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Essay: Adoption of a First — to — File Patent System: A Proposal

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ESSAY

ADOPTION OF A FIRST-TO-FILE PATENT SYSTEM: A PROPOSAL

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I. INTRODUCTION

Global trade opportunities continue to broaden as technological innovation diminishes the distance between nations. Intellectual property law, particularly patent law, increasingly plays a fundamental role in advancing the global economy. Because of the important role of patent law in global trade, there has been a worldwide movement to harmonize patent laws for the purpose of establishing uniform and valid international patent protection.

Patent law harmonization would significantly affect the patent laws of the United States. When two or more inventors in the United States wish to obtain a patent on the same invention, the United States Patent and Trademark Office (PTO) awards the patent to the person who is the first inventor, regardless of who actually files a patent application first.[1] This system of determining priority of invention is known as the "first-to-invent" system and has been used by the PTO for over 150 years.[2] Nearly every other country in the world utilizes a "first-to-file" patent system, which establishes priority of invention on the basis of the earliest effective filing date of a patent application. Effective global patent harmonization would require the United States to change from its current first-to-invent patent system to the universally accepted first-to-file patent system.

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1. *See* 35 U.S.C. §§ 101, 102(g) (1988) (setting out what constitutes patentable inventions and how priority of invention is determined when more than one inventor seeks a patent for an invention).
2. *See* Patent Act of 1836, ch. 357, sec. 6, 5 Stat. 117, 119 (1836) (formally establishing patent statutes that award patents on basis of priority of invention).

Multilateral negotiation efforts have failed to achieve meaningful global harmonization of patent laws. Although the recent negotiations on the North American Free Trade Agreement (NAFTA)[3] and the General Agreement on Tariffs and Trade (GATT)[4] successfully included agreements on several intellectual property law issues, these agreements failed to address the United States' potential adoption of a first-to-file patent system. The proposed Patent Harmonization Treaty prepared by the World Intellectual Property Organization (WIPO)[5] specifically mandates the universal adoption of a first-to-file patent system; however, in 1993 the Clinton administration postponed treaty negotiations indefinitely.[6] Furthermore, with the 1994 announcement from the Secretary of Commerce that the United States would maintain its first-to-invent patent system,[7] the possibility of meaningful patent harmonization in the near future is slight.

This article examines the basic principles behind patent law harmonization and proposes that harmonization, particularly the adoption of a first-to-file system, is in the best interests of the United States. This article first examines the history of the patent system, specifically the first-to-invent system, in this country. Part III discusses the major impediments to global patent law harmonization and analyzes recent international attempts at harmonizing patent laws. Part IV discusses the most important reasons for implementing a first-to-file patent system. Finally, this article concludes that for the United States to be a part of any meaningful patent harmonization treaty, it must abandon its first-to-invent system and adopt the first-to-file system.

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3. On December 8, 1993, President Clinton signed the North American Free Trade Agreement Implementation Act, and the treaty took effect on January 1, 1994. *See* North American Free Trade Agreement, Dec. 8, 1993, U.S.-Can.-Mex., 32 I.L.M. 289 (1993) [hereinafter NAFTA].
4. General Agreement on Tariffs and Trade, *opened for signature* Oct. 30, 1947, 61 Stat. A3, 55 U.N.T.S. 187 [hereinafter GATT]. On December 8, 1994, President Clinton signed GATT, and it took effect on Jan. 1, 1995. *See* 140 CONG. REC. D1274 (daily ed. Dec. 8, 1994).
5. *See WIPO Experts Make Progress on Patent Harmonization Draft*, 41 PAT. TRADEMARK & COPYRIGHT J. (BNA) 231 (1991) [hereinafter *WIPO Experts Make Progress*].
6. *See Patent Law Harmonization Hearings Scheduled, Comments Sought*, 46 PAT. TRADEMARK & COPYRIGHT J. (BNA) 370, 371 (1993) [hereinafter *Harmonization Hearings Scheduled*].
7. *See U.S. Says "Not Now" on First-to-File and Agrees with Japan on Patent Term*, 47 PAT. TRADEMARK & COPYRIGHT J. (BNA) 150 (1994) [hereinafter *U.S. Says "Not Now"*].

II. PATENT LAW IN THE UNITED STATES

A. *Some Aspects of Intellectual Property*

Intellectual property law pertains generally to the property rights of intangible forms of property in the industrial, scientific, literary, and artistic fields. Traditionally, intellectual property has been divided into the three areas of patents, trademarks, and copyrights.[8] Intellectual property has been defined in the WIPO Convention which states:

> 'Intellectual property' shall include the rights relating to: - literary, artistic and scientific works - performances of performing artists, photographs and broadcasts, - inventions in all fields of human endeavor, - scientific discoveries, - industrial designs, - trademarks, service marks, and commercial names and designations, - protection against unfair competition and all other rights resulting from intellectual activity in the industrial, scientific, literary or artistic fields.[9]

The labeling of these rights as intellectual property rights is based on the intellectual property doctrine, which grew out of natural law concepts.[10] This doctrine was developed in the 17th and 18th centuries by philosophers and legal scholars who believed that an inventor or author was intrinsically entitled to the property rights of his intellectual creations.[11] Subsequently, in the development of national legal systems, legal concepts have prevailed in which the natural law idea of intellectual property was complemented or modified.[12]

Intellectual property also has the unusual characteristic of not being depleted by use. This elusive characteristic has made it susceptible to taking by others. It is the prevention of this taking which has led to national laws for the procurement and protection of intellectual property rights. To justify this protection, special theories have developed in addition to the intellectual property doctrine, in

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8. *See generally* WILLIAM H. FRANCIS ET AL., PATENT LAW (4th ed. 1995).
9. Convention Establishing the World Intellectual Property Organization, *opened for signature* July 14, 1967, 21 U.S.T. 1749, 828 U.N.T.S. 3 [hereinafter WIPO Convention]. The WIPO Convention was amended on October 2, 1979, and entered into force on June 1, 1984.
10. *See* 14 EUGEN ULMER, COPYRIGHT AND INDUSTRIAL PROPERTY 4 (1987).
11. *See id.*
12. *See id.*

particular, the theories of reward, incentive, and disclosure.[13] The granting of intellectual property rights, particularly patent rights, accomplishes three important objectives: (1) it *rewards* the inventor for the skill and labor exerted in conceiving and perfecting the invention; (2) it encourages invention through the expectation of profit and creates *incentives* for business to invest capital in research and development; and (3) it promotes the *disclosure* of the creation which, in turn, enhances the general public knowledge.[14]

B. History of Patent Law in the United States

Early in the development of patent systems, it came to be recognized that two or more persons could independently invent the same thing. Since granting patent rights to each independent inventor would defeat the very purpose of a patent — the grant of a limited term exclusive right — some mechanism had to be developed to determine which inventor in such circumstance would be given the right to the patent.

American colonists recognized the importance of rewarding innovation soon after settling in the New World. The General Court of Massachusetts adopted a law of monopolies for that Colony in 1641: "[t]here shall be no monopolies granted or allowed among us, but of such new inventions as are profitable to the country, and that for a short time."[15] Later in the same year, the General Court granted the first patent to Samuel Winslow for his invention of a method of manufacturing salt.[16] After the Revolutionary War, Charles Pinckney and James Madison submitted proposals to the Constitutional Convention for the protection of inventors and authors.[17] The result was Article I, Section 8, Clause 8 of the United States Constitution which gave Congress the 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."[18]

In the second session of the First Congress, Congress utilized

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13. *See* FRANCIS, *supra* note 8, at 73.
14. *See id.*
15. ROBERT A. COATE ET AL., CASES AND MATERIALS OF PATENT LAW 68 (3d ed. 1987).
16. *See id.* at 69.
17. *See id.*
18. U.S. CONST. art. I, § 8, cl. 8. This Clause grants legislative power to Congress in the areas of copyright and patent law.

this power to enact the Patent Act of 1790.[19] The Act enabled the Patent Office to grant a patent to anyone who complied with the mandates of the Act and stated that only the "first and true inventor or discoverer" could receive a patent for a particular invention.[20] The courts at that time determined that the "first and true inventor or discoverer" was the first person to "reduce to practice" the invention.[21] Although the Act attempted to define how the inventor was to be determined, it came into being with no provision concerning how priority of invention should be established.[22] In 1793, a new patent act established the "prior inventorship" defense to infringement.[23] As a result, if the defendant could prove that the patentee was not truly the first person to create the invention, the patentee would lose the patent, and the defendant would not be liable for infringement.

It is only with the enactment of the Patent Act of 1836[24] that the United States can truly be said to have established a first-to-invent patent system. For the first time, this Act required an applicant to sign an oath or affirmation that he "does verily believe that he is the original and first inventor."[25] The Act finally provided a system by which the PTO could determine priority of invention. It ultimately established the basis for the present United States patent system and, although revised, its character remains fundamentally unchanged.

C. *Modern Concept of First-to-Invent*

It is clear that the Constitution grants Congress the power to award patents to the "inventor" of an invention. It is also clear that the inventor does not need to actually manufacture the invention as

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19. Patent Act of 1790, ch. 7, 1 Stat. 109 (1790) (repealed 1793).
20. *See id.* §§ 5-6.
21. Robert W. Pritchard, *The Future Is Now - The Case for Patent Harmonization*, 20 N.C. J. INT'L L. & COM. REG. 291, 294 (1995) (citing George E. Frost, *The 1967 Patent Law Debate - First-to-Invent vs. First-to-File*, 1967 DUKE L.J. 923, 932 (1967)). Reduction to practice may be either actual or constructive. Generally, actual reduction is the first construction of the tangible means or way of carrying out the new idea and any testing or operation needed to demonstrate that such means or way is effective. *See* FRANCIS, *supra* note 8, at 117. Constructive reduction is the filing of a patent application disclosing the new idea and the means or way of carrying it out. *See id.*
22. *See* Patent Act of 1790, ch. 7, 1 Stat. 109 (1790) (repealed 1793).
23. *See* Patent Act of 1793, ch. 11, 1 Stat. 318 (1793) (repealed 1836).
24. Patent Act of 1836, ch. 357, 5 Stat. 117 (1836).
25. *See id.*

of the time of filing the patent application; a constructive reduction to practice is adequate to establish a date of invention. The remaining issue, then, is how the patent system should determine who the "first and true inventor" is in situations where two or more persons independently conceive an invention and actually or constructively reduce it to practice around the same time period.

A statutory definition now enables one to determine the first inventor. In 1952, Congress rewrote the whole patent law, codifying portions of the common law, revising past statutory law, and creating new law.[26] The new section 102(g) describes the considerations to be examined in determining priority of invention.[27] This section codified the legal concepts of conception,[28] reduction to practice,[29] diligence,[30] and abandonment, suppression, and concealment.[31] Therefore, in order to establish priority of invention, the "interfering" parties[32] need to show the dates of conception and reduction to practice, the quantity of diligence, and any indications of abandonment, suppression, or concealment. The result of section 102(g) is that, in the United States, a party who is second to file may establish priority by showing the earliest date of invention. The general rule as to priority of invention is that priority goes to the inventor

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26. *See* Patent Act of 1952, 35 U.S.C. §§ 1-376 (1997).

27. *See* 35 U.S.C. § 102(g) (1988). This section states that:

> A person shall be entitled to a patent unless -
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> . . . .
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> (g) 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.
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> *Id.*

28. *See* FRANCIS, *supra* note 8, at 117. In general, conception is the mental activity of inventing or the creation or discovery of the new idea and a specific tangible means or way of carrying out the new idea. *See id.*

29. *See supra* note 21.

30. *See* FRANCIS, *supra* note 8, at 117. Diligence is reasonable effort of an inventor in trying to reduce the conception of an invention to practice. *See id.*

31. Congress included these concepts to recognize that one who hides an invention from the public is not entitled to receive patent protection. *See* Pritchard, *supra* note 21, at 297 n.54.

32. When an application for a patent would interfere with any other pending application, the Commissioner of Patents may declare an "interference." *See* 35 U.S.C. § 135(a) (1988). The Board of Patent Appeals and Interferences then determines any questions of priority of the inventions.

who first reduced an embodiment of the invention to practice.[33] This rule is subject to two exceptions: (1) the inventor who was the first to conceive the subject matter, but the last to reduce to practice, will prevail if that inventor exercised reasonable diligence in reducing the invention to practice from a time just prior to when the first person to reduce to practice conceived the subject matter; and (2) the second inventor to reduce the invention to practice will prevail if the first inventor abandoned, suppressed, or concealed the invention.[34]

It is not always a simple process to ascertain the priority of invention in the United States; difficulties may arise due to the uncertainties inherent in the process. For example, the exact dates of conception and reduction to practice may be troublesome to determine, even with detailed records.[35] Furthermore, the amount of diligence each party exercised in reducing their conceived invention to practice is a subjective determination that lies with the trier of fact.[36] Moreover, the quantity of abandonment, suppression, or concealment sufficient to deprive an inventor of patent rights is also subjective and is not statutorily defined.[37] Despite these potential difficulties with determining the first and true inventor, the United States continues to award patents to the first to invent.

D. First-to-File System

In contrast with the United States, nearly every other country in the world utilizes a first-to-file system of priority.[38] Only Jordan and the Philippines are currently utilizing a first-to-invent system.[39] Canada had formerly used a first-to-invent system but converted to a first-to-file system in 1989.[40]

The first-to-file patent system establishes priority of invention on the basis of the first effective filing date of a patent application

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33. *See* Pritchard, *supra* note 21, at 298.
34. *See id.*
35. *See id.*
36. *See id.*
37. *See id.*
38. *See* Vito J. DeBari, *International Harmonization of Patent Law: A Proposed Solution to the United States' First-to-File Debate*, 16 FORDHAM INT'L L.J. 687, 691 (1993) (citing THE ADVISORY COMMISSION ON PATENT LAW REFORM, A REPORT TO THE SECRETARY OF COMMERCE, at 43 n.2 (1992)).
39. *See id.*
40. *See* Canadian Patent Act of Nov. 19, 1987, R.S.C. ch. P-4 (1988).

disclosing and claiming an invention.[41] Obviously, under a first-to-file system, the most important date is the filing date of the patent application. The date of filing determines the right of priority of the patent. Because courts normally do not have to turn to any prior dates of conception to decide priority, this system has been globally utilized, primarily based upon its ease of administration.[42]

III. PATENT HARMONIZATION

A. *The Need for Global Patent Law Harmonization*

The flow of international trade is ever increasing in the world, with intellectual property comprising an ever increasing percentage of such trade.[43] For example, as of 1991, it has been estimated that approximately twenty-five percent of the United States exports involve some form of intellectual property.[44] The international impact of patents is increasing for three primary reasons: (1) commerce in intellectual property has become an even greater component of trade between nations; (2) world commerce has become more interdependent, thus establishing a need for international cooperation; and (3) piracy of intellectual property is increasing, particularly in the Third World, and underscores the increasing conflicts of the rights of intellectual property owners in the developed world with the economic goals of the developing world.[45] However, as world trade increases and multinational corporations grow, obtaining uniform patent protection which extends beyond national borders has become increasingly difficult.[46] This need for uniform and valid international patent protection is the primary impetus in the quest for patent law harmonization.[47]

Patent harmonization could be a means of reducing the costs associated with international patent protection for all nations. Developing nations often look for a "free ride," seeking to build their economies not by encouraging the innovation and creativity of their own people through strong protection for all forms of intellectual

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41. *See* Matthew P. Donohue, *First-to-File vs. First-to-Invent: Will Universities be Left Behind?*, 21 J.C. & U.L. 765, 769 (1995).
42. *See id.*
43. *See Register Oman's Address to the Atlanta Meeting of the Patent, Trademark and Copyright Section of the ABA*, 42 PAT. TRADEMARK & COPYRIGHT J. (BNA) 427 (1991).
44. *See id.*
45. *See* Anthony D. Sabatelli, *Impediments to Global Patent Law Harmonization*, 22 N. KY. L. REV. 579, 585 (1995).
46. *See id.*
47. *See id.*

property, but by promoting intellectual property piracy through weak laws or no protection at all.[48] Developing nations could benefit from a commitment to patent harmonization insofar as it would encourage other nations to trade high technology goods with their countries and foster the scientific and technological progress necessary to achieve industrialization.[49]

Multinational corporations and those involved in international trade and technology transfers could certainly benefit from the certainty and stability of effective patent harmonization. In the absence of harmonization, the problems of infringement and enforcement could cause serious impediments to international trade and technology transfers. Furthermore, the increase in the percentage of international trade related to the advancements in electronics, computers, and genetic engineering reinforces the need that these relatively new technology areas be adequately and uniformly protected on an international scale.[50]

It is recognized that intellectual property rights are critically important in preserving or regaining the competitive edge of a wide range of United States exports.[51] In the United States, strong international patent protection will encourage inventors to expand their markets globally and will reduce the substantial costs associated with obtaining such protection and enforcing against its infringement.[52] The United States system of patent protection, however, differs significantly from those of other countries throughout the world. Consequently, this difference may impede the United States' participation in patent law harmonization.

B. Impediments to Global Patent Law Harmonization

The crux of the current movement towards patent law harmonization is the recognition that the existing fragmented system of

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48. *See* Bruce A. Lehman, *Intellectual Property Under the Clinton Administration*, 27 GEO. WASH. J. INT'L L. & ECON. 395 (1993). This attitude is demonstrated in two basic ways. First, developing countries frequently have inadequate legal mechanisms to protect intellectual property. Second, some countries fail to enforce existing laws adequately. *See id.*

49. *See* Karen M. Curesky, *International Patent Harmonization Through W.I.P.O.: An Analysis of the U.S. Proposal to Adopt a "First-to-File" Patent System*, 21 LAW & POL'Y INT'L BUS. 289 (1989).

50. *See* Faryan A. Afifi, *Unifying International Patent Protection: The World Intellectual Property Organization Must Coordinate Regional Patent Systems*, 15 LOY. L.A. INT'L & COMP. L.J. 453, 466 (1993).

51. *See* Sabatelli, *supra* note 45, at 590.

52. *See* DeBari, *supra* note 38, at 687.

national patent laws and patent offices creates barriers for international trade. The idea of one inventor filing one patent application in one patent office is utopian due to many impediments. The three most important are: (1) the reluctance of national governments to give up their current systems which allow them to use their patent laws to favor domestic entrepreneurs; (2) the relinquishment of a portion of national sovereignty for the sake of a global system; and (3) the reconciliation of the different national interests of the developing countries and the developed countries.[53] Thus, one of the principal difficulties in dealing with patent harmonization issues is that harmonization is an international issue, while the underlying patent itself is the creation of a national entity.

The territorial limitation of patent law, therefore, is due to the fact that the patent is based upon a state grant whose legal effects do not extend beyond the national borders.[54] A patent is defined as a "grant of some privilege, property, or authority, made by the *government or sovereign of a country* to one or more individuals."[55] Thus, the circle of persons who can claim patent right protection within a national territory is determined by national legislation. National legislation primarily protects the patent rights of its own citizens.[56]

There are important policy reasons for a government to provide patent protection to its citizens. In the absence of intervention by a governmental entity, it would be difficult for an individual to practice an invention and to maintain rights to that invention without its unauthorized use by others, unless the invention is something that is difficult to "reverse-engineer" and copy.[57] The purpose of patent protection is to serve the interests of society and to advance technology development by encouraging risk taking with the goal of innovation and investment.[58] Therefore, it is important for the governmental entity to provide protection to encourage innovation and investment. However, such patent protection rights have generally stopped at national borders.

The reason for this limitation of rights stems from the conflict between the national patent rights and international trade issues.

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53. *See* J.C. Rasser, *Foreword* to Sabatelli, *supra* note 45, at 579-80; *see also supra* notes 48-49 and accompanying text.

54. *See* ULMER, *supra* note 10, at 5.

55. BLACK'S LAW DICTIONARY 1125 (6th ed. 1990) (emphasis added).

56. *See* ULMER, *supra* note 10, at 7.

57. *See* Sabatelli, *supra* note 45, at 583.

58. *See id.*

On the national level, there is a conflict between the rights of inventors to their inventions versus the public interest of promoting technological and economic development.[59] On the international level, there are the conflicts which arise from the competing interests which the national entity has in providing national patent protection versus the interests of the international community in unrestricted trade and technology transfers.[60] The need for global patent harmonization is underscored by this inherent conflict of the national entity versus the international community and the conflicting and inconsistent web of national patent laws currently in existence. Furthermore, the existence of separate, unharmonized national patent systems leads to duplicative and wasteful efforts in patent procurement on an international scale.[61]

C. International Attempts at Patent Law Harmonization

The demand for worldwide protection of patent rights is not satisfied by the fact that the privilege acquired in the country of origin is also recognized in other countries.[62] The securance of protection of patent rights beyond the borders of the country of origin is rather the task of international conventions and treaties.[63] International conventions have expanded the group of persons protected. Principally, they accord the persons nominated in the conventions protection on the basis of national treatment.[64] Despite these attempts to achieve international patent harmonization, complete unification has not been accomplished, primarily because of the differences in legal systems and economic and social foundations.

1. Paris Convention for the Protection of Industrial Property

The foundation of international patent law is the International Convention for the Protection of Industrial Property.[65] It is the oldest international treaty dealing with intellectual property. The treaty was drafted in 1880, ratified in 1883, and became effective in 1884. The treaty has gone through six revisions, the last being revised in

59. *See id.* at 584.
60. *See id.*
61. *See* Afifi, *supra* note 50, at 455.
62. *See* ULMER, *supra* note 10, at 5.
63. *See id.*
64. *See id.* at 7-8.
65. Paris Convention for the Protection of Industrial Property, *opened for signature* Mar. 20, 1883, 25 Stat. 1372, 161 Consol. T.S. 409.

Stockholm in 1967.[66] The fields of industrial property covered by this treaty include not only patents, but also trademarks, trade names, industrial designs, unfair competition, and other areas of industrial property.[67] As of April 1992, a total of 108 countries were signatories to the Paris Convention.[68]

The Paris Convention is based on the principles of national treatment, right of priority, and uniform rules of *convention minima*.[69] National treatment is an agreement to reciprocity, such that each member state is required to grant the same protection to the nationals of other member states as it affords to its own citizens.[70] In other words, under this treaty a country cannot provide preferential treatment under its intellectual property laws to its own citizens at the expense of non-citizens. The right of priority provides that an applicant for a patent who files in any signatory nation has a grace period of one year in which to file in any other member nation and claim priority to the initial filing date.[71] As for *convention minima*, the Paris Convention is rather rudimentary and does not establish any meaningful standards.[72]

The principal problem with the Paris Convention is that it leaves its implementation up to the discretion of each individual signatory nation rather than incorporating uniform implementation provisions. Under the Paris Convention, each country remains free to adopt its own patent granting procedures and substantive patent

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66. The treaty was revised on: December 14, 1900, International Union for the Protection of Industrial Property, *opened for signature* Dec. 14, 1900, 32 Stat. 1936, 189 Consol. T.S. 134; June 2, 1911, Convention for the Protection of Industrial Property, *opened for signature* June 2, 1911, 38 Stat. 1645, 213 Consol. T.S. 405; November 6, 1925, Convention for the Protection of Industrial Property, *opened for signature* Nov. 6, 1925, 100 Stat. 1789; June 2, 1934, Convention for the Protection of Industrial Property, *opened for signature* June 2, 1934, 53 Stat. 1748; October 31, 1958, Convention for the Protection of Industrial Property, *opened for signature* Oct. 31, 1958, 13 U.S.T. 1; and July 14, 1967, Convention for the Protection of Industrial Property, *opened for signature* July 14, 1967, 21 U.S.T. 1583, 828 U.N.T.S. 305 [hereinafter Paris Convention].

67. *See* Paris Convention, *supra* note 66, arts. 4-10, 21 U.S.T. at 1586-1600, 828 U.N.T.S. at 312-38.

68. *See* Sabatelli, *supra* note 45, at 591.

69. *See id.*

70. *See* Paris Convention, *supra* note 66, arts. 2-3, 21 U.S.T. at 1585-86, 828 U.N.T.S. at 312.

71. *See id.* art. 4, 21 U.S.T. at 1586, 828 U.N.T.S. at 313.

72. *See* Sabatelli, *supra* note 45, at 592.

laws.[73] In effect, the Paris Convention leaves great discretion to national legislators in determining how to protect industrial property rights.[74] However, despite its major deficiency, the Paris Convention was, and still is, a significant attempt toward establishing worldwide standards for intellectual property. The Paris Convention is also important insofar as it gave rise to WIPO.

2. World Intellectual Property Organization

WIPO was established by a convention signed in Stockholm on July 14, 1967.[75] The WIPO Convention established the governmental structure of the organization. Membership is open to any country that is a member of any of the treaties administered by WIPO or to any country that is a member of the United Nations.[76] A total of 139 countries are members of WIPO.[77]

The United Nations created WIPO for the purpose of worldwide promotion of patents, copyrights, trademarks, and other intellectual property rights.[78] The WIPO Committee of Experts on the Harmonization of Certain Provisions in Laws for the Protection of Inventions convened a series of meetings in 1985 in Geneva to discuss worldwide patent harmonization.[79] The Committee completed a draft treaty of basic proposals in 1990.[80] A diplomatic conference met for the first time in 1991 to complete the final harmonization treaty.[81] The final session of the diplomatic conference was originally scheduled for July 1993, but the Clinton administration postponed it indefinitely.[82] The United States justified the delay on the need to select a new commissioner of the PTO and the need to formulate a clear position on patent harmonization.[83]

The WIPO draft treaty for patent law harmonization contains two dozen articles; however, the most significant difference between the WIPO Basic Proposal and current United States law is found in

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73. *See* Afifi, *supra* note 50, at 457.
74. *See* Sabatelli, *supra* note 45, at 593.
75. *See generally* WIPO Convention, *supra* note 9.
76. *See id.* art. 5, 21 U.S.T. at 1754, 828 U.N.T.S. at 12.
77. *See id.* supp. 64, at 1-4 (Aug. 1991).
78. *See generally* WIPO Convention, *supra* note 9.
79. *See generally WIPO Experts Make Progress*, *supra* note 5.
80. *See generally id.*
81. *See generally Harmonization Hearings Scheduled*, *supra* note 6.
82. *See generally id.*
83. *See generally id.*

section 2 of article 9, which mandates that the "invention shall belong to the applicant with the earliest priority date."[84] This proposal would change the United States patent system from a first-to-invent into a first-to-file system, and would bring United States laws into conformity with the rest of the industrialized world. However, the possibility of harmonization ended on January 24, 1994, with the announcement that the United States would maintain its first-to-invent system.[85] This announcement closed almost a decade of negotiations at WIPO and ended the possibility of meaningful international patent harmonization in the near future.

3. General Agreement on Tariffs and Trade

GATT is an international commercial treaty signed on October 30, 1947 in Geneva, Switzerland.[86] It was initially conceived as a mechanism for removing unnecessary technical obstacles to trade, initiating large-scale negotiations to reduce tariffs, and for agreeing on a code of conduct to help eliminate discriminatory practices in international trade.[87] At its inception, the treaty was intended to provide a temporary means for implementing tariff concessions and regulating international trade until a permanent international trade organization could be established.[88] This international trade body, the World Trade Organization (WTO), finally came into force on January 1, 1995.[89]

The focus of GATT has been expanded from removing tariff obstacles to international trade to removing non-tariff barriers, including the abolition of restrictive and unharmonized intellectual property laws worldwide.[90] The eighth negotiation round of the GATT, also known as the Uruguay Round, began in September, 1986, and concluded on December 15, 1993.[91] The Uruguay Round

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84. Basic Proposal for Patent Harmonization, art. 9, *reprinted in WIPO Experts Make Progress*, *supra* note 5, at 232. The "earliest priority date" is the filing date of the original completed application. *See id.*

85. *See generally U.S. Says "Not Now,"* *supra* note 7.

86. *See generally* GATT, *supra* note 4.

87. *See* Hanz P. Kunz-Hallstein, *The United States Proposal for a GATT Agreement on Intellectual Property and the Paris Convention for the Protection of Industrial Property*, 22 VAND. J. TRANSNAT'L L. 265, 268 (1989).

88. *See id.*

89. *See PTO Holds Public Hearing on 18-month Publication of Patent Applications*, 49 PAT. TRADEMARK & COPYRIGHT J. (BNA) 492-94 (1995).

90. *See* Kunz-Hallstein, *supra* note 87.

91. *See* Sabatelli, *supra* note 45, at 602. The Uruguay Round was launched at the GATT Ministerial Meeting in Punta del Este, Uruguay on September 12, 1986.

differs from previous negotiation rounds in that it covers intellectual property. The Trade Related Aspects of Intellectual Property Rights (TRIPs) part of GATT establishes comprehensive standards for protecting intellectual property and enforcing intellectual property rights.[92] Although it seeks to establish minimum standards of patent protection and enforcement worldwide, implementation and enforcement are ultimately left up to each national entity.[93]

One of the changes imposed by TRIPs on United States patent law pertains to the treatment of inventive activity.[94] Article 27 of TRIPs requires that patents be available "without discrimination as to the place of invention."[95] To avoid such discrimination, the United States must now allow foreign acts of invention to be used in establishing dates of invention in interference proceedings.[96] Another change pertinent to the first-to-file debate is the establishment of provisional patent applications.[97] The provisional applications are given a cursory review by the PTO to ensure that formal statutory requirements have been met, and then the PTO assigns a filing date.[98] The applicant has twelve months after the filing of the provisional application to file a complete application.[99] Under the provisional application scheme, applicants are entitled to claim priority for the subject matter disclosed in the complete application back to the filing date of the provisional application.[100] Although none of the changes specifically require the United States to convert to a first-to-file system, GATT, like the proposed WIPO treaty, represents an important incremental step toward patent law harmonization.

4. North American Free Trade Agreement

The recently signed NAFTA treaty, like the GATT treaty, is primarily a trade related agreement containing intellectual property

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See id.

92. *See* Lauren A. Degnan, *Does U.S. Patent Law Comply with TRIPS Articles 3 and 27 with Respect to the Treatment of Inventive Activity?*, 78 J. PAT. & TRADEMARK OFF. SOC'Y 108 (1996).

93. *See id.*

94. *See id.*

95. *Uruguay Round of GATT Talks are Concluded with IP Provisions*, 47 PAT. TRADEMARK & COPYRIGHT J. (BNA) 170, 171 (1993).

96. *See* Degnan, *supra* note 92, at 111.

97. *See id.* at 108.

98. *See* Charles E. Van Horn, *Effects of GATT and NAFTA on PTO Practice*, 77 J. PAT. & TRADEMARK OFF. SOC'Y 231, 235 (1995).

99. *See id.*

100. *See id.*

provisions to decrease non-tariff barriers to trade.[101] Like the TRIPs agreement in GATT, NAFTA lacks a specific first-to-file provision.[102] NAFTA, however, only affects the United States, Canada, and Mexico, whereas GATT encompasses many nations.

The NAFTA legislation amends United States patent law to allow an applicant to claim a date of invention by reference to knowledge or use of the invention in Canada or Mexico.[103] Formerly under United States law, only inventive acts occurring within the United States could be considered in a patent application. This change satisfies the requirement in NAFTA of uniform treatment between the United States, Canada, and Mexico regarding intellectual property rights.[104]

Enactment of this provision, as with the similar provision in GATT, elicits concern because of the first-to-invent priority system used by the United States. The concern is that in actual practice the new provision, combined with first-to-file, will place the United States inventors at a disadvantage if the date of invention is contested.[105] Although GATT and NAFTA managed to harmonize some of the issues presented in international patent law, these treaties left unresolved the most controversial issue in patent harmonization, the failure of the United States to adopt a first-to-file system.

D. Patent Law Harmonization Under the Clinton Administration

The Clinton Administration, while emphasizing world trade in such treaties as GATT and NAFTA, has not placed a high priority on patent law harmonization. In April 1992, President Clinton announced the nomination of Bruce Lehman to serve as Assistant Secretary of Commerce and Commissioner of Patents and Trademarks.[106] While progress was made by the PTO in some areas of patent law, the move toward a first-to-file system abruptly ended when Commerce Secretary Ron Brown issued a statement that the United States would not pursue first-to-file.[107] He claimed that small inventors and entrepreneurs would not benefit by the change, and

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101. *See generally* NAFTA, *supra* note 3.

102. *See generally id.*

103. *See* Kim Taylor, *Patent Harmonization Treaty Negotiations on Hold: The "First-to-File" Debate Continues*, 20 J. CONTEMP. L. 521, 540 (1994).

104. *See id.*

105. *See id.*

106. *See Senate Panel Holds Hearing on Nomination of Lehman to Head PTO*, 46 PAT. TRADEMARK & COPYRIGHT J. (BNA) 269 (1993).

107. *See generally U.S. Says "Not Now," supra* note 7.

that the first-to-invent framework has served America well in the past.[108] The decision by Commerce Secretary Brown is significant because the PTO is an agency of the Commerce Department and, consequently, bound by the decision.[109] While Congress could theoretically pass first-to-file legislation despite the decision not to pursue first-to-file, it is unlikely this would occur because changes in patent law typically come from the PTO or the Commerce Secretary, not from the United States Congress.[110]

Speculation exists that the decision not to pursue first-to-file was based upon a concern in the Clinton Administration about upsetting a significant constituency, the small inventor and the entrepreneur, and that proposing a change would be politically detrimental.[111] Regardless of the reason, the decision not to pursue first-to-file signified the lack of priority given to patent law harmonization by the Clinton Administration.

IV. THE ADVANTAGES OF FIRST-TO-FILE

A. *Superior Nature of the First-to-File System*

The first-to-file system offers a fast, predictable, and cost-effective means to determine patent priority. Initially, the first-to-invent system places a difficult burden on United States inventors. Interference proceedings require investigating the date of conception, the date of the reduction to practice, and whether the first to conceive acted diligently in reducing the invention to practice.[112] This often involves searching through countless notebooks and other records, thus dramatically increasing the cost of litigation.[113] A first-to-file system would greatly decrease the complexity, length, and expenses usually associated with these interference proceedings.[114] Importantly, small entities are particularly vulnerable in interference proceedings, not only because of the enormous costs involved, but because many do not have the resources or a sophisticated understanding of patent law to keep the records necessary to prove their date of invention.[115] A first-to-file system would

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108. *See generally id.*
109. *See* Pritchard, *supra* note 21, at 310 n.161.
110. *See id.*
111. *See U.S. Says "Not Now," supra* note 7.
112. *See supra* notes 28-34 and accompanying text.
113. *See* Donohue, *supra* note 41, at 776.
114. *See* DeBari, *supra* note 38, at 707.
115. *See id.*

eliminate this cost and complexity by substituting a fair, simple, and inexpensive means by which priority of invention would be easily determined on the basis of the filing date of the patent application.[116] This readily available means of establishing priority of invention would end the uncertainty and unpredictability associated with interferences and would provide greater reliability for United States patents.

B. Small Number of Cases Will Be Affected by Adoption of First-to-File

Most United States inventors with global commercial interests are currently operating on a first-to-file system, so a change to that system would not have a substantial effect on their business. Since the rest of the world grants patents to the first person to file a patent application, United States inventors with foreign interests, who are already bound to a first-to-file system, would not be adversely impacted.[117] Also, more than 99.9% of the patent applications that are currently filed in the United States raise no dispute as to the identity of the inventor.[118] With regard to inventors losing priority of invention to other inventors, these statistics show that there would be no significant difference as a result of changing to first-to-file. Moreover, when a dispute does arise as to the identity of the first inventor, statistics also show that the party who filed first prevailed in a significant majority of the interference proceedings.[119] This outcome comes from the difficult burden of proof that the party who filed second must meet in order to prove conception, diligence, and reduction to practice.[120]

C. GATT and NAFTA Provisions Compel Conversion

The adoption of GATT and NAFTA requires the United States to recognize foreign use in interference proceedings, a practice that will complicate the proceedings and burden the small entity inventor.[121] The adoption of a first-to-file system would avoid this problem. Now that GATT and NAFTA are both law in the United States, the United States inventor will be better served by the simple and efficient first-to-file system because interference proceedings, already

116. *See id.*
117. *See* Pritchard, *supra* note 21, at 314.
118. *See* DeBari, *supra* note 38, at 707 (citing THE ADVISORY COMMISSION ON PATENT LAW REFORM, A REPORT TO THE SECRETARY OF COMMERCE 3, 44 (1992)).
119. *See id.*
120. *See id.* at 707.
121. *See supra* notes 94-96, 103-05 and accompanying text.

a complicated and expensive drain in the resources of United States innovators, will become even more difficult, more costly, and less successful than in the past.[122] It is apparent that the United States places a high priority on world trade as emphasized by the adoption of GATT and NAFTA. The United States should place an equally high priority on international patent law harmonization and adopt a first-to-file system.

D. International Concessions Provide Harmonization Incentive

Adoption of a first-to-file system will place the United States in a better position to participate in the proposed WIPO Harmonization Treaty. If the United States were to give up the first-to-invent system in favor of a first-to-file, it could demand reform in other countries to the benefit of United States inventors, both large and small entities.[123] The WIPO Harmonization Treaty contains several articles consistent with United States patent law and favorable to the United States inventor.[124] Adoption of a first-to-file system will enable the United States to pressure other nations into adopting those provisions and attain needed improvements in their patent systems. Consequently, the global harmonization will enable the United States inventor to expand the scope and zone of patent protection around the world.

E. Provisional Applications Will Protect Small Entities

A major concern in adopting the first-to-file system is that it would hurt independent inventors and small companies because of their limited available resources to file a patent application with the PTO promptly.[125] It is argued that small entities would be at a disadvantage because unlike large, well-financed corporations, they may need time to develop and prove to potential investors that their inventions are worth financing the application costs.[126] The provisional application system should allay the concern of the small inventors that they will lose the race to the PTO in a first-to-file system.

Provisional applications provide a simple and relatively inexpensive method of establishing an early priority date.[127] Their minimum

122. *See* Pritchard, *supra* note 21, at 317.
123. *See id.*
124. *See id.*
125. *See* DeBari, *supra* note 38, at 711.
126. *See id.*
127. *See id.*

requirements allow most inventors to file the application themselves, or with minimal assistance, and thus make the PTO more accessible.[128] They give applicants an additional year before the start of the twenty year patent term while establishing both the date of invention for disputes with foreign countries and the inventor as the first inventor of a disputed invention in an interference proceeding.[129] Also, by deferring the examination by the PTO for one year, provisional applications allow the applicant more time to garner additional funding.[130] Thus, the procedure is actually more advantageous than the current first-to-invent system with respect to the problem of attracting necessary financing.

F. First-to-File Encourages Innovation and Public Disclosure

Encouraging inventors to file sooner would accelerate the innovation process and promote early public disclosure of inventions.[131] The objective of the United States patent system, as set forth in the Constitution, is to "promote the progress of science and useful arts."[132] This objective is accomplished by granting to inventors limited monopolies in exchange for full and complete disclosure of their inventions, thus advancing the state of the art and giving the public a chance to use the invention.[133]

Under the current first-to-invent system, a first inventor who fails to develop and disclose the invention promptly can be granted a patent over a later independent inventor who is prepared to develop, manufacture, and market the invention immediately.[134] The first-to-file system, unlike the first-to-invent, would reward an inventor for initiating the process of bringing the invention into the public domain by promptly filing a patent application. This, in turn, is consistent with the ultimate goal of patent law by protecting the inventor who promotes the progress of the useful arts.

V. CONCLUSION

Technological innovation brings the world closer together everyday. This economic proximity increases the opportunity for international trade. The United States has demonstrated its willingness

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128. *See* Van Horn, *supra* note 98, at 235.
129. *See id.* at 236.
130. *See id.*
131. *See* DeBari, *supra* note 38, at 708.
132. U.S. CONST. art. I, § 8, cl. 8.
133. *See generally* FRANCIS, *supra* note 8.
134. *See supra* notes 28-34 and accompanying text.

to seize this opportunity by participating in agreements like GATT and NAFTA. Because intellectual property law, particularly patent law, increasingly plays a fundamental role in international trade, it would seem likely that the United States would also share a willingness to participate in patent law harmonization efforts. However, the United States continues to impede the possibility of uniform and valid patent protection by failing to adopt a first-to-file system of patent priority.

By pulling out of the WIPO negotiations, the United States has shown that it does not want to proceed with the most significant change in United States patent law in 150 years without being absolutely sure that harmonization is in the best interests of investors, consumers, and the country. Recent developments in the United States, and the fact that the rest of the world utilizes a first-to-file system, indicate that the adoption is in the United States' best interests.

The first-to-file system provides a fast, predictable, and cost-effective way of determining patent priority. Scholars have noted that only a very small percentage of inventors will be affected by the change.[135] Furthermore, the adoption of GATT and NAFTA requires the United States to convert to avoid complicated and expensive interference proceedings. In addition, the United States could demand much needed international reform in return for its concession. Moreover, the recent adoption of provisional applications protects small entity inventors by enabling them to obtain an early filing date at little cost. Finally, encouraging inventors to file patent applications accelerates innovation and promotes public disclosure. This, in turn, promotes the "progress of science and useful arts."

135. *See supra* notes 117-20 and accompanying text.