U.S. Laws Affecting the Transfer of Intellectual Property

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ABSTRACT

This chapter provides an overview of some of the legislative bills that have profoundly affected the evolution of technology transfer and intellectual property (IP) rights in the United States. The chapter references provisions of the specific bills as codified in U.S. law and explains their goals and historical circumstances. While not an exhaustive presentation of all of the bills that have contributed to laws governing IP, the codification references will provide a useful starting point for those researching the applicability of the laws to particular situations.

1. INTRODUCTION

In the United States, the fundamental basis for the transfer of technology as property lies in the U.S. Constitution. In an effort to protect the rights of its more creative citizens, the framers of the Constitution struck a compromise position: creators of intellectual property (IP) would own it and be able to exclude others from using it for a limited period of time. After this time period expired, the right to use the IP was extended to all. By agreeing to accept the "disclosure inducement theory" of advancing science and the arts, the framers also allowed a creator of IP to deny others the use of that property for a limited period of time in exchange for disclosing the nature of the property to all. The conveyed right is expressed in article I, section 8, clause 8 of the U.S. Constitution:

The Congress shall have Power—
to promote the progress
Of Science and useful arts, by securing
for limited Times
To Authors and Inventors the exclusive
Right to their Respective Writings
and Discoveries.

2. U.S. PATENT SYSTEMS

The U.S. patent system finds its origin in the U.S. Constitution (art. I, § 8, cl. 8). The system described therein is the primary vehicle for transferring IP from the university and nonprofit sectors to the private sector or, as is often the case, from the government to the private sector. Within its scope, the clause includes trademarks and copyrights. Indeed, all of these elements—patents, trademarks, and copyrights—are classified as intellectual property and in the United States have the imprimatur of personal property rights. The terms and provisions governing these forms of IP are codified in various statutes: U.S. Code, title 35 for patents (35 U.S.C.); U.S. Code, title 15 (15 U.S.C.), chapter 22 for trademarks; and U.S. Code, title 17 (17 U.S.C.) for copyrights. Detailed regulations governing the application of these statutes are found in title 37 of the Code of Federal Regulations (37 C.F.R.), chapters I and II. These laws and regulations outline

Bremer H. 2007. U.S. Laws Affecting the Transfer of Intellectual Property. In *Intellectual Property Management in Health and Agricultural Innovation: A Handbook of Best Practices* (eds. A Krattiger, RT Mahoney, L Nelsen, et al.). MIHR: Oxford, U.K., and PIPRA: Davis, U.S.A. Available online at www.ipHandbook.org.

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the obligations for obtaining and maintaining IP protection and for asserting the property rights that the laws convey.

2.1 *Specific legislation*

Two pieces of legislation, both of which were passed in 1980, are of particular interest. The first gave the government authority to engage in the transfer of federally owned or federally originated technology. The second gave the government statutory authority to patent and license federally owned inventions and was instrumental in enhancing the nonprofit sector's technology transfer function—especially for universities.

The first law was the Stevenson-Wydler Act. Its reach expanded by amendments over a period of years, the law is codified in title 15 (15 U.S.C.), chapter 63 of the U.S. Code, under the heading "Technology Innovation." Its fundamental purpose was to promote the utilization of technology owned by the federal government and generated with its help. The act accomplished its purpose by aiding the transfer of that technology to the private sector and to state and local governments. The act initially called for setting aside 0.5% of each federal laboratory's budget to fund technology transfer activities; a later amendment required "sufficient funding to support technology transfer activities."

The second law was the Patent and Trademark Amendment Act of 1980—known as the Bayh-Dole Act. The terms and provisions of this act, as amended by the Trademarks Clarification Act of 1984, are codified in title 35 of the U.S. Code (35 U.S.C. § 200–212). The Bayh-Dole Act changed the presumption of title in and to inventions made, in whole or in part, with federal monies at nonprofit organizations—including universities and small businesses—from the government to those entities. For the first time, the law established a uniform federal patent policy and provided the first statutory authority for the U.S. government to take title to and hold patents through its agencies. The regulations pertaining to the Bayh-Dole Act are found in the Code of Federal Regulations, title 37 (37 C.F.R.), part 401; those regulations pertaining to the licensing of government-owned inventions are set forth in part 404, and those pertaining to inventions made by government employees are set forth in part 501.

The Bayh-Dole Act also embraces any novel variety of plant that is or may be protected under the Plant Variety Protection Act, which is codified in title 7 of the U.S. Code (7 U.S.C.), chapter 57, and includes sections 1545 and 2353 of title 28 (28 U.S.C. §§ 1545 and 2353), amendments to title 27, sections 1551 and 1562 (27 U.S.C. §§ 1551 and 1562) (the Federal Seed Act), and sections 1338 and 1498 of 28 U.S.C (28 U.S.C. §§ 1338, 1498).

Because the Bayh-Dole Act depends upon the U.S. patent system to transfer technology from the nonprofit, university, and small business sectors, it is axiomatic that changes in the patent system and in the regulations governing that system can affect the ability to protect and transfer technology.

2.2 *Patents and antitrust laws*

Many people classify patents as monopolies, a view that brings into sharp focus the issue of antitrust laws and patents, particularly the right of the patent holder to exclude. The passage of antitrust legislation in the United States was driven by the growth and expansion of business and the efforts of competitors to stabilize markets through price and quota arrangements. These activities made it clear that growing industrial combinations and monopolies would have to be controlled.

As a result, in 1890 the Sherman Act was passed (codified at 15 U.S.C. §§ 1–7). The Clayton Act (codified at 15 U.S.C. §§ 12–29 and 29 U.S.C. § 52) followed in 1916. As a supplement to the Sherman and Clayton acts, the Federal Trade Commission Act was passed in 1914, amended in 1980 and1994, and reauthorized in 1996 (codified at 15 U.S.C. §§ 41–58).

The Sherman Act prohibits the restraint of trade and monopolies. Antitrust law and patents oppose each other because according to the act, patents can contribute or be a part of an attempt to restrain trade or to establish a monopoly of "*any part of the trade or commerce between the several States (of the United States) or with foreign*

nations." Specifically, the substantive governing provisions are:

- ***Section 1**. Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations, is declared to be illegal.…*
- *Section 2. Every person who shall monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty of a misdemeanor.*

It should be noted that under section 1, restraint of trade requires action by two or more parties, but monopolization requires action by just one party.

In contrast to the broad language of the Sherman Act, the Clayton Act focuses on more specific trade abuses: price discrimination, the acquisition of one corporation by another, restrictions forbidding a purchaser of goods to deal in the goods of competition, and the use of interlocking directorates among large corporations. The relevant, specific statutory language is:

- ***Section 3.** …[I]t shall be unlawful for any person engaged in [interstate] commerce, in the course of such commerce, to lease or make a sale or contract for sale of goods, wares, merchandise, machinery, supplies or other commodities, whether patented or unpatented, for use, consumption or resale within the United States or any Territory thereof or the District of Columbia of any insular possession or other place under the jurisdiction of the United States, or fix a price charged therefore, or discount from, or rebate upon, such prices, on the condition, agreement or understanding that the lessee or purchaser thereof shall not use or deal in the goods, wares, merchandise, machinery, supplies or other commodities of a competitor or competitors of the lessor or seller, where the effect of such lease, sale, or contract for sale on such condition, agreement or understanding may be to substantially lessen competition or tend to create a monopoly in any line of commerce.*
- ***Section 7.** …[N]o corporation engaged in [interstate] commerce shall acquire, directly or indirectly, the whole or any part of the stock or other share capital and no corporation subject to the jurisdiction of the Federal Trade Commission shall acquire the whole or any part of the assets of another corporation engaged also in commerce, where in any line of commerce in any section of the country, the effect of such acquisition may be substantially to lessen competition, or to tend to create a monopoly.*

The early historical perception that patents and antitrust principles are antithetical has been ameliorated over the years; today they are recognized as complementary tools that enhance competition. Nevertheless, the inherent right-to-exclude conveyed by a patent forecloses third parties from practicing the invention patented, and patents can be used for various kinds of conveyances. (For example, patents can be the basis for exclusive, partially exclusive, or nonexclusive licenses, bailments, or actual sales.) Attention must be paid to the nature of those conveyances and to the context within which and purpose for which they are generated and will be used. At present, patents, per se, are not viewed as conveyers of market power. But when coupled with other assets, or when patents are acquired in order to build a monopolistic position (other than through internal research and development efforts), patents do contribute to market power. When combined with apparent predatory practices that restrain trade, such a position can invite antitrust scrutiny. For example, a violation of the Clayton Act would occur if a purchaser were forced to purchase certain materials or supplies from a specified supplier to the exclusion of a competitor—this is referred to as a *tying arrangement*. In terms of antitrust issues, this arrangement would be viewed as extending the scope of a patent by restricting the use of the patented invention to goods necessary for its operation but not part of the patented invention. For example, the license (or franchise) under the patent might require the purchase of nonpatented items from the licensor as a condition for the license itself. Without the element of coercion,

however, the parties are free to enter into such a supply agreement.

2.3 *Export Administration Regulations and International Traffic in Arms Regulations*

The Department of Commerce administers the Export Administration Regulations (EAR) to protect trade, while the Department of State administers the International Traffic in Arms Regulations (ITAR) to protect national security. The regulations apply not only to the transfer of physical items to persons and/or entities outside the United States, but also to the transfer of technology—whether or not it is associated with a physical item. The regulations also cover disclosure to foreign persons while in the United States of technical data or information on controlled items, as well as to the training and offering of services involving controlled equipment to foreign persons.

The EAR can be found at title 15, sections 730–74 of the Code of Federal Regulations. EAR regulations apply to and regulate the export of goods and related technology on the Commodity Control List (15 C.F.R. § 774, supplement 1). The ITAR can be found at 22 C.F.R. 120–30. The regulations control the export of articles, services, and related technical data that are inherently military in nature. Regulated items are specified in the Munitions List at 22 C.F.R. 121.

Additionally, the regulations restrict the export of goods and technology that could hamper the economic vitality of the United States or that might contribute to the military capability and potential of its adversaries. Because of global terrorism, the latter has been particularly emphasized in recent years.

IP, as represented by patents, know-how, trade secrets, and copyright can also be affected by EAR and ITAR. The Patent and Trademark Office asserts some control over the export of sensitive technology by issuing export licenses—in most cases, automatically, during the early consideration of a patent application, or upon request from the applicant. In some cases, the office will impose a secrecy order on a patent application that contains sensitive materials. In such cases, an applicant may prosecute the application so ordered in a special group in the examining corps, but the patent will not be issued until the restriction has been lifted. Corresponding applications can be filed and prosecuted in other approved countries to the point of acceptance, but the patent itself will not be issued. With the patented technology embargoed, the technology itself would fall under the EAR or ITAR.

Inasmuch as they embrace transfers of controlled information (including technical data, physical items—inclusive of scientific equipment—and verbal, written, electronic and/or visual disclosures of controlled scientific and technical information), the EAR and ITAR can affect university research and development, as well as university technology-transfer functions, via patent licensing and/or other means. Because of the tradition of academic freedom and the open nature of research and development in U.S. universities, the EAR and ITAR can be more difficult to administer; nevertheless, universities must comply with the regulations. Although EAR and ITAR cover virtually all of the same science and engineering fields that universities research and develop, compliance tends not to be viewed as essential. This is partly because of the open environment of universities. Control is more difficult, and neither the EAR nor the ITAR require an export license to disclose technical information to foreign nationals in the United States inside classes, laboratories, or conferences, or in publications, if the information is in the public domain. Information is considered to be in the public domain if it is, at least in part, published and generally accessible to the public through unlimited and unrestricted distribution. This public-domain exemption, however, may not apply to all information that a university generates. There are circumstances in which a specific export license may be required or, particularly where a secrecy order has been imposed, export of the information and/or technology is illegal.

Ancillary to the EAR and ITAR is the Treasury Department Office of Foreign Assets Control (OFAC). OFAC acts under presidential wartime and national emergency powers and has the

authority of specific legislation to prohibit transactions, including the provision of services, and freeze foreign assets under U.S. jurisdiction of targeted persons and entities. Individuals may not provide technologies or services to countries on OFAC's list of embargoed entities or to specially designated persons without first obtaining licenses from OFAC and the state or commerce department.

2.4 *The Cooperative Research and Technology Enhancement Act of 2004*

In 2004, the U.S. Congress passed the Cooperative Research and Technology Enhancement Act, (CREATE Act). The law is codified at 35 U.S.C. § 103(c) and applies to any patent (including reissued patents) granted on or after December 10, 2004. The law was designed to overrule a judicial decision that held that confidential information derived from another individual (termed *secret prior art*) could render an invention *obvious* and thereby preclude patentability of the invention. Since such an exchange of information tends to occur most frequently where researchers, engaged by different entities, are collaborating on a given research project, the decision was construed to have a "chilling effect" on collaborative research among different entities. The CREATE Act enables two or more entities to obtain and separately own patents containing claims that are not patentably distinct from each other (where one claim in one patent would be "obvious" in view of a claim in the other patent). To involve the provisions of the CREATE Act, the collaborative research must have been conducted under a Joint Research Agreement that was in effect on or before the claimed invention was made, the claimed invention must have been made as a result of activities undertaken within the scope of the agreement, and the application for patent for the claimed invention, initially or by amendment, must have disclosed the names of the parties to the agreement.

2.5 Cooperative Research and Development Agreements

Authority for Cooperative Research and Development Agreements (CRADAs) is found at 35 U.S.C. § 3710(a). The purpose of CRADAs is to promote technology innovation in government-operated federal laboratories and government-owned, contractor-operated laboratories across all federal government agencies. The specific authorization language at 35 U.S.C. § 3710(a) is reproduced below:

(a) General authority. Each Federal agency may permit the director of any of its Government-operated Federal laboratories, and, to the extent provided in an agency-approved joint work statement or, if permitted by the agency, in an agency-approved annual strategic plan, the director of any of its Government-owned, contractor-operated laboratories—

(1) to enter into cooperative research and development agreements on behalf of such agency (subject to subsection (c) of this section) with other Federal agencies; units of State or local government; industrial organizations (including corporations, partnerships, and limited partnerships, and industrial development organizations); public and private foundations; nonprofit organizations (including universities); or other persons (including licensees of inventions owned by the Federal agency); and

(2) to negotiate licensing agreements under section 207 of title 35, United States Code, or under other authorities (in the case of a Government-owned, contractor-operator laboratory, subject to subsection (c) of this section) for inventions made or other intellectual property developed at the laboratory and other inventions or other intellectual property that may be voluntarily assigned to the Government.

Under a CRADA, the involved laboratory may grant, or agree to grant, in advance to a collaborating party patent licenses, or assignment, or options thereto, in any invention made, in whole or in part, by a laboratory employee under the agreement for reasonable compensation (35 U.S.C. § 3710a(b) enumerated authority).

2.6 *Department of Energy/Nuclear Regulatory Commission inventions and atomic weapons*

The laws pertaining to this subject are codified at title 42 U.S. Code, beginning with section 2014 and continuing with section 2181 (42 U.S.C. §§ 2014–181). The law specifically prohibits the granting of any patent for any invention or discovery for the utilization of special nuclear material or atomic energy in an atomic weapon; the law revokes any patent granted for such an invention or discovery. The prohibition extends even further to state that no patent granted shall confer any rights with respect to any invention or discovery insofar as it is used in the utilization of special nuclear material or atomic energy in an atomic weapon.

2.7 *National Aeronautics and Space Administration*

The property rights for inventions made under the aegis of the National Aeronautics and Space Administration (NASA) or in contracts issued by NASA are codified at 42 U.S.C. § 2457. Generally, inventions made in the performance of any work under a contract with NASA shall be the property of the United States. The provisions of 42 U.S.C. § 2457c extend beyond the obligation arising under contract with NASA to all patents that "have significant utility in the conduct of aeronautical and space activities subject to a patent applicant's positive action to dispute ownership by the United States." A right of appeal presents an opportunity to obtain a waiver of rights by NASA (42 U.S.C. § 2457f). Even if the agency waives its right of ownership in a given patent, the government will, nevertheless, retain or receive an irrevocable, nonexclusive, nontransferable, royalty-free license to practice the inventions of such patent on behalf of the United States or any foreign government pursuant to any treaty or agreement with the United States.

2.8 *IP and international trade*

The applicable law under the general heading of IP and international trade can be found at 19 U.S.C. § 1337 under "unfair practices in import trade." Such issues fall under the aegis of the International Trade Commission. The provisions under subsection (a), titled "Unlawful activities; covered industries; definitions," are self-explanatory and are reproduced in Box 1.

Moreover, 19 U.S.C. § 2242 requires the identification of countries that deny adequate protection or market access for IP rights before suitable action can be taken by the U.S. Trade Representative to counter, correct, or suspend the benefits afforded in trade and related activities to such a country. (The authorization for actions available to the Trade Representative can be found at 19 U.S.C. § 1526(c).)

2.9 *Small Business Innovation Development Act of 1982*

Codified at 15 U.S.C. § 631, et sequens, the Small Business Innovation Development Act (SBIR) was intended to strengthen the role of small, innovative firms in federally funded research and development and to utilize federal research and development as a base for technological innovation. An important feature of the SBIR is the directive for federal agencies to set aside a portion of each agency's funding for small business R&D. The Bayh-Dole Act allows small businesses to retain title to inventions made, in whole or in part, with federal funds. SBIR enhances the position of small business.

2.10 *Small Business Technology Transfer Program*

The Small Business Technology Transfer Program (STTR) (15 U.S.C. § 638) supplements the SBIR program. STTR requires a set-aside for applicable agencies to support cooperative research-and -development projects involving small businesses and a nonprofit research institutions. STTR provides the latter with the opportunity to call upon the funding federal agency for technical assistance. IP rights between the United States and the recipient small business are required to be set forth in the funding agreement, along with any right to carry out follow-on research.

Box 1: Unlawful activities; covered industries; definitions

(1) Subject to paragraph (2), the following are unlawful, and when found by the Commission to exist shall be dealt with, in addition to any other provision of law, as provided in this section:

(A) Unfair methods of competition and unfair acts in the importation of articles (other than articles provided for in subparagraphs (B), (C), (D), and (E) into the United States, or in the sale of such articles by the owner, importer, or consignee, the threat or effect of which is—

(i) To destroy or substantially injure an industry in the United States;

(ii) To prevent the establishment of such an industry; or

(iii) To restrain or monopolize trade and commerce in the United States.

(B) The importation into the United States, the sale for importation, or the sale within the United States after importation by the owner, importer, or consignee, of articles that—

(i) infringe a valid and enforceable United States patent or a valid and enforceable United States copyright registered under title 17, United States Code; or

(ii) are made, produced, processed, or mined under, or by means of, a process covered by the claims of a valid and enforceable United States patent.

(C) The importation into the United States, the sale for importation, or the sale within the United States after importation by the owner, importer, or consignee, of articles that infringe a valid and enforceable United States Trademark registered under the Trademark Act of 1946.

(D) The importation into the United States, the sale for importation, or the sale within the United States after importation by the owner, importer, or consignee, of a semiconductor chip product in a manner that constitutes infringement of a mask work registered under chapter 9 of title 17, United States Code.

(E) The importation into the United States, the sale for importation, or the sale within the United States after importation by the owner, importer, or consigner, of an article that constitutes infringement of the exclusive rights in a design protected under chapter 13 of title 17, United States Code.

(2) Subparagraphs (B),(C), and (D) of paragraph (1) apply only if an industry in the United States, relating to the articles protected by the patent, copyright, Trademark, mask work, or design concerned, exists or is in the process of being established.

(3) For purposes of paragraph (2), an industry in the United States shall be considered to exist if there is in the United States, with respect to the articles protected by the patent, copyright, Trademark, mask work, or design concerned—

(A) significant investment in plant and equipment;

(B) significant employment of labor or capital; or

(C) substantial investment in its exploitation, including engineering, research and development, or licensing.

(4) For the purposes of this section, the phrase "owner, importer, or consignee" includes any agent of the owner, importer, or consignee.

3. CONCLUSIONS

This overview of the laws and regulations governing IP in the United States provides a general orientation to the goals and historical concerns of the legislation. As these goals and concerns change, so will the laws addressing IP rights. Moreover, issues surrounding IP rights are addressed in many pieces of legislation, including authorization bills for funding various federal agencies. The effects of the legislation may be temporary or permanent, another reason for understanding not just the statutes, but also the motivation and reasoning behind them. ■

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