

**U.S. HOUSE OF REPRESENTATIVES
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY**

HEARING CHARTER

Applications for Information Technology Research & Development

Thursday, February 14, 2013

2:00 p.m. – 4:00 p.m.

2318 Rayburn House Office Building

Purpose

On Thursday, February 14, 2013, the Subcommittee on Research will hold a hearing to show the practical applications and benefits of the Networking and Information Technology Research and Development (NITRD) program and its significance to U.S. competitiveness.

Witnesses

- Dr. Kelly Gaither, Director, Visualization Lab, Texas Advanced Computing Center, University of Texas, Austin
- Dr. Kathryn McKinley, Principal Researcher, Microsoft
- Dr. Ed Lazowska, Bill and Melinda Gates Chair in Computer Science and Engineering, University of Washington

Overview

The United States has been the world leader in networking and information technology (NIT). Federal support for research and development (R&D) in NIT originally stemmed from an interest in and the challenge of developing computers capable of addressing complex problems, primarily those focused on national security and hi-end applications. Over the past decades, however, federal spending for NIT R&D has encompassed a broad array of technologies, from digital libraries to cloud computing. The eventual commercial applications for such federally-funded R&D has fundamentally changed the way modern-day Americans work and live.

Additionally, R&D in NIT provides a greater understanding of how to protect essential systems and networks that support fundamental sectors of our economy, from emergency communications and power grids to air-traffic control networks and national defense systems. NIT R&D works to prevent or minimize disruptions to critical information infrastructure, to protect public and private services, to detect and respond to threats while mitigating the severity of and assisting in the recovery from those threats, in an effort to support a more stable and secure nation.

Originally authorized in the High-Performance Computing Act of 1991, the NITRD program is the main R&D investment portfolio of 15 federal member agencies in networking, computing, software, cyber security and related information technologies totaling over \$3.7 billion in FY2013 (with the National Science Foundation being the principal contributor with

over \$1.1 billion of that total). Other federal agencies participate in program activities beyond the 15 member agencies. The NITRD program supports a number of research areas, including big data, cyber physical systems, cyber security and information assurance, health technology, high performance computing and large scale networking.

Federally funded NIT research and industry are tightly linked to innovation. The President’s Council of Advisors on Science and Technology (PCAST) recently released the following updated “Tire Tracks” diagram in their January 2013 report titled *Designing A Digital Future: Federally Funded Research and Development in Networking and Information Technology* (See: <http://www.whitehouse.gov/sites/default/files/microsites/ostp/pcast-nitrd2013.pdf>)

