Introduction and Overview

This Supplement to the President's Fiscal Year (FY) 2009 Budget provides a technical summary of the budget request for the Networking and Information Technology Research and Development (NITRD) Program, as required by the High-Performance Computing Act of 1991 (P.L. 102-194) and the Next Generation Internet Research Act of 1998 (P.L. 105-305). The multiagency NITRD Program, now in its 17th year, provides a framework and mechanisms for coordination among Federal agencies that support R&D in networking and information technology. Considered a model of effective interagency collaboration, the Program is one of the few such activities in the Federal government. The NITRD Program is an Administration interagency R&D budget priority for FY 2009.

The NITRD Supplement describes the FY 2009 networking and information technology R&D plans and current technical and coordination activities of the 13 Federal agencies in the NITRD budget crosscut as well as other agencies that are not formal members of the Program but participate in NITRD activities. In the NITRD Program, the term "agency" may refer to a department, a major departmental subdivision, or a research office or laboratory.

The President's 2009 budget request for the NITRD Program is $3.548 billion, an increase of $0.207 billion, approximately 6 percent, over the 2008 NITRD budget estimate of $3.341 billion. Major contributors to this change are NITRD Program budget increases at NSF, DARPA, DOE, and NIST, partially offset by decreases at DoD (OSD and DoD Service research organizations), NSA, and NASA. Details of the NITRD budget, including 2008 estimates and 2009 requests by agency and by Program Component Areas (PCA), are presented in the budget table on page 21 and discussed in the budget analysis beginning on page 22.

NITRD activities and plans are coordinated in eight PCAs: high-end computing infrastructure and applications (HEC I&A); high-end computing research and development (HEC R&D); cyber security and information assurance (CSIA); human computer interaction and information management (HCI&IM); large-scale networking (LSN); high-confidence software and systems (HCSS); social, economic, and workforce implications of IT and IT workforce development (SEW); and software design and productivity (SDP). Agency program managers in each PCA meet monthly in an Interagency Working Group (IWG) or a Coordinating Group (CG) to exchange information and coordinate research plans and activities such as workshops and solicitations. Overall NITRD Program coordination is carried out by the Subcommittee on Networking and Information Technology Research and Development, under the aegis of the Committee on Technology of the National Science and Technology Council (NSTC).

For each NITRD PCA, this Supplement presents, in brief, the interagency strategic priorities underlying the FY 2009 budget request, programmatic highlights of the request, ongoing and anticipated interagency planning and coordination activities, and additional technical activities, by agency. Agencies engaged in various R&D and coordination topic areas are listed in NITRD budget order unless there is a lead agency (listed first) for the activity; agencies listed after the word "with" are in-kind contributors to the activity rather than funders or performers. Some large-scale activities may be cited in more than one PCA because they involve R&D efforts in a variety of technologies. In such cases, agencies report the portion of program funding in each relevant PCA.

Abbreviations and acronyms are used throughout the Supplement to maintain brevity. A glossary, beginning on page 28, is provided for reference.

Assessment of the NITRD Program by the President's Council of Advisors on Science and Technology
In August 2007, the President's Council of Advisors on Science and Technology (PCAST) concluded a two-year review of the NITRD Program conducted by the PCAST Subcommittee on Networking and Information Technology. The PCAST assessment, described in a 62-page report entitled *Leadership Under Challenge: Information Technology R&D in a Competitive World,* marked the first full review of the Program since 1999.

The NITRD community is currently evaluating the implications for the Program of PCAST's substantive and wide-ranging findings and recommendations. This evaluation is being undertaken as an integral part of the NITRD Program's strategic planning process.