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BEFORE THE
SUBCOMMITTEE ON COUNTERTERRORISM AND INTELLIGENCE
COMMITTEE ON HOMELAND SECURITY
U.S. HOUSE OF REPRESENTATIVES

“Economic Espionage: A Foreign Intelligence Threat to American Jobs and Homeland Security”

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Introduction

Chairman Meehan, Ranking Member Higgins, and Members of the Subcommittee:

Thank you for this opportunity to discuss the potential impact of economic espionage on one of this country’s most important resources – the intellectual property (IP) protections of our innovators.

It is clear that policies supporting and protecting a higher-quality IP system are making a difference in our nation’s economic recovery. In my testimony today, I will primarily discuss the importance of IP protections to U.S. businesses, with particular focus on the findings contained in the Department of Commerce’s recent report titled *“Intellectual Property in the U.S. Economy: Industries in Focus.”* Moreover, I will discuss actions the Department of Commerce is taking to build capacity in the U.S. for new and existing businesses to protect their innovations. The Department of Commerce is keenly aware that America’s core strength lies in our ability to experiment, innovate, and create new value. It is axiomatic that sensible government policies that encourage and stimulate that spirit of innovation and clear that appropriate protection for American innovation can demonstrably contribute to job creation, economic well-being, and better lives for our people.

Commerce Report Overview: *“Intellectual Property in the U.S. Economy: Industries in Focus”*

On April 11, 2012, the Department of Commerce released this report in a White House press conference. Underlining the importance of this topic, speakers included the Secretary of Commerce, the White House Intellectual Property Coordinator, the President of the U.S. Chamber of Commerce, and the President of the AFL-CIO. The report is a collaborative effort by economists in the Economics and Statistical Administration (ESA) and the United States Patent and Trademark Office (USPTO), both bureaus of the Department. This report has had a large impact in helping to educate citizens about the role of intellectual property in our economic health – during the first 30 days after the report’s release it was downloaded from the USPTO website over 82,000 times.

The report recognizes that innovation—the process through which new ideas are generated and successfully introduced in the marketplace—is a primary driver of U.S. economic growth and national

competitiveness.¹ U.S. companies' use of patents, copyright, and trade secrecy to protect their creations, and trademarks to distinguish their goods and services from those of competitors represent important supports for innovation, enabling firms to capture market share, which contributes to growth in our economy. The granting and protection of intellectual property rights is vital to promoting innovation and creativity and is an essential element of our free enterprise, market-based system. Patents, trademarks, and copyrights are the principal means used to establish ownership of inventions and creative ideas in their various forms, providing a legal foundation to generate tangible benefits from innovation for companies, workers, and consumers. Without this framework, the creators of intellectual property would tend to lose the economic fruits of their own work, thereby undermining the incentives to undertake the investments necessary to develop the IP in the first place.² Moreover, without IP protection, the inventor who had invested time and money in developing the new product or service (sunk costs) would always be at a disadvantage to the new firm that could just copy and market the product without having to recoup any sunk costs or pay the higher salaries required by those with the creative talents and skills. As a result, the benefits associated with American ingenuity would tend to more easily flow outside the United States.

The report finds that IP is used everywhere in the economy, and IP rights support innovation and creativity in virtually every U.S. industry. While IP rights play a large role in generating economic growth, too little attention has been given to identifying which industries produce or use significant amounts of IP and rely most intensively on these rights. The report was written to give policy makers and the public more information about the impacts of IP protection in the U.S. economy on which to base sound policy.

This report investigates the economic impact in the United States of intellectual property protection by developing several industry-level metrics on IP use and employs these measures to identify a set of the most IP-intensive industries in the U.S. economy. To develop the industry-level metrics discussed, several databases were used, some of which (for the patent and trademark analyses) are publicly available.³

The report employs USPTO administrative data to identify the industries that most intensively use the protection offered by patents and trademarks. For copyrights, the report identifies the set of industries primarily responsible for both the creation and production of copyrighted materials. The report then uses standard statistical methods to identify which American industries are the most patent-, trademark-, and copyright-intensive, and defines this subset of industries as "IP-intensive." Using data collected from sources across the U.S. government, the report examines both the important trends and economic characteristics of these highly IP-intensive industries, and their meaningful contributions to the U.S. economy. There are several important findings contained in the report.

Commerce Report Findings

Mr. Chairman, the important findings of the Department's report are as follows:

- The entire U.S. economy relies on some form of IP, because virtually every industry either produces or uses it.

¹ National Economic Council et al. 2011.

² Ibid., 11.

³ See www.uspto.gov/web/offices/ac/ido/oeip/taf/data/naics_conc/ and also www.google.com/googlebooks/uspto-trademarks.html.

- IP-intensive industries accounted for about \$5.06 trillion in value added, or 34.8% of U.S. gross domestic product (GDP), in 2010. Merchandise exports of IP-intensive industries totaled \$775 billion in 2010, accounting for 60.7% of total U.S. merchandise exports.
- IP-intensive industries directly accounted for 27.1 million American jobs, or 18.8% of all employment in the economy, in 2010.
- A substantial share of IP-intensive employment in the U.S. was in the 60 trademark-intensive industries, with 22.6 million jobs in 2010. The 26 patent-intensive industries accounted for 3.9 million jobs in 2010, while the 13 copyright-intensive industries provided 5.1 million jobs.
- While IP-intensive industries directly supported 27.1 million jobs either on their payrolls or under employment contracts, these sectors also indirectly supported 12.9 million more supply chain jobs throughout the economy.
- In other words, every two jobs in IP-intensive industries support an additional one job elsewhere in the economy. In total, 40.0 million jobs, or 27.7% of all jobs, were directly or indirectly attributable to the most IP-intensive industries.
- Jobs in IP-intensive industries pay well compared to other jobs. Average weekly wages for IP-intensive industries were \$1,156 in 2010 or 42% higher than the \$815 average weekly wages in other (non-IP-intensive) private industries. This wage premium nearly doubled from 22% in 1990 to 42% by 2010.
- Patent- and copyright-intensive industries have seen particularly fast wage growth in recent years, with the wage premium in patent-intensive industries increasing from 66% in 2005 to 73% in 2010. And the premium in copyright-intensive industries rising from 65% to 77%.
- The comparatively high wages in IP-intensive industries correspond to, on average, the completion of more years of schooling by these workers. More than 42% of workers aged 25 and over in these industries in 2010 were college educated, compared with 34% on average in non-IP-intensive industries.
- Due primarily to historic losses in manufacturing jobs, overall employment in IP-intensive industries has lagged other industries during the last two decades. While employment in non-IP-intensive industries was 21.7% higher in 2011 than in 1990, overall IP-intensive industry employment grew 2.3% over this same period.
- Because patent-intensive industries are all in the manufacturing sector, they experienced relatively more employment losses over this period, especially during the past decade.
- While trademark-intensive industry employment had edged down 2.3% by the end of this period, copyright-intensive industries provided a sizeable employment boost, growing by 46.3% between 1990 and 2011.
- Between 2010 and 2011, the economic recovery led to a 1.6% increase in direct employment in IP-intensive industries, faster than the 1.0% growth in non-IP-intensive industries.
- Growth in copyright-intensive industries (2.4 %), patent-intensive industries (2.3%), and trademark-intensive industries (1.1%) all outpaced gains in non-IP-intensive industries.

- Data on foreign trade of IP-intensive service-providing industries is limited. However, this report does find that exports of IP-intensive service-providing industries accounted for approximately 19% of total U.S. private services exports in 2007.

The Importance of Protections to U.S. Businesses

Mr. Chairman, it is important to point out that the findings contained in the Commerce report concerning the positive economic impacts of the most intensive users of IP in the economy are consistent with previous academic studies finding that secrecy, patenting, and other legal protections are important to U.S. businesses in securing competitive advantage from their innovations. Notably, in response to a survey conducted by scholars at Carnegie-Mellon University in the 1990s, managers of U.S. businesses reported that various legal protections were effective in protecting their product and process innovations. Across all industries surveyed, patenting was found to effectively protect U.S. business' competitive advantage for over one-third of their product innovations, while secrecy was found to effectively protect competitive advantage on innovations in over one-half of product and process innovations.⁴

Given recent evidence from the Kauffman Foundation showing that new business creation disproportionately contributes to job creation in the U.S.,⁵ it is important to note that a recent survey conducted at the University of California examining only young companies in high technology industries finds results similar to the Carnegie-Mellon survey.⁶ Managers at startup companies told the researchers in 2008 that patents, trademarks, copyright and trade secret protections were all important to securing competitive advantage from their new product and process innovations. Notably, the most important reason that managers cited for seeking patent protection was to prevent others from copying their products or services.

Department of Commerce Efforts to Build Capacity and Protect American Innovation

In light of the recent and increasing concerns by U.S. right holders on the importance of having effective mechanisms to protect their trade secrets from misappropriation, the USPTO is emphasizing this area in our domestic and foreign policy objectives, particularly as they relate to other countries. USPTO attorneys are undertaking a comprehensive study of foreign laws and other legal measures governing trade secrets and are discussing with foreign government officials changes that can facilitate more effective protection regimes abroad. For instance, USPTO is using this information to update the "China IP Toolkit" on Stopfakes.gov with a section dedicated to trade secret protection and enforcement. This component of the Toolkit will provide an overview of China's major laws and other measures affecting trade secrets and include basic steps a company can consider to protect its trade secrets in China, including not only information on judicial and administrative enforcement mechanisms but also basic strategies companies can employ to help prevent misappropriation from occurring.

⁴ Cohen, Wesley M., Richard R. Nelson, and John P. Walsh (2000). "Protecting Their Intellectual Assets: Appropriability Conditions and Why U.S. Manufacturing Firms Patent (or Not)." NBER Working Paper 7552, *available at* <http://www.nber.org/papers/w7552>.

⁵ *See, e.g.,* Tim J. Kane (2010). "The Importance of Startups in Job Creation and Job Destruction," SSRN working paper, *available at* <http://ssrn.com/abstract=1646934>; E.J. Reedy & Robert E. Litan (2011). "Starting Smaller; Staying Smaller: America's Slow Leak in Job Creation," SSRN working paper, *available at* <http://ssrn.com/abstract=1883660>.

⁶ Graham, Stuart, Robert P. Merges, Pamela Samuelson, and Ted M. Sichelman (2009). "High Technology Entrepreneurs and the Patent System: Results of the 2008 Berkeley Patent Survey. Berkeley Technology Law Journal, Vol. 24, No. 4, pp. 255-327, *available at* <http://ssrn.com/abstract=1429049>.

Also, the USPTO is currently developing training modules on trade secrets for small and medium enterprises and enforcement officials. These modules will include an overview of trade secret law in the United States, measures to protect trade secrets, criminal and civil enforcement procedures and international trade secret protection and enforcement.

My presentation today focuses on USPTO efforts in support of the Administration's innovation goals. I would like to note, however, that there are additional efforts underway across the Department of Commerce, ranging from BIS's enforcement activities and administrative sanctions against export violators, to outreach and advocacy directed at helping U.S. IP-intensive industries compete successfully in foreign markets.

Conclusion

Mr. Chairman, the growth, job creation, and success of businesses of all shapes and sizes are highly dependent on the effectiveness of IP protection. The Department of Commerce is committed to supporting not only the creation of innovation, but also the ability of U.S. businesses to compete fairly with these innovations and protect our economy from illegal copying and theft. We appreciate your support for the employees and operations of the Department that make that protection possible.

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