Telecommunications Industry Association
Driving Innovation through Federal Investments
Senate Appropriations Committee
April 29, 2014

The Telecommunications Industry Association (TIA) applauds the Senate Appropriations Committee for holding a hearing on the important topic of driving innovation through federal research programs. TIA urges the Committee to provide vitally needed support for information and communications technology (ICT) research programs.

Numerous examples and studies demonstrate and document the degree to which the ICT industry directly benefits other industries and the U.S. economy as a whole. A TIA-commissioned report found that ICT firms contribute about $1 trillion to U.S. GDP, or seven percent of GDP, including $600 billion in direct contributions from their own operations and $400 billion in indirect contributions through the benefits other sectors derived from the use of ICT.[1] Funding for ICT research is therefore essential to ensure American competitiveness and will pay dividends in new jobs, new capabilities and even in new industries. In short, it will ensure that the United States remains a generator for innovation and is not left behind.

Among other specific focus areas, research funding for emerging wireless technology, network security and reliability, and public safety wireless communications represents an important "win-win" for consumers, the ICT industry, and the Treasury at a time when the government is seeking to raise money from spectrum auctions. By ensuring that a sufficient portion of spectrum auction proceeds are reinvested into spectrum-related research, Congress will be making an investment that will pay both technological and budgetary dividends in the future.

Specific priorities should include:

- **Fully funding the America COMPETES Act.** Congress should provide full funding for federal research at the levels authorized by the America COMPETES Act. During a time of significant budgetary constraints, research funding represents an important investment in the future of the American economy that will repay itself many times over.

- **Providing additional funding for wireless technology research.** Spectrum is the fuel powering the mobile broadband revolution. As millions of American consumers are demanding more voice, video and data from their mobile devices, efficient use of scarce

[1] Robert J. Shapiro and Aparna Mathur, *The Contributions of Information and Communication Technologies to American Growth, Productivity, Jobs and Prosperity*, available at http://www.tiaonline.org/gov_affairs/fcc_filings/documents/Report_on_ICT_and_Innovation_Shapiro_Mathur_September_8_2011.pdf

spectrum resources is a subject of increasing interest to the ICT industry, other industry sectors, and the scientific research community.

- *Administrative actions to date.* TIA has supported the President's June 2013 announcement to administratively target R&D funding for spectrum research.[2] This was a welcome and long-awaited step, and followed a July 2012 report from the President's Council of Advisors on Science and Technology (PCAST) report finding that spectrum sharing is essential to exploiting the nation's spectrum resources over the long term.[3]

- *Re-investing auction proceeds in R&D.* To achieve transformational advances in spectrum sharing R&D that will yield economic benefits several times over, Congress should provide significant additional funding for spectrum sharing research. Spectrum R&D is the "seed corn" that has enabled more efficient uses of spectrum by federal and commercial users alike, resulting in macroeconomic benefits to the U.S. economy as well as direct benefits to the Treasury when more spectrum is made available for auction. To ensure that the pipeline of spectrum continues into the future, Congress should enact legislation requiring re-investment of a portion of spectrum funds in spectrum research and development efforts.[4]

- **Ensuring that current NITRD funding is properly spent.** The current budget for the federal Networking and Information Technology Research and Development program (NITRD) dramatically overstates how much the federal government is actually investing in ICT research. For example, a December 2010 PCAST found that a large portion of NIH's NITRD funding is being used to purchase equipment supporting research in other fields; as little as 2% of its NITRD funding goes towards actual ICT research.[5] The report also assumed that similar problems likely exist at the other agencies participating in NITRD, but insufficient agency recordkeeping prevented a more thorough analysis.

  - Congress should support the PCAST recommendation that the National Coordination Office for NITRD, in conjunction with OMB, re-define the budget reporting categories to separate (1) funding for NIT infrastructure that supports R&D in *other* fields from (2) true NIT research and development. Congress should also support the PCAST recommendation that the National Coordination

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[2] White House, *Fact Sheet: Administration Provides Another Boost to Wireless Broadband and Technological Innovation*, rel. June 14, 2013, available at http://www.whitehouse.gov/sites/default/files/spectrum_fact_sheet_final.pdf

[3] *See* PCAST, *Realizing the Full Potential of Government-Held Spectrum to Spur Economic Growth*, July 20, 2012, available at http://www.whitehouse.gov/sites/default/files/microsites/ostp/pcast_spectrum_report_final_july_20_2012.pdf

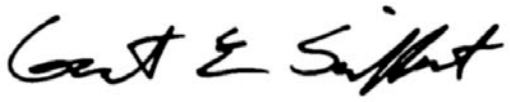
[4] *See also* TIA, Spectrum Sharing Research and Development (rel. December 11, 2013), available at https://www.tiaonline.org/policy/spectrum-sharing-research-development-white-paper

[5] PCAST, *Designing a Digital Future: Federally Funded Research and Development in Networking and Information Technology*, at ix, available at http://www.whitehouse.gov/sites/default/files/microsites/ostp/pcast-nitrd-report-2010.pdf

Office create a publicly available database of government funded NIT research and provide regular detailed reporting to the Director of the Office for Science and Technology Policy.

We urge you to support this effort and hope that even during these challenging budgetary times, you will continue to recognize the need for this basic investment in the technology that will dominate our future society and economy.

Sincerely,



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