University of Florida Journal of Law & Public Policy

Volume 11 | Issue 1

Article 5

1999

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Cuenot, Kevin (1999) "Perilous Potholes in the Path Toward patent Law Harmonization," *University of Florida Journal of Law & Public Policy*: Vol. 11: Iss. 1, Article 5. Available at: https://scholarship.law.ufl.edu/jlpp/vol11/iss1/5

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PERILOUS POTHOLES IN THE PATH TOWARD PATENT LAW HARMONIZATION

Kevin Cuenot*

| 1. | INTRC | DUCTION |
|------|--|--|
| II. | INTERNATIONAL PATENT HARMONIZATION EFFORTS | |
| | А. | The Paris Convention |
| | В. | The World Intellectual Property Organization 105 |
| | C. | The Patent Cooperation Treaty 106 |
| | D. | Fundamental Differences Between |
| | | Patent Law in Europe and the United States |
| III. | United States Patent Law | |
| | А. | Constitutional Authority of Patent Law |
| | B. | Origins of First-to-Invent |
| | C. | Prior User Rights 111 |
| | D. | Confidentiality of Patent Applications |
| IV. | EFFORTS TO UNIFY PATENT FILING SYSTEMS | |
| | A. | Past Unification Efforts of the WIPO 112 |
| | B. | Current Disposition of Unification Efforts |
| V. | Debate Over the Issues | |
| | Α. | First-to-File vs. First-to-Invent |
| | B. | Prior User Rights |
| | C. | Trade Secret Protection |
| VI. | Conc | lusion |

I. INTRODUCTION

"Intellectual property has one feature which distinguishes it from other areas of law; its purpose is not to regulate affairs between persons as with the laws of tangible property, tort, contract, competition, commercial and even criminal law, but to reward the creator and promote economic and technological progress." Since 1883, nations have tried to harmonize

^{*} This article is dedicated to Sheri and my family whose love and support have been appreciated more than they can ever know.

^{1.} GUY TRITTON, INTELLECTUAL PROPERTY IN EUROPE 1 (1996).

patent laws.² Although many areas of patent law have been harmonized on an international level, several major issues have yet to be reconciled.

Patent law harmonization is necessary for several reasons. First, in a time when nations are transforming from industrial based economies to information based economies, worldwide uniform protection of intellectual property deeply affects trade issues.³ Secondly, patent law harmonization would evenly spread the administrative burden and redundancy present in prosecuting international patent applications among participating nations. Consequently, uniform patent laws would reduce the cost of prosecuting an international patent.⁴

As mentioned earlier, significant strides toward patent harmonization have already taken place. For example, the term of patent protection has been largely unified to a twenty-year term from the date of filing.⁵ Still, there are major rifts between the United States patent system and European and Japanese patent systems. The major stumbling block preventing total patent law harmonization is the "first-to-file" debate.

The United States currently awards patent rights to the inventor or person who is the first to conceive of an invention. In fact, the United States is the only major economic power using a first-to-invent system of awarding patent rights.⁶ Europe and Japan both utilize a first-to-file system of awarding patent rights which awards patent rights to the first person to file a patent application, regardless of whether that person was the first person to conceive of the invention claimed.

4.

"The senior patent counsel of one of the world's major researched-based pharmaceutical companies estimates, for example, that it currently costs between \$750,000 and \$1,000,000 to obtain comprehensive worldwide patent protection for an important chemical compound, and that figure is growing at a rate of 10% each year." Gerald J. Mossinghoff & Vivian S. Ku, *World Patent System Circa 20XX, A.D.,* 38 IDEA 529, 530 (1998). An article in the *Patent Trademark and Copyright Journal* stated that "[h]armonization of patent law worldwide has been a prime goal of international intellectual property and trade negotiations for some time. Uniform procedures and standards would permit patent applicants to obtain foreign patent protection more quickly, more reliably, and at less cost, harmonization advocates argue."

47 PAT. TRADEMARK & COPYRIGHT J. (BNA) No. 1164, 285 (Jan. 27, 1994).

5. Agreement on Trade-Related Aspects of Intellectual Property Rights, Including Trade in Counterfeit Goods, Dec. 15, 1993, General Agreement on Tariffs and Trade-Multilateral Trade Negotiations (The Uruguay Round) #53, 33 I.L.M. 81 (1994) [hereinafter TRIPS].

6. See Kim Taylor, Note, Patent Harmonization Treaty Negotiations on Hold: The "First to File" Debate Continues, 20 J. CONTEMP. L. 521, 521 (1994).

^{2.} See id.

^{3.} Intellectual property as a component of the United States' exports grew from 9.9% in 1947 to 27.4% in 1986. R. MICHAEL GADBAW & TIMOTHY J. RICHARDS, INTELLECTUAL PROPERTY RIGHTS, GLOBAL CONSENSUS, GLOBAL CONFLICT? 4 (1988).

The first-to-file debate has effectively stifled efforts to harmonize international patent laws. However, as the world's leading economies transform from industrial to information based, patent harmonization takes on an even greater importance. Consequently, patent harmonization affects free trade and the ongoing globalization of national economies. Patents have emerged as the life's blood of our nation's technology companies which compete in a global economy.⁷ This Note will address the public policy issues and the economics involved with changing the United States patent system to a first-to-file system.

II. INTERNATIONAL PATENT HARMONIZATION EFFORTS

International patent harmonization has been partially brought about through the enactment of several treaties. In addition to international efforts, many nations have organized on a regional level. Under these regional agreements, patent recipients are awarded a bundle of rights that are enforceable in the respective member countries.⁸

A. The Paris Convention

Nations realized the need for international protection of intellectual property as early as 1873.⁹ Many inventors kept their inventions secret out

7.

One observer has estimated that worldwide sales of products made without authorization utilizing the intellectual property of others (piracy) amount to \$60 billion per year. Revenues lost by U.S. companies alone as a result of these activities have been estimated to be as much as \$25 billion per year. This represents approximately 15 percent of the U.S. trade deficit.

GADBAW, supra note 3, at 2-3.

8. Nations have been cooperating inter-governmentally with other nations in their respective regions and from trade groups. These trade groups grant bundles of intellectual property rights which are largely uniform throughout the region. Examples include the African Intellectual Property Organization (OAPI), the Subregional Integration Agreement of the ANDEAN Group Countries, the Eurasian Patent Organization, the European Patent Organization (EPO), and the African Regional Industrial Property Organization (ARIPO). See WORLD INTELLECTUAL PROPERTY ORGANIZATION, INTRODUCTION TO INTELLECTUAL PROPERTY THEORY AND PRACTICE 508-12, 395 (1997).

9. See World Intellectual Property Organization [hereinafter WIPO], General Information < http://www.wipo.org/eng/main.htm> (visited Mar. 24, 1999). "The need for international protection of intellectual property became evident when foreign exhibitors refused to attend the International Exhibition of Inventions in Vienna in 1873 because they were afraid their ideas would be 'stolen' and exploited commercially in other countries." *Id.*

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of fear that their ideas would be stolen or exploited.¹⁰ In response to the growing unrest, the Paris Convention for the Protection of Industrial Property¹¹ was entered into in 1883.¹² Initially, there were fourteen states that signed onto the Paris Convention, but as of June 30, 1998, there were 171 member nations.¹³

The Paris Convention is substantive in nature, and deals with the protection of industrial property rather than the procedures of obtaining international patent protection.¹⁴ Beginning with the first draft of the Paris Convention, and on through its many revisions, member states have continually tried to harmonize the protection awarded to the recipient of a patent.¹⁵

The Paris Convention serves several primary functions. First, nationals of member countries "must enjoy in other countries of the [Paris] Convention the same rights with regard to intellectual property as their own nationals."¹⁶ Second, applicants in member states may preserve the filing date of their national applications when filing internationally. This right of priority is contingent upon the applicant filing internationally no later than twelve months after the applicant's national filing.¹⁷ Lastly,

12. See TRITTON, supra note 1, at 35.

13. See WIPO, Contracting Parties to Treaties Administered by WIPO, http://www.wipo.org/eng/main.htm (visited Mar. 24, 1999).

14. See TRITTON, supra note 1, at 38.

15. The Paris Convention has been revised seven times since 1883. See WIPO, http://www.wipo.org/eng/main.htm (visited Mar. 24, 1999). Revisions occurred in 1900, 1911, 1925, 1934, 1958, 1967, and amended in 1979. See id.

16. TRITTON, supra note 1, at 36.

The Paris Convention provides that "[n]ationals of any country of the Union shall, as regards the protection of industrial property, enjoy in all the other countries of the Union the advantages that their respective laws now grant, or may hereafter grant, to nationals; all without prejudice to the rights specially provided for by this Convention. Consequently, they shall have the same protection as the latter, and the same legal remedy against any infringement of their rights, provided that the condition and formalities imposed upon nationals are complied with."

Paris Convention, supra note 11, art. 2, cl. 1.

17. See TRITTON, supra note 1, at 36.

The Paris Convention states that "[a]ny person who has duly filed an application

^{10.} See id.

^{11.} Paris Convention for the Protection of Industrial Property, July 14, 1967, 982 U.N.T.S. 369 (amended on Oct. 2, 1979) [hereinafter Paris Convention]. Industrial property is a term used largely in Europe and in international literature as a subset of intellectual property which includes inventions, trademarks, industrial designs, and appellations of origins. The other subset of intellectual property is copyright. *See* WIPO, <http://www.wipo.org/eng/main.htm> (visited Mar. 24, 1999).

members have the right to enact laws requiring compulsory licenses in response to patent abuses.¹⁸

B. The World Intellectual Property Organization

The Paris Convention set up an International Bureau to carry out administrative tasks.¹⁹ Shortly after the Paris Convention went into effect, the Berne Convention for the Protection of Literary and Artistic Works²⁰ was organized.²¹ The Berne Convention established another International Bureau to handle administrative tasks.²² In 1893, the two Bureaus merged into one organization called the United International Bureaux for the Protection of Intellectual Property, known as BIRPI.²³

BIRPI was the predecessor of the World Intellectual Property Organization (WIPO) which was established in 1970.²⁴ The WIPO's goal is the harmonization of national "intellectual property legislation and procedures."²⁵ The WIPO became an agency of the United Nations in 1974 and today administers twenty-one treaties including the Paris Convention.²⁶ The WIPO also administers the Patent Cooperation Treaty (PCT).²⁷

for a patent, or for the registration of a utility model, or of an industrial design, or of a trademark, in one of the countries of the Union, or his successor in title, shall enjoy, for the purpose of filing in the other countries, a right of priority during the periods hereinafter fixed."

Paris Convention, *supra* note 11, art. 4, § A, cl. 1. The Paris Convention further states that "[t]he periods of priority referred to above shall be twelve months for patents and utility models, and six months for industrial designs and trademarks." Paris Convention, *supra* note 11, art. 4, § c, cl. 1.

18. See TRITTON, supra note 1, at 36. The Paris Convention states that "[e]ach country of the Union shall have the right to take legislative measures providing for the grant of compulsory licenses to prevent the abuses which might result from the exercise of the exclusive rights conferred by the patent, for example, failure to work." Paris Convention, supra note 11, art. 5, § A, cl. 2.

19. See WIPO, General Information, http://www.wipo.org/eng/main.htm (visited Mar. 24, 1999).

20. The Berne Convention for the Protection of Literary and Artistic Works, Sept. 9, 1886, as revised at Paris July 24, 1971, 828 U.N.T.S. 221 [hereinafter the Berne Convention].

21. See WIPO, General Information http://www.wipo.org/eng/main.htm (visited Mar. 24, 1999).

24. See id.

25. Id. The WIPO also performs the following tasks: "provide services for international applications for industrial property rights, exchange intellectual property information, provide training and legal and technical assistance to developing and other countries, facilitate the resolution of private intellectual property disputes, and marshal information technology as a tool for storing, accessing, and using valuable intellectual property information." Id.

26. See id.

^{22.} See id.

^{23.} See id.

^{27.} Patent Cooperation Treaty, June 19, 1970, 1037 U.N.T.S. 213 [hereinafter PCT].

C. The Patent Cooperation Treaty

Whereas the Paris Convention dealt with substantive issues of patent protection, the Patent Cooperation Treaty (PCT) deals with procedures to obtain international patent protection.²⁸ The PCT, which went into effect on June 1, 1978,²⁹ represented a significant step toward simplifying international patent filing procedures and decreasing the economic burdens placed on inventors for filing patent applications in multiple countries.³⁰ Two parts of the PCT, Chapter I and Chapter II, deal primarily with filing.³¹ Under each chapter, applicants can delay filing in individual countries and also delay the expenses involved in filing in individual countries.

Under the PCT, an applicant begins by filing a single application in a receiving office such as the United States Patent and Trademark Office (USPTO).³² Filing in a receiving office commences Chapter I. The PCT enables an applicant to claim a priority date for the international application based on an earlier filed national application.³³ Under Chapter I of the PCT, the applicant receives a search report containing prior art references that could potentially prevent a patent from issuing on the claimed invention.³⁴ After eighteen months, the application is published.³⁵

31. See PCT, supra note 27.

32. See TRITTON, supra note 1, at 37. The PCT defines a receiving office as "the national Office or the intergovernmental organization with which the international application has been filed." PCT, supra note 27, at art. 2, cl. xv.

The PCT defines a national Office as "the government authority of a Contracting State entrusted with the granting of patents; references to a 'national Office' shall be construed as referring also to any intergovernmental authority which several States have entrusted with the task of granting regional patents, provided that at least one of those States is a Contracting State, and provided that the said States have authorized that authority to assume the obligations and exercise the powers which this Treaty and the Regulations provide for in respect of national Offices."

Id. art. 2, cl. xii.

33. See PCT, supra note 27, art. 8, § 1. The PCT provides that "[t]he international application may contain a declaration, as prescribed in the Regulations, claiming the priority of one or more earlier applications filed in or for any country party to the Paris Convention for the Protection of Intellectual Property." *Id.*

34. See PCT, supra note 27, art. 15. The PCT provides that "[t]he international search report shall be established within the prescribed time limit and in the prescribed form." *Id.* at art. 18, cl. 1. The PCT further provides that "[t]he objective of the international search is to discover relevant prior art. International search shall be made on the basis of the claims, with due regard to the

^{28.} See TRITTON, supra note 1, at 37.

^{29.} See id.

^{30.} See id.

Nineteen months after the national filing date, the applicant may choose to enter Chapter II of the PCT. If the applicant does not enter Chapter II, then the applicant must begin to file applications in individual countries or regions by the twentieth month. Choosing to enter Chapter II, however, gives the applicant an additional eleven months, for a total of thirty months, to claim a priority date for the international application. Under Chapter II of the PCT, the applicant also receives a patentability opinion called an International Preliminary Examination.³⁶

Stripped down to its essentials, the PCT enables an inventor to prosecute a single international patent application to obtain patent protection in multiple regions. As a result of the Paris Convention and the PCT, along with other regional treaties within Europe,³⁷ patent laws in Europe have been largely harmonized.³⁸

D. Fundamental Differences Between Patent Law in Europe and the United States

Though the PCT and the Paris Convention have moved member nations toward global patent law harmonization, differences still exist. The United States is the only major economic power with a patent prosecution system that utilizes the first-to-invent system as a method of granting patent

36. See PCT, supra note 27, art. 33.

Article 35 of the PCT provides in relevant part that "[t]he international preliminary examination report shall not contain any statement on the question whether the claimed invention is or seems to be patentable or unpatentable according to any national law. It shall state, subject to the provision of paragraph (3), in relation to each claim, whether the claim appears to satisfy the criteria of novelty, inventive step (non-obviousness), and industrial applicability, as defined for the purposes of the internation preliminary examination in Article 33(1) to (4)."

Id. art. 35, cl. 2; see also TRITTON, supra note 1, at 38, (providing a detailed explanation of the procedures for filing an international application under the PCT).

37. One of the most significant European treaties was the Treaty on European Union (TEU) which provided for the establishment of the European Union and called for "full economic and monetary union and the creation of a single currency by January 1, 1999." TRITTON, *supra* note 1, at 3. The TEU contains intellectual property provisions and as a result of the TEU and other conventions, patent laws in Europe have been mostly harmonized. See id. at 33.

38. See id.

description and the drawings (if any)." Id. art. 15, cl. 2-3.

^{35.} See PCT, supra note 27, art. 21, § 2, cl. a. The PCT provides that "[s]ubject to the exceptions provided for in sub-paragraph (b) and in Article 64(3), the international publication of the international application shall be effected promptly after the expiration of 18 months from the priority date of that application." Id.

rights.³⁹ Unlike the United States, patent rights in Europe accrue to the first person to file a patent application.⁴⁰ A necessary component of the first-to-file system is prior user rights.⁴¹ Prior user rights enable a prior user to continue to use his invention even though another person who was not the first to invent filed a patent application first.⁴² Prior user rights are meant to ensure fairness to one who was first to invent but not first to file.⁴³

Another difference between international patent law and United States patent law is the publication of patent applications in Europe after eighteen months from the patent's filing date.⁴⁴ The United States utilizes a patent prosecution system that operates in secrecy.⁴⁵ An applicant's file history is kept in confidence by the USPTO and remains unpublished until the issuance of the patent.⁴⁶

The main regions engaged in the debate over the first-to-file system, prior user rights, and the publication of patents debate are the United States, Japan, and the European Union.⁴⁷ This Note will focus on the European system as a generic international system and will compare it to United States patent law.

III. UNITED STATES PATENT LAW

A. Constitutional Authority of Patent Law

The United States Government's power to grant patents flows from the Constitution.⁴⁸ Specifically, the Constitution states that inventors will receive the exclusive rights to their respective discoveries.⁴⁹ Traditional

41. See Robert W. Pritchard, The Future Is Now – The Case for Patent Harmonization, 20 N.C.J. INT'L LAW & COM. REG. 291, 322 (1995). "A corollary to the first-to-file debate is the discussion about adoption of a form of prior user rights as a defense to patent infringement." Id.

43. See id. (discussion supporting the adoption of a first to file system and prior user rights).

44. See TRITTON, supra note 1, at 91.

45. See 35 U.S.C. § 122 (1999). 35 U.S.C. § 122 provides that "[a]pplication for patents shall be kept in confidence by the Patent and Trademark Office and no information concerning the same given without authority of the applicant or owner unless necessary to carry out the provisions of any Act of Congress or in such special circumstances as may be determined by the Commissioner." *Id.*

46. See id.

47. See 47 PAT. TRADEMARK & COPYRIGHT J. (BNA) No. 1164, 285 (Jan. 27, 1994). "[T]he U.S. Patent and Trademark Office has engaged in trilateral harmonization discussions with the Japanese and European Patent Offices." *Id.*

48. See U.S. CONST. art. I, § 8, cl. 8.

49. The Constitution provides that "[t]he Congress shall have power to . . . promote the

^{39.} See Kim Taylor, supra note 6, at 521.

^{40.} See TRITTON, supra note 1, at 79.

^{42.} See id.

interpretation of the Constitution has been that an inventor was the first person to conceive of an invention.⁵⁰ That notion has been solidified in United States patent law ever since.

In 1790, the Second Session of the First Congress enacted the Patent Act of 1790.⁵¹ Since its initial enactment, the Patent Act of 1790 has been revised about fifty times between 1790 and 1950. Congress, however, has never changed the novelty test, the utility test, or the first-to-invent requirements found in the 1793 draft of the Patent Act.

United States patent law is largely a function of public policy, where the United States Government rewards inventors of new, useful, and nonobvious inventions with a limited term to exclude others from making, using, or selling the invention set forth in the patent.⁵² This limited term allows inventors to recover resources invested in the development of an invention and possibly to turn a profit. In return for the grant of a patent to an inventor, public disclosure of the invention in the form of a patent application enriches the public knowledge and advances the relevant state of the art.

United States patent law also has been a function of utilitarian concepts. Patent law attempts to strike a balance between rewarding inventors and moving the state of the art forward. The granting of a patent is a quid pro quo. In return for an inventor disclosing his invention to the public for the advancement of the art, the public grants the inventor a right to exclude others from making, using, or selling the claimed invention for a limited term. This balance seeks to create an optimal creative environment which encourages inventors to disclose inventions rather than

Every patent shall contain a short title of the invention and a grant to the patentee, his heirs or assigns, of the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States or importing the invention into the United States, and, if the invention is a process, of the right to exclude others from using, offering for sale or selling throughout the United States, or importing into the United States, products made by that process, referring to the specification for the particulars thereof.

35 U.S.C. § 154(a)(1) (1999).

progress of Science and useful arts by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries." U.S. CONST. art. I, § 8, cl. 8.

^{50.} See Clark Thread Co. v. Willimantic Linen Co., 140 U.S. 481, 486 (1891). The U.S. Supreme Court noted that "[t]he law is that any person sued for infringement of an application for it may show in defence that the invention claimed was patented or described in some printed publication [not before the American patent was granted—nor before the American patent was filed, but] before the patentee's supposed invention or discovery thereof. *Id.*

^{51.} See Pritchard, supra note 41, at 293-94.

^{52.} IRAH H. DONNER, PATENT PROSECUTION, PRACTICE AND PROCEDURE BEFORE THE U.S. PATENT OFFICE 2 (1996). 35 U.S.C. § 154(a)(1) provides that

to keep new innovations secret.

Some aspects of natural law, however, do creep into the picture. The notion that the inventor, the person who actually conceives of an invention, should be rewarded rather than one who was merely first-to-file for a patent application is rooted in natural law. This notion is the source of the United States' long standing philosophy that the true inventor is the person who conceives of an invention, not the person who first files a patent application.

Significant changes and strides toward patent law harmonization have recently gone into effect as a result of the GATT Uruguay Round Agreement on Trade Related Aspects of Intellectual Property Rights, Including Trade in Counterfeited Goods (TRIPS).⁵³ For example, the Patent Act provided for a seventeen-year patent term beginning upon the issuance of the patent. However, Article 33 of the TRIPS agreement states that "[t]he term of protection available shall not end before the expiration of a period of twenty years counted from the filing date."⁵⁴ As a result of the TRIPS agreement, Congress amended 35 U.S.C. § 154(a)(2)⁵⁵ of the Patent Act to reflect a twenty-year term of patent protection. Patent applications filed after June 8, 1995 are subject to the new patent term.⁵⁶ This change has brought United States patent law closer to being in step with international standards.

B. Origins of First-to-Invent

United States patent law uses the first-to-invent system to award patent rights to an inventor. 35 U.S.C. § 102(g) states that one who was not the first-to-invent is not entitled to a patent.⁵⁷ The fact that a person filed a

35 U.S.C. § 102(g) provides that a person is not entitled to a patent if "before the applicant's invention thereof the invention was made in this country by another who had not abandoned, suppressed, or concealed it. In determining priority of invention there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other."

^{53.} See TRIPS, supra 5, at art. 33.

^{54.} See id.

^{55. 35} U.S.C. § 154(a)(2) provides in relevant part that: "[s]ubject to the payment of fees under this title, such grant shall be for a term beginning on the date on which the patent issues and ending 20 years from the date on which the application for the patent was filed in the United States \dots " 35 U.S.C. § 154(a)(2) (1999).

^{56.} See IRVING KAYTON, PATENT PRACTICE, Vol. 1, ch. 2, at 14 (6th ed. 1995).

^{57.} See 35 U.S.C. § 102(g)(1999).

patent application is irrelevant to the determination of inventorship.58

Supporters of the first-to-invent system argue that it is constitutionally mandated. Under this system, one who invents or conceives of a new, useful, and non-obvious invention is entitled to a patent.⁵⁹ Therefore, if one was the first-to-file, but another person conceived of the invention with due diligence, the first person to file would lose his or her right to the patent in an interference proceeding.⁶⁰

C. Prior User Rights

The second area of debate is prior user rights, which are considered essential to a first-to-file system.⁶¹ Under the first-to-file system, prior user rights enable the first party to invent to continue to use an invention in a limited context if another party is the first-to-file a patent application for the same invention.⁶² Thus, the inventor could continue to practice the invention without being liable as an infringer.⁶³ The United States does not

58. See id.

[a] patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

35 U.S.C. § 103 (1999).

60. See 35 U.S.C. § 103 (1999). 35 U.S.C. § 135 deals with interferences and section (a) provides that

"[w]henever an application is made for a patent which, in the opinion of the Commissioner, would interfere with any pending application, or with any unexpired patent, an interference may be declared and the Commissioner shall give notice of such declaration to the applicants, or applicant and patentee, as the case may be. The Board of Patent Appeals and Interferences shall determine questions of priority of the inventions and may determine questions of patentability."

35 U.S.C. § 135(a) (1994).

61. See Pritchard, supra note 41, at 322.

62. See id.

63. 35 U.S.C. § 271 details infringement of patents and states in relevant part that "[e]xcept as otherwise provided in this title..., whoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent therefor, infringes the patent." 35 U.S.C. § 271 (1996).

1999]

^{59.} See 35 U.S.C. § 101 (1999). 35 U.S.C. § 101 provides that "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title." *Id.* Furthermore, 35 U.S.C. § 103 provides in relevant part that

have any prior user rights because the current system is based on the firstto-invent.⁶⁴ A showing by one party that the first party to file was not the inventor of a device would prevent the first filer from obtaining a patent.

D. Confidentiality of Patent Applications

Presently, the USPTO keeps patent applications secret until issuance.⁶⁵ In order to bring the United States in line with the rest of the world, arguments have been made to publish applications within eighteen months of their United States filing date. This provision has not proved to be as controversial as others because of existing international filing requirements that applications be published after eighteen months of filing. Consequently if a United States patent holder pursues international patent protection through the PCT, then the application routinely would be published after eighteen months from the original United States priority filing date.

IV. EFFORTS TO UNIFY PATENT FILING SYSTEMS

A. Past Unification Efforts of the WIPO

In 1990, the WIPO completed a treaty draft for the harmonization of patent law.⁶⁶ The draft treaty provided four major areas of harmonization which were: "(1) an international 12-month grace period; (2) meaningful and fair protection based on patent claims including equivalents; (3) a prohibition of pre-grant oppositions; and (4) the ability to file applications initially in English and rely on the English-language originals when errors are found in the translations."⁶⁷ For the above changes to be implemented, the United States would have to adopt a first-to-file system.⁶⁸ However, in 1994 the United States announced that it would continue to use the first-to-invent system.⁶⁹ This announcement effectively silenced efforts toward patent harmonization.⁷⁰

^{64.} See 35 U.S.C. § 102(g) (1999).

^{65.} See 35 U.S.C. § 122 (1999).

^{66.} See Pritchard, supra note 41, at 299-300.

^{67.} Id. at 300 (quoting 44 PAT. TRADEMARK & COPYRIGHT J. (BNA) No. 1080, at 3, 3 (May 7, 1992)).

^{68.} See id. at 301.

^{69.} See id. at 302. "Commerce Secretary Ronald H. Brown announced Jan. 24 that the United States will maintain the U.S. first-to-invent patent system and will not seek to resume patent harmonization negotiations at this time." 47 PAT. TRADEMARK & COPYRIGHT J. (BNA) No. 1164, 285 (Jan. 7, 1994).

^{70.} See Pritchard, supra note 41, at 302.

113

B. Current Disposition of Unification Efforts

In spite of its commitment to the first-to-invent system, since 1994 the United States has taken some small steps toward patent harmonization. The U.S. has adopted a twenty-year patent term beginning on the filing date.⁷¹ Under TRIPS and NAFTA, this change was required and implemented in 35 U.S.C. § 154.⁷² As of yet, there still has been no resolution of the first-to-file debate.

Several pieces of legislation have been introduced in Congress to effect patent law harmonization. One such bill was Senate Bill 2605 which had provisions to add 35 U.S.C. § 106 which would have provided for a first-to-file system.⁷³ Additionally, Senate Bill 2605 also had provisions for prior user rights, deemed essential for fairness in a first-to-file patent system.⁷⁴ The prior user rights say that one is not an infringer who has commercially used, commercially sold, or previously made, in good faith, the invention that is the subject of an application.⁷⁵ However, the party may not transfer the prior user rights.⁷⁶ Senate Bill 2605 was not enacted.

More recently, House Bill 400, pending in 1998, contained provisions for many changes but excluded any attempt to convert to a first-to-file patent system.⁷⁷ The House Bill did have provisions for publication of

75. See S. 2605, 102d Cong. § 235 (1992). 35 U.S.C. 235 provided for prior user rights and stated, in relevant part, that

[a] person shall not be liable as an infringer under a patent granted to another with respect to any subject matter claimed in the patent that such person has, acting in good faith, commercially used or commercially sold in the United States, or has made effective and serious preparation therefor in the United States, before the filing date or priority date of the application for patent. The rights based on prior use under this section are personal and shall not be subject to assignment or transfer to any other person or person except in connection with the assignment or transfer of the entire business or enterprise to which the rights relate.

^{71.} See 35 U.S.C. § 154 (1999).

^{72.} See id.

^{73.} See S.2605, 102d Cong. § 106 (1992).

^{74.} See id. 35 U.S.C. § 106 would have put into place a first to file patent system. 35 U.S.C. § 106 stated that "[a]n applicant shall be entitled to a patent unless . . . the subject matter is described in an application for patent of another applicant that has been previously filed in the United States and has been opened to public inspection under section 122. . . . " *Id.* Provisions for publishing patent applications after 18 months of the application date were provided for in section 122. See *id.*

S. 2605, 102d Cong. § 235.

^{76.} See id.

^{77.} See H.R. 400, 105th Cong. (1998).

[Vol. 11

patent applications after eighteen months of the filing date.⁷⁸ House Bill 400 also provided for limited prior user rights. The prior user rights set out under House Bill 400 protected prior domestic commercial or domestic use of an invention.⁷⁹

V. DEBATE OVER THE ISSUES

A. First-to-File vs. First-to-Invent

The first-to-invent system favors both the independent inventor and universities. These groups argue that a first-to-file system would favor large corporations who can afford to file many applications as opposed to the small inventor who cannot afford to file an application for every invention conceived, but would be entitled to a patent because of his or her first-to-invent status.

A first-to-invent system, which rewards the inventor that conceives of an invention, also serves an economic function. The patent system is designed as a means of quid pro quo. The inventor discloses his invention to advance the state of the art and in return, the inventor is rewarded with a limited time in which he can exclude others from making, using or selling the invention.⁸⁰ Rewarding one who was first-to-invent encourages inventors to make a more adequate disclosure. By eliminating the "race" to the patent office that is an inherent part of a first-to-file system, an inventor can make sure that his idea is fully developed prior to applying for a patent. Consequently, the public is more fully enriched with an

Each application for patent, except applications for design patents filed under Chapter 16 of this title and provisional applications filed under section 111(b) of this title, shall be published, in accordance with procedures determined by the director, promptly after the expiration of a period of 18 months from the earliest filing date for which a benefit is sought under this title.

H.R. 400 § 202.

79. See H.R. 400, § 302. H.R. 400 § 302(b)(1) provides, in relevant part, that

[a] person shall not be liable as an infringer under section 271 of this title with respect to any subject matter that would infringe one or more claims in the patent being asserted against such person, if such person had, acting in good faith, commercially used the subject matter before the effective filing date of such patent.

H.R. 400 § 302(b)(1).

80. See 35 U.S.C. § 154(a)(1) (1999).

^{78.} See H.R. 400 § 202. H.R. 400 § 202 would have amended 35 U.S.C. § 122, as follows:

adequate disclosure rather than an incomplete disclosure, brought about because the inventor rushed to procure patent rights under a first-to-file system.

Many argue that a first-to-invent system needlessly complicates patent prosecution and administration.⁸¹ Where two persons file for a patent for the same invention within the same time frame, a proceeding called an interference is triggered.⁸² An interference is an adversarial proceeding within the USPTO and serves to determine which party is entitled to ownership of the claimed subject matter.⁸³ Supporters of a first-to-file system point out that the interference proceeding needlessly adds to the expense of obtaining a patent and complicates administration of the system.⁸⁴ Supporters further point out that because of the relatively few interference proceedings that occur each year, and the frequent outcome that the first-to-file traditionally wins such a proceeding, the amount of inventors that would be prejudiced by a first-to-file system would be negligible.⁸⁵ First-to-file patent system supporters also argue that the burden for an inventor to prove prior reduction to practice or conception in an interference proceeding is burdensome.⁸⁶

However, these arguments may not be entirely accurate. First, although interference proceedings would not be needed to determine who is awarded patent rights because of the ease of administering a first-to-file system, interferences may become commonplace in determining the scope of prior user rights.

For example, if a prior user rights statute allows a university to continue to practice an invention with a showing of prior conception, then the same burden that fell on the university in an interference proceeding under a first-to-invent patent system still falls on the university in a firstto-file patent system. The only difference being that the interference will establish prior user rights rather than inventorship. The same argument can

84. See Pritchard supra note 41, at 313.

86. Id.

^{81.} See Pritchard, supra note 41, at 313.

^{82.} See 35 U.S.C. § 135 (1999). "When two or more inventors claim the same invention in different patent applications or patents, an interference is declared to determine inventorship and ownership of the subject matter claimed therein." DONNER, supra note 52, at 81.

^{83.} See DONNER, supra note 52, at 81. "In this situation, each inventor or inventorship entity claims that it is entitled to priority over the other to be the only entity awarded the patent grant. To show prior invention, one inventor must show reduction to practice of the invention before the other inventor, or conception before the other inventor followed by reasonable diligence in reducing the invention to practice." *Id.*

^{85.} See 44 PAT. TRADEMARK & COPYRIGHT J. No. 1080, at 3(May 7, 1992) (stating that "[0]f the 130 thousand patents filed each year, only 300 result in interferences...."). With such a small percentage of patent filings resulting in interferences, the first to invent system does not seem to overburden the USPTO.

be made for individual inventors.

Additionally, in order to allow universities to claim prior user rights, any proposed statute must not base the award of prior user rights on a sale, but on prior conception. Because most universities exploit their discoveries and patents through licensing, prior user rights should be based on a showing of prior conception, and not on a commercial transaction.

An even more problematic caveat of prior user rights is the prohibition on any transfer of prior user rights to third parties. The prior user rights must remain with the first to conceive of the invention. This restriction further disables a university's ability to capitalize on its discoveries. Specifically, patent protection is costly and most universities have limited resources. As is the case in any business, the choice to pursue patent protection for a given technology is a significant business decision. Further magnifying the significance of this decision is the fact that universities typically profit from patent portfolios through the licensing of third parties. Because prior user rights cannot be transferred to third parties, a university which is first-to-invent, but not first-to-file, is unlikely to engage in a prior user rights interference. The prior user rights interference is an added cost lacking any real economic return. Although a university may be credited with a discovery, unlike other commercial enterprises, a university is not in a position to go into business or production to derive value from prior user rights. In such a situation, the university is crippled from capitalizing on its discovery and is left without adequate recourse.

Still another problem exists with the first-to-file system. A common expression among college professors is "publish or perish." There is tremendous pressure on faculty to publish discoveries. Currently, one may publish one's findings and still file for a patent within twelve months of the initial public disclosure without being barred by 35 U.S.C. § 102. Under a first-to-file system, professors would be caught between publishing results and winning a race to the patent office. The European first-to-file patent system does not have a one year grace period for publication of one's own discoveries. Should an inventor publish findings prior to filing a patent application, then that inventor's own publication would be prior art and prevent the grant of a patent. Until this discrepancy between United States patent law and European patent law is harmonized, professors will be faced with the dilemma of losing foreign patent rights for the sake of publishing, or keeping a discovery secret in the hopes that the university will find the funds from their limited budget to prosecute a patent application.

B. Prior User Rights

As discussed above, the interference proceeding would determine prior user rights. An argument can be made that much of the cost of obtaining a patent using a first-to-file system would really just shift to the area of prior user rights. Instead of having interference proceedings to determine which party is entitled to a patent, the interference proceeding would determine which party is entitled to prior user rights.

Consequently, the small inventor would still be in the same position as before. If a small inventor had developed and secretly used an invention prior to a large corporation that filed for a patent, the independent inventor would still have to institute a prior user rights interference proceeding. The interference would still be a costly endeavor and present the same evidentiary problems as an interference proceeding to determine the firstto-invent. The larger problem is that in a prior user rights interference, winning means only limited, non-transferable rights for an inventor. The prospect of limited rights diminishes the incentive to engage in a prior user rights interference proceeding, especially if the independent inventor never intended to make or to use the invention, but was hoping only to license the technology.

Similarly, universities often do not actually exploit patents themselves. Universities do not go into the business of manufacturing to exploit a patent, but rather try to license the technology to outside industry. Paying costly filing fees is not always a realistic option for a university if a technology is questionable or a market is not yet developed. Prior user rights mean little to a university if that institution cannot transfer those rights to a third party.

Factions in favor of prior user rights argue that the use of a provisional patent application remedies any problems inherent in a first-to-file system.⁸⁷ By filing a provisional application, which is essentially a complete patent application without the claims, an independent inventor can lock in a filing date at a low cost.⁸⁸ By later filing a complete patent

Id.

88. See 35 U.S.C. § 111(b) which deals with provisional applications and provides, in

^{87.} See Pritchard, supra note 41, at 321.

Small inventors are concerned that they will be forced to apply for a patent before the invention is fully developed out of fear that a third party inventor will file an application on the same invention . . . A provisional application filing would enable the inventor to obtain an early filing date at little cost. This simple, lowcost system of establishing priority is superior to the current means of establishing priority-the complex, expensive, and inefficient interference practice.

application and referencing the earlier filed provisional application, the inventor maintains the original filing date of the provisional application.⁸⁹

Supporters often overlook that claiming the provisional filing date with the later non-provisional application only works for matter disclosed within the original provisional application. Consequently, the time it takes an attorney to draft a provisional application is no less than the time it takes to draft the non-provisional. The patent attorney must still spend time with the inventor and fully understand the discovery to be patented. In fact, to ensure that the disclosure adequately supports the claims of an application, patent attorneys often draft the claims of a non-provisional application prior to the disclosure. Even in filing a provisional application, a patent attorney may draft a set of hypothetical claims to be certain that a later filed non-provisional can claim the priority date of the provisional for all that will later be filed.⁹⁰ As a result, only the filing fee of the provisional is smaller than the non-provisional patent application.⁹¹ The

relevant part, that

[a] provisional application for patent shall be made or authorized to be made by the inventor, except as otherwise provided in this title, in writing to the Commissioner. Such application shall include... a specification as prescribed by the first paragraph of section 112 of this title; and ..., a drawing as prescribed by section 113 of this title A claim, as required by the second through fifth paragraphs of section 112, shall not be required in a provisional application.

35 U.S.C. § 111(b) (1999).

89. See 35 U.S.C. § 119(e)(1) (1999) providing that

[a]n application for patent filed under section 111(a) or section 363 of this title for an invention disclosed in the manner provided by the first paragraph of section 112 of this title in a provisional application filed under section 111(b) of this title, by an inventor or inventors named in the provisional application, shall have the same effect, as to such invention, as though filed on the date of the provisional application filed under section 111(b) of this title, if the application for patent filed under section 111(a) or section 363 of this title is filed not later than 12 months after the date on which the provisional application was filed and if it contains or is amended to contain a specific reference to the provisional application.

35 U.S.C. § 119(e)(1) (1994).

90. Any new matter contained in a subsequently filed non-provisional application claiming priority to a previously filed provisional application would not be entitled to the earlier filing date of the provisional. See 35 U.S.C. § 119(e) (1999). No amendments are allowed with regard to provisional applications. See 37 C.F.R. § 1.53(b) (1997). Therefore, new matter would only be permitted during the filing of the non-provisional application and accorded the filing date of the non-provisional application rather than the priority date of the provisional application. See 37 C.F.R. § 1.53(b)(2) (1997).

91. See 35 U.S.C. § 41 (1999) (setting the applicable patent filing fees at \$760 to file each application for an original patent, and \$150 to file each provisional application for an original

attorney's fees, which constitute the bulk of the cost of filing the initial application, are not substantially decreased. Therefore, the provisional is not the solution to the cost problems inherent within the first-to-file system.

C. Trade Secret Protection

Trade secret protection may also suffer under a first-to-file system. Under a first-to-file patent system, if a prior user wishes to establish prior user rights to guard from being an infringer, the party must establish prior invention under an interference proceeding. By protecting the right to continue to use the trade secret through an interference, the prior user can at best only hope to gain prior user rights. The prior user is still faced with competition from a party that has now acquired patent protection. Patent protection enables the owner of the patent to gain significant market control over the technology. Additionally, the patent owner may license the technology as well as exploit the technology himself. Again, similar to situations described above regarding universities, the acquisition of prior user rights does not include the right to license third parties. Although the prior user may still use the invention, the restriction on licensing or transferring prior user rights to third parties diminishes the prior user's rights, and therefore, the value of the prior user's intellectual property. As one gains prior user status, the intellectual property that was once freely transferable is transformed into restricted property under the first-to-file system.

VI. CONCLUSION

Although in the long-term patent law harmonization is extremely desirable, many issues still need to be resolved. Among them is an equitable way to lighten the burdens on small private inventors and universities. A carefully thought out system of prior user rights that would not prevent universities from licensing technology must first be developed. When equitable solutions are reached, patent law should be harmonized, but not before meaningful solutions are reached. Harmonization with the goal of saving time and money in international patent prosecution ultimately would serve to decrease the rights of small inventors and universities.

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