

Section-by-Section
H.R. 967, Advancing America's Networking and Information Technology Research and Development Act of 2013

SECTION 1. SHORT TITLE.

This section sets for the short title as *Advancing America's Networking and Information Technology Research and Development Act of 2013*.

SEC. 2. PROGRAM PLANNING AND COORDINATION.

Requires the Networking and Information Technology Research and Development Program (NITRD) agencies to periodically assess the program contents and funding levels and to update the program accordingly.

Requires the NITRD agencies to develop and periodically update (at 3-year intervals) a strategic plan for the program. Describes the characteristics and content of the strategic plan, including how the program will foster technology transfer; encourage innovative, large-scale, and interdisciplinary research; address long-term challenges of national importance; emphasize innovative and high-risk projects; and strengthen NIT education and the workforce.

Encourages a more active role for the Office of Science and Technology Policy (OSTP) in ensuring that the strategic plan is developed and executed effectively and that the objectives of the program are met.

Ensures that the advisory committee for NITRD retains the necessary breadth and depth of expertise in NIT fields, provides guidance on the committee's co-chairs, and allows that it may be linked to the President's Council of Advisors on Science and Technology.

Specifies that the annual report now required for the NITRD program explicitly describes how the program activities planned and underway relate to the objectives specified in the strategic plan.

Specifies that the annual report now required for the NITRD program include a description of research areas supported in accordance with section 3, including the same budget information as is required for the Program Component Areas.

Adds a definition for cyber-physical systems and amends existing definitions to incorporate networking and information technology terminology.

SEC. 3. LARGE-SCALE RESEARCH IN AREAS OF NATIONAL IMPORTANCE.

Authorizes NITRD agencies to support large-scale, long-term, interdisciplinary research with the potential to make significant contributions to society and U.S. economic competitiveness and to encourage collaboration between at least two agencies as well as cost-sharing from non-federal sources.

Characteristics of the projects supported include: collaborations among researchers in institutions of higher education and industry, and may involve nonprofit research institutions and Federal laboratories; leveraging of federal investments through collaboration with related State initiatives, when possible; and plans for fostering technology transfer.

Authorizes support of activities under this section through existing interdisciplinary research centers that are organized to investigate basic research questions and carry out technology demonstration activities.

SEC. 4. CYBER-PHYSICAL SYSTEMS.

Requires the program to support research and development in cyber-physical systems; human-computer interactions, visualization, and big data.

Convenes a university/industry task force to explore mechanisms for carrying out collaborative research and development activities for cyber-physical systems with participants from universities, industry, and Federal laboratories.

Requires the task force to develop options for an entity to plan, manage and conduct cyber-physical systems research and development activities; propose a process for developing a research and development agenda for the entity which would include guidelines to ensure work focused on nationally significant challenges and which would require collaboration on the development of scientific and technological milestones; define roles and responsibilities for participants; propose guidelines for assigning intellectual property rights; and make recommendations for funding the entity from federal, state and non-government sources.

Requires a report to Congress on any findings and recommendations from the task force on models for collaborative research and development. The task force would terminate upon transmittal of the report, and members of the task force would not be compensated for participation.

SEC. 5. CLOUD COMPUTING SERVICES FOR RESEARCH.

Provides for an interagency working group to examine issues around funding mechanisms and policies for the use of cloud computing in federally-funded science and engineering research and to recommend guidelines, as needed, to agencies on those policies. The working group would consult with academia, industry, federal laboratories and other relevant organizations and institutions. Within one year the working group would be required to report to Congress on its findings and any recommendations for guidelines. The working group would terminate upon transmittal of the report.

SEC. 6. NATIONAL COORDINATION OFFICE.

Formally codifies the existing National Coordination Office (NCO); delineates the office's roles and responsibilities; and specifies the source of funding for the office (consistent with current practice).

SEC. 7. IMPROVING NETWORKING AND INFORMATION TECHNOLOGY

Requires NSF to use existing programs to improve the teaching and learning of networking and information technology.

SEC. 8. CONFORMING AND TECHNICAL AMENDMENTS

Strikes and replaces instances of out-dated "high-performance computing" language with "networking and information technology" and "high-end computing" as appropriate.