsibility for Internal Control," which is subject to audit this year. Ms. Marie Maguire, OIG Senior Audit Manager, discussed how the OIG oversees the financial statement audit.

A&O Closed Session

The OIG presented information about ongoing investigations.

b. Education and Human Resources (EHR) Committee

The committee recommended a letter and evaluation summary report be approved by the full Board and sent to Congressman Rush Holt. The prepared documents had been promised in a preliminary report submitted in January 2007 in response to Congressman Holt's request to the Board in 2006 for a review of the evaluation of NSF EHR directorate programs. [*The full Board subsequently approved the letter and summary to Congressman Holt.*] (See 1.g.)

The committee heard a presentation on the educational activities at the University of Hawaii - Hilo by invited guest speaker Chancellor Rose Y. Tseng. Dr. Camilla Benbow briefed the committee on the National Math Panel, of which she was a member, that covered a broad set of questions on how to prepare children for algebra.

Dr. Benbow also introduced a draft document, "Preparing the Next Generation of STEM Innovators." The committee approved establishing a working group to hold a 1-day meeting to develop a white paper with recommendations for EHR to offer to the Board on how NSF, and possibly other agencies, might engage the agenda of fostering the development of the next generation of innovators and for conducting research to better understand this process.

c. EHR Subcommittee on Science and Engineering Indicators (SEI)

On February 13, 2008, Dr. Louis Lanzerotti and Mr. Arthur Reilly made a formal presentation to the Government-University-Industry Research Roundtable, which focused the Board's data and recommendations in *Research and Development: Essential Foundation for U.S. Competitiveness in a Global Economy - A Companion to Science and Engineering Indicators 2008*. Dr. Lynda Carlson, Division Director, SBE, presented information on the efforts of the Division of Science Resources Statistics (SRS) to develop new data and indicators for *Science and Engineering Indicators 2010* and beyond.

d. Committee on Programs and Plans (CPP)

CPP Open Session

The committee heard reports on several information items: Sustainable Digital Data Preservation and Access Network Partners (DataNet); the Science of Learning Centers (SLC); the General Social Survey (GSS); and the Competition for the Management and Operation of the National Center for Atmospheric Research (NCAR). The committee also heard a science presentation on "The Breadth of NSF Mathematical and Physical Sciences" by Dr. Chan.

Dr. Mark Abbott updated the committee on the NSB Report to Congress on Pre-construction Funding and Maintenance and Operations Costs Associated with Major Research Equipment and Facilities at NSF. In February 2008, the Board approved the report to Congress as required by the America COMPETES Act and committed to providing a follow-up report to Congress later in 2008. (COMPETES: America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education, and Science.) Since the February 2008 meeting, Dr. Abbott had been engaged in ongoing discussions with NSF management to identify and address critical issues.

Dr. Louis Lanzerotti reported on the progress toward preparing a report to Congress on Interdisciplinary Research, also required by the America COMPETES Act and due to Congress before the August 2008 Board meeting.

Dr. Kesh Narayanan, Division Director, ENG, and Dr. Clifford Gabriel, Senior Advisor, Office of Integrative Activities (OIA), provided an update on the working group on Facilitating Transformative and Interdisciplinary Research (FacTIR). Drs. Gabriel and Narayanan described NSF's evolving response to the Board's report on transformative research (TR), first modifying the Board's definition of transformative research to create a "working definition" to cover the full range of NSF's activities, and then outlining the proposed revision of the Small Grants for Exploratory Research (SGER) program.

CPP Closed Session

The committee heard a report on an information item: High Performance Computing (HPC) Program Updates.

The committee considered and approved two action items and forwarded them to the full Board for approval:

- Request for Proposal and Award of a Support Contract for the U.S. Antarctic Program (NSB-08-28)
- LIGO Operations and Maintenance/AdvLIGO Construction (NSB-08-41)
A. LIGO Laboratory Operations and Maintenance Award to California Institute of Technology; B. Advanced LIGO Construction Award to California Institute of Technology

[The full Board subsequently approved the above resolutions.] (See 1.e. – 1.f.)

e. CPP Subcommittee on Polar Issues (SOPI)

SOPI Closed Session

The subcommittee considered and approved one action item, and forwarded it to CPP for approval: Request for Proposal and Award of a Support Contract for the U.S. Antarctic Program (NSB-08-28).

f. CPP Task Force on Sustainable Energy (SE)

The task force reviewed the first SE roundtable discussion held on February 8, 2008, and discussed the upcoming roundtable on June 19, 2008 at the Visitor's Center of the National Renewable Energy Laboratory in Golden, Colorado.

g. Committee on Strategy and Budget (CSB)

The committee noted the issue of open access to Federally-sponsored research data and information and reviewed a summary of recent legislation and related activities. The Board Office, in coordination with CSB, will organize a presentation on open access issues for the May 2008 Board meeting.

As the COMPETES Act requires the Board to review and assess the effects on institutions of NSF practices limiting the number of proposals that may be submitted by a single institution in response to NSF award solicitations, CSB will compile information for the development of a report in response to the Congressional request.

Mr. Cooley gave a presentation on submission limitations in NSF proposals, and indicated that the Directorate of Budget, Finance, and Award (BFA) Management will work with the Board Office to conduct case studies on the impacts of proposal limits at institutions. NSF advisory committees will be contacted and asked to provide input to the Board on this issue.

h. CSB Task Force on Cost Sharing (CS)

The task force discussed plans for two upcoming roundtables on cost sharing, scheduled on July 9 and 10, 2008 at NSF. The first roundtable will focus on issues in voluntary cost sharing, and the second roundtable will focus on broadening the participation of traditionally under-represented groups and institutions in Federally-sponsored research. Also, the task force considered a plan for collecting qualitative input on cost sharing from NSF advisory committees, which will replace former plans to conduct a Web-based survey of key stakeholders.

[signed]

Craig R. Robinson
Acting Executive Officer