

Executive Summary

This Supplement to the President’s Budget for Fiscal Year 2006 offers a brief technical outline of the 2006 budget request for the Networking and Information Technology Research and Development (NITRD) Program. Now in its 14th year, the NITRD Program is a unique collaborative enterprise of Federal agencies engaged in long-term R&D in information technology (IT) to support Federal missions and help sustain U.S. leadership in cutting-edge science, engineering, and technology. NITRD is the Nation’s primary source of fundamental breakthroughs in IT R&D and advanced education and training for the new generations of IT researchers, educators, and entrepreneurs required to maintain U.S. innovation and economic prosperity.

The NITRD agencies coordinate their IT R&D activities in the following major research areas: high-end computing applications and infrastructure; high-end computing research and development; large-scale networking; human-computer interaction and information management; high-confidence software and systems; software design and productivity; and social, economic, and workforce implications of IT and IT workforce development.

The 2006 Supplement provides a two-page review of each NITRD research area summarizing the strategic priorities underlying the budget request, highlights of the request, interagency planning and coordination supporting the request, and an agency-by-agency listing of 2005 and proposed 2006 activities. Coordination highlights for 2006 include joint planning and funding of R&D in software for high-end computing; mutually agreed-upon agency efforts to open Federal HEC resources to wider research communities; collaborative planning and activities in optical networking; a multiagency national workshop on information integration; a joint initiative to create a prototype real-time high-confidence operating system engineered from the ground up to achieve high assurance, security, and reliability; and the open Expedition Workshop series on IT applications to improve government and community services to citizens.

The NITRD Program is coordinated by the Subcommittee on Networking and Information Technology Research and Development, under the aegis of the National Science and Technology Council’s Committee on Technology. The National Coordination Office (NCO) for IT R&D provides technical and administrative support for the Program.

NOTE: To assure brevity, abbreviations and acronyms are employed throughout the Supplement and a glossary is included for reference. In conformance with OMB style, references to years in this report are to fiscal years unless otherwise noted.

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