



Accelerating Innovation in
Technology, Data & Media

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July 30, 2018

Mr. Phillip A. Singerman
Associate Director for Innovation and Industry Services
U.S. Department of Commerce
National Institute for Standards and Technology
100 Bureau Drive
Gaithersburg, MD 20899

RE: RFI Response: Federal Technology Transfer Authorities and Processes

Dear Mr. Singerman:

On behalf of the Software & Information Industry Association (SIIA), thank you for the opportunity to comment on the Request for Information Regarding Federal Technology Transfer Authorities and Processes.

With nearly 700 member companies, SIIA is the principal trade association of the software and digital content industries. Our members are global industry leaders in the development and marketing of software and electronic content for business, education, government and consumer markets. They range from start-up firms to some of the largest and most recognizable corporations in the world. SIIA member companies are leading providers of, among other things:

- Data analytics and artificial intelligence
- business, enterprise and networking software
- software publishing, graphics, and photo editing tools
- corporate database and data processing software
- financial trading and investing services, news, and commodities
- online legal information and legal research tools
- tools that protect against software viruses and other threats
- education software, digital content and online education services
- specialized business media
- open source software, and
- many other products and services in the digital content industries.

Introduction

SIIA strongly supports efforts to maximize the social return on public R&D investments and policies that promote the transfer of technology from the public and private sector. SIIA also strongly concurs with the objectives of this initiative, particularly the conclusion established in the RFI that for the results of Federal investment to produce economic gain and maintain a strong national security innovation base, the results must be put to productive use through applied research, services to the public, and transfer to the private companies to create new products and services.

Federal agencies that fund research, as well as universities and national laboratories, provide a critical contribution to U.S. research and innovation. Building from this, technology transfer is a critical driver of national innovation and economic growth. At a time when the knowledge-based global economy has become so competitive, strong technology transfer policies can help the United States continue as world leaders in technology, innovation and knowledge.

While technology transfer has been a key priority for many years, it is even more important in the 21st Century, as technologies such as artificial intelligence (AI) and machine learning (ML) are critically important technologies where competition for global leadership is very strong. China, for instance is expending extensive resources in the effort to lead in the development of AI and ML technologies, as highlighted by a 2017 blueprint for investing in artificial intelligence. The Chinese goal to create a \$150 billion industry by 2030 underscores their desire to outpace the United States.¹ Therefore, it is not only critical that the U.S. government invest in the development of AI and ML, but that this investment is able to be leveraged and extended in the private sector, through effective technology transfer policies.

We offer the following assessments and recommendations regarding the current Federal technology transfer policies and processes, and opportunities to improve them.

1. The existing U.S. technology transfer framework has proven largely effective.

For the most part, existing Federal technology transfer laws have served the Nation well over nearly four decades. The Bayh-Dole Act of 1980, including its amendments in 1984 and 1986, has been a primary enabler of technology transfer. At the inception of the Act, there were thousands of government patents that were not being put to good use because Federal agencies lacked the ability to advance this research for social benefit or economic growth. Universities were creating new and exciting technology using government funds that were never reaching the industry or the public. The Bayh-Dole act changed the way these government funded patents were handled and there was an explosion of university patenting following 1980. Since the passage of the Bayh-Dole Act, more than 5,000 new companies have formed from federally funded university research. In 2008, more than 600 new university products were introduced to the marketplace. According to MIT, about 30 billion dollars of economic activity per year and 250,000 jobs can be attributed to technology born in academic institutions.²

Bayh-Dole strikes a good balance between the public interest and needed market incentives. The wide dissemination and use of the federal science and technology resulting from the taxpayers' substantial investments in government R&D is in the public interest and should be preserved. Strong incentives for the private sector to commercialize the new technologies and innovations that arise from these efforts are also needed and important. Bayh-Dole strikes a very reasonable balance, and we would be concerned that major changes might upset this careful framework. Other countries, including Japan and France, have since adopted Bayh-Dole-like legislation, precisely because it has been so successful in the United States. Of course, all laws and regulations need to be updated over time, and we are hopeful that the new implementing regulation that went into effect in May 2018, will further reduce regulatory burdens on large and small businesses by clarifying electronic reporting, updating certain sections to

¹ [A Next Generation Artificial Intelligence Development Plan](#). August 2017

² Kirby, Catherine. [True Impact of the Bayh-Dole Act](#). December 6, 2016.

conform with changes in the patent laws and streamline the licensing application process for some Federal laboratory collaborators.

2. The goals of this initiative should extend beyond the transfer of technology to include all forms of intellectual property (IP) arising from Federal research and development investments.

As identified by the RFI, NIST and OSTP, in leading the Lab-to-Market cross agency priority (CAP) goal, are engaging in this exercise to promote sound business principles that derive and maximize the economic value of the Federal government's investment in research and development broadly. In essence, technology transfer is the dynamic exchange of knowledge between the government, research organizations and the private sector, with the goal to foster more innovation and positive economic benefits.

However, the RFI is focused narrowly on maximizing the transfer of "technology." It appears that the intent of the initiative is to apply broadly to transfer of all intellectual property (IP), not just technology. The government invests in a wide range of R&D, and whether it results in the production of technology, research data, software or other products the objective is the same: transfer for economic growth and job production and maximize innovation.

As discussed above, the fundamental objective of the Bayh-Dole Act was to advance innovation and economic activity by promoting the transfer of intellectual property arising from federal government-funded research. However, while Bayh-Dole allows for the retention of any "subject invention" made with federal funds, it does not apply to work that is not patentable and has nothing to do with work that is outside the "planned and committed" activities under a grant. For instance, Bayh-Dole is interpreted as having no impact on any software that is not protected by patent.³

Therefore, while the existing Federal technology transfer laws have served well for decades, this process is valuable to clarify and extend these policies to ensure that they are not focused too narrowly on the transfer of technology—and particularly patented technology— but promote all forms of knowledge and innovation. Federal policies should clarify the goal to ensure software that is protected by copyright or trade secrets, or other IP that derives from Federal R&D, are also valuable outputs, and where appropriate, can be effectively leveraged by the private sector to maximize innovation and job growth. What these other forms of intellectual property share with patents is that they have long been recognized for their role in promoting the necessary framework for commercialization of new discoveries, the key incentive Bayh-Dole sought to promote.

Unfortunately, inconsistent practices at other federal agencies, including the US Department of Education's Open Licensing Requirement for Competitive Grant Programs final rule, fail to recognize this crucial objective. Rather than ensuring an incentive structure that enables private sector investment and affirming the freedom for creators to choose how to build on, commercialize and disseminate their innovations, such policies risk undermining the very foundations upon which the success of Bayh-Dole

³ Barnett, Gerald. [*The Cork in the Keg: Open Source Software Complies with Bayh-Dole But University Invention Practice Often Does Not*](#). March 4, 2015

and similar policies have been based. We strongly encourage NIST and OSTP to recognize these other forms of intellectual property for their merits as drivers of commercialization.

3. Policies should recognize broadly that public private partnerships are critical for leveraging Federal investment, and they should discourage competition from the public sector.

Public-private partnerships, or contracts between a *private* party and a government entity for providing a *public* asset or service, involve a complimentary relationship where the goal is to maximize the outcomes for the Nation and American citizens. It is no surprise that they have been a fundamental pillar of American innovation because of their ability to create jobs and economic growth. Similarly, it has long been established that government should not compete with the private sector, as a means to maximize taxpayer dollars

SIIA supports continuation and expansion of policies to maximize the opportunity for effective public-private partnerships to the greatest extent possible, and to avoid competition between the government and private sector in the development of technology, or development of other IP, even in cases where the underlying IP derives from government research and development.

OMB Circular A-76, regarding *Performance of Commercial Activities*, was written to provide fundamental policy direction to agencies that the government should not be in the business of providing commercial goods and services in competition with private markets. Two key statements highlighting this included: (1) “in the process of governing, the government should not compete with its citizens” and (2) “a commercial activity is not a governmental function.” In providing this guidance, A-76 required that government should rely on the private sector to perform such functions under the American economic model, including the provision of the goods and services the Government needs for fulfillment of its essential operating missions and requirements.

However, Circular A-76 has since been amended, and these explicit guidelines for agencies have been removed, creating a gap in Federal policy for a non-compete requirement with the private sector. While the rationale for revisions to the Circular were consistent with the goal to maximize government reliance on the private sector for needed commercial products and services, the end result was a deletion of the strongest explicit guidelines for federal agencies to avoid competing with the private sector.

As NIST and OSTP conduct a comprehensive assessment of the Lab-Market CAP Goal and the broader Return on Investment initiative (ROI), SIIA urges you to consider revisiting Circular A-76 and the key non-compete principles. It would benefit the government, private sector, and the American taxpayer to re-establish specific requirement to avoid competition, and to maximize public-private partnerships to accelerate technology transfer.

4. The Lab-to Market cross-agency priority (CAP) goals should be combined with an ongoing process to maximize public-private partnerships and collaboration.

As stated above, SIIA strongly supports the goals of the President's Management Agenda to modernize government for the 21st century, including the associated Lab-to-Market cross-agency priority (CAP) goals. As NIST and OSTP work together to advance the goals, particularly to develop and implement more effective partnering models, we recommend the institution of an ongoing process through which

government leaders can update and engage with private sector stakeholders to assess and maximize progress.

Given the speed of technological development, it would be beneficial to establish a schedule for private sector stakeholder meetings to evaluate progress and to provide for other periodic oversight and feedback opportunities from the private sector. By enabling an ongoing process to continue evaluation of technology transfer and establish the CAP goals, such as continually bringing products to market as quickly as possible, and ultimately enabling America to maintain its position as the leader in global innovation.

Conclusion

Again, thank you for reviewing the technology transfer process, and for the opportunity to comment. SIIA members look forward to continuing to partner with the Government to promote technology transfer and to maximize opportunities for innovation and economic growth. I hope that these comments and recommendations are helpful as you proceed in with these efforts. If you have further questions or would like to discuss any of the issues in further detail, please do not hesitate to contact David LeDuc, SIIA Senior Director, Public Policy, at dleduc@siia.net or 202-789-4443.

Sincerely,

A handwritten signature in black ink that reads "Ken Wasch". The signature is fluid and cursive, with the first name "Ken" and last name "Wasch" clearly distinguishable.

Ken Wasch
President and CEO
Software & Information Industry Association