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ABSTRACT

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INNOVATION

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- Innovation encompasses research, invention, product development, and marketing. It includes new services, marketing practices, business processes, and noncommercial services, as well as new products and industrial processes.
- “Innovation policy” encompasses a range of policy tools including funding of education, basic research, patents, tax credits, infrastructure, standards, and procurement.
- Information technology plays a central role in promoting productivity and enabling innovation across all sectors of the economy. It should figure prominently in the design of national innovation strategies.

Background - The Role of IT in Innovation Policy: Because of the scope of innovative activity and enterprise in IT and its impact across the economy, it is important that policymakers understand the economic significance of information technology, data, software, infrastructure, and IT-dependent services.

IT-related innovation is distinguished by:

- Standards. Standards are strategically important for defining new areas of technology, developing new markets, and ensuring interoperability.
- Patents. Patent practice in IT is dominated by the acquisition and non-exclusive licensing of patents in volume. The fact that IT products are complex and may be infringed by many patented functions makes IT uniquely vulnerable to patent trolls.
- Copyright. Overzealous enforcement of copyright inhibits the development of innovative technologies and services.
- Infrastructure. Infrastructure provides global access to products and services and minimizes barriers to innovation and to participating in business and commerce.
- Education. There is growing awareness that information technology is changing the nature of work and the skills needed in the future.
- General-Purpose Technology. Like electricity, IT is a general-purpose technology. It is essential to innovation throughout the economy, including areas targeted by innovation policy such as basic science, global challenges, and advanced manufacturing.

- Competition Policy. Network effects, extreme economies of scale, and overpatenting pose unique challenges for competition agencies.
- Trade Policy. IT has uniquely deep and broad global value chains that are vulnerable to trade blockages, including exclusionary orders based on the patent infringement.

U.S. Innovation Policy

Innovation policy in the United States features two pillars: the patent system, which dates to the Constitution, and federal funding of research, which dates to World War II. The Bayh-Dole Act (1980) links the two, providing a template for commercializing federally funded research.

Other programs and laws associated with innovation policy include: the Small Business Innovation Research (SBIR) Act, which reserves a percentage of the budget of federal research agencies for small businesses; the Research and Experimentation (R&E) Tax Credit (sometimes referred to inaccurately as the “R&D tax credit”); and the Technology Innovation Program, a program to support “high-risk, high-reward research in areas of critical national need” – a successor to the politically controversial Advanced Technology Program.

The America COMPETES Act of 2007 emphasized increased investment in research in the physical sciences and education in science, technology, engineering and math (STEM). However, the authorizations contained in the Act remained largely unfunded until the Obama Administration’s stimulus package, the American Recovery and Reinvestment Act of 2009 (ARRA).

The Obama Administration released *A Strategy for American Innovation* in September 2009 with a revision in February 2011. The America COMPETES Act was reauthorized by Congress in December 2010. It included a mandate to the Department of Commerce to conduct a comprehensive study on U.S. competitiveness and innovative capacity to be followed the formulation of a national strategy. Funds were never appropriated for this study, but a summary report was issued in January 2012 that was similar in many respects to the administration’s national strategy documents.

CCIA’s Position: CCIA believes that innovation is essential to promoting productivity and economic growth, and that, like other countries, the U.S. needs a strong, coherent, and farsighted strategy for innovation. Since information and communications technology enable innovation throughout the economy, these subjects should figure prominently in national innovation strategy.