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# The Future is Now - The Case for Patent Harmonization

## **Cover Page Footnote**

International Law; Commercial Law; Law

# The Future Is Now—The Case for Patent Harmonization

Robert W. Pritchard†

## I. Introduction

On January 24, 1994, U.S. Commerce Secretary Ronald H. Brown ended any possibility of achieving meaningful patent harmonization<sup>1</sup> in the near future. In a short statement, he said that while “other international negotiations continue, [the United States] will maintain our first-to-invent system, while keeping open the option of full patent harmonization in the future.”<sup>2</sup> These words effectively ended almost ten years of efforts to harmonize U.S. patent law with the rest of the world.<sup>3</sup> The decision to maintain the isolationist first-to-invent system may placate some university researchers and independent inventors for a short while,<sup>4</sup> but it may ultimately be disastrous for a nation that must depend on international cooperation for future long-term growth. Secretary Brown stated that patent harmonization remains a possibility at some undefined point “in the future.”<sup>5</sup> For the good of American inventors and the nation as a whole, however, the future is now.

This Article examines the basic principles behind patent harmonization and demonstrates why harmonization is in the best interests of the United States. This Article first examines the history of the patent system in this country.<sup>6</sup> Part II discusses the most significant developments in the patent harmonization debate that have occurred in the past decade: (1) the discussions of the World Intellectual Property Or-

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† B.S. 1992, University of Notre Dame; J.D. expected 1995, University of Dayton School of Law. An earlier draft of this Article was awarded the Biebel & French Patent Law Writing Award. The author gratefully acknowledges the invaluable assistance of Michael Robert Haemmerle in the preparation of this Article.

<sup>1</sup> “Patent harmonization” is a phrase used to describe the standardization of patent laws throughout the world. Currently, the patent laws of each nation are different, and it is therefore difficult to gain patent protection in every country. Efforts to “harmonize” U.S. patent laws with a worldwide proposal have been underway for several years. See *infra* notes 49-70 and accompanying text.

<sup>2</sup> Teresa Riordan, *The Patent Office Takes a Stand on International Patent Policy, But It's Confusing to Many*, N.Y. TIMES, Feb. 7, 1994, at D2.

<sup>3</sup> See *infra* notes 158-61 and accompanying text.

<sup>4</sup> Riordan, *supra* note 2, at D2.

<sup>5</sup> *Id.*

<sup>6</sup> See *infra* notes 15-61 and accompanying text.

ganization (WIPO);<sup>7</sup> (2) the unenacted 1992 Patent System Harmonization Act;<sup>8</sup> and (3) the recently proposed Patent Term and Publication Reform Act of 1994.<sup>9</sup> Part III of this Article contains an analysis of four essential aspects of patent harmonization: (1) the first-to-file system;<sup>10</sup> (2) prior user rights;<sup>11</sup> (3) early publication;<sup>12</sup> and (4) a twenty-year patent term beginning on the date of filing.<sup>13</sup> This Article concludes that the United States should adopt each of these four proposals, either unilaterally or with other nations as part of a complete harmonization package.<sup>14</sup>

## II. The History of Patent Law and the Failure of First-to-File in America

Before undertaking a comprehensive analysis of the benefits of patent harmonization, it is important to establish an analytical framework. This section examines the history of the patent system in the United States. Next, this section discusses the proposals for harmonization developed by the World Intellectual Property Organization. This background also examines the 1992 Patent System Harmonization Act and the Patent Term and Publication Reform Act of 1994. Each section contains a description of the development, status, and discussion concerning proposals for first-to-file, prior user rights, early patent application disclosure, and a twenty-year patent term. A brief examination of the history of the patent laws of the United States and the developments in the past two years reveals that while the United States is likely to implement early patent disclosure and a twenty-year patent term soon, first-to-file and prior user rights have virtually no possibility of being adopted in the foreseeable future. As a result, meaningful patent harmonization is not possible.

### A. *The History of U.S. Patent Law*

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: "There 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."<sup>15</sup> Later in that same year, the General Court granted the first patent to Samuel Winslow for his invention of a method of manu-

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<sup>7</sup> See *infra* notes 62-83 and accompanying text.

<sup>8</sup> See *infra* notes 84-115 and accompanying text.

<sup>9</sup> See *infra* notes 162-72 and accompanying text.

<sup>10</sup> See *infra* notes 175-250 and accompanying text.

<sup>11</sup> See *infra* notes 251-64 and accompanying text.

<sup>12</sup> See *infra* notes 265-75 and accompanying text.

<sup>13</sup> See *infra* notes 276-82 and accompanying text.

<sup>14</sup> See *infra* part IV.

<sup>15</sup> ROBERT A. CHOATE ET AL., CASES AND MATERIALS ON PATENT LAW 68 (3d ed. 1987).

facturing salt.<sup>16</sup> After the Revolutionary War, James Madison and Charles Pinckney submitted proposals to the Constitutional Convention for the protection of inventors and authors.<sup>17</sup> The result was Article I, Section 8, Clause 8 of the U.S. 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."<sup>18</sup> James Madison, in the *Federalist Papers*, commented that the "utility of this power will scarcely be questioned. The copyright of authors has been solemnly adjudged in Great Britain, to be a right at common law. The right to useful inventions seems with equal reason to belong to the inventors."<sup>19</sup> In the United States,

[t]he granting of a patent privilege at once accomplishes three important objects: it rewards the inventor for his skill and labor in conceiving and perfecting his invention; it stimulates him, as well as others, to still further efforts in the same or different fields; it secures to the public an immediate knowledge of the character and scope of the invention, and an unrestricted right to use it after the patent has expired.<sup>20</sup>

The founders of the United States of America clearly appreciated the significance of a strong patent system to promote the progress of the useful arts. As the American patent system developed in both the Congress and the courts, the debate over how to best achieve the progress of the useful arts grew.

The Constitution grants Congress the power to enact legislation to promote the progress of useful arts.<sup>21</sup> Within the limitations of this grant,<sup>22</sup> Congress may choose the policy which, in its judgment, satisfies this constitutional objective.<sup>23</sup> Congress may establish conditions, specifications, and requirements for receiving a patent.<sup>24</sup> In the sec-

<sup>16</sup> *Id.* at 69.

<sup>17</sup> *Id.*

<sup>18</sup> U.S. CONST. art. I, § 8, cl. 8. This Clause grants legislative power to the Congress in the areas of both copyright and patent law. See H.R. REP. NO. 1923, 82d Cong., 2d Sess. 4 (1952). The copyright power emanates from the power to "promote the Progress of Science . . . by securing for limited Times to Authors . . . the exclusive Right to their respective Writings." *Id.* (quoting U.S. CONST. art. I, § 8, cl. 8). The patent power arises from the power to "promote the Progress of . . . useful Arts, by securing for limited Times to . . . Inventors the exclusive Right to their respective . . . Discoveries." *Id.* (quoting U.S. CONST. art. I, § 8, cl. 8).

<sup>19</sup> THE FEDERALIST NO. 43, at 297 (James Madison) (Henry B. Dawson ed., 1865).

<sup>20</sup> 1 WILLIAM C. ROBINSON, THE LAW OF PATENTS FOR USEFUL INVENTIONS § 33, at 52 (1890).

<sup>21</sup> See *supra* note 18 and accompanying text.

<sup>22</sup> The limitations are those enunciated in the Constitution: the laws must be for the purpose of promoting the progress of useful arts, the grant must be limited, the grant must be to the inventor, and the grant must be limited to the scope of the discovery. See *supra* text accompanying note 18.

<sup>23</sup> See *Gibbons v. Ogden*, 22 U.S. (9 Wheat.) 1, 197 (1824) (interpreting constitutional grants of power broadly to permit congressional action based not upon limitations of the courts, but upon the "wisdom and the discretion of Congress" so long as such action does not violate the Constitution).

<sup>24</sup> See *McClurg v. Kingsland*, 42 U.S. (1 How.) 202, 206 (1843) ("[T]he powers of Con-

ond session of the First Congress, Congress utilized this power to enact the Patent Act of 1790.<sup>25</sup> 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.<sup>26</sup> The courts at that time determined that the "first and true inventor or discoverer" is the first person to "reduce to practice" the invention.<sup>27</sup> In *Clark Thread Co. v. Willimantic Linen Co.*,<sup>28</sup> the U.S. Supreme Court noted: "It is evident that the invention was not completed until the construction of the machine. A conception of the mind is not an invention until represented in some physical form, and unsuccessful experiments or projects, abandoned by the inventor, are equally destitute of that character."<sup>29</sup> The "physical form" requirement of invention described in *Clark* need not be an actual machine in every case, and can be satisfied by a complete patent application.<sup>30</sup>

In 1793, a new patent act abolished the patent examination procedure and enabled the "prior inventorship" defense to infringement, such that a defendant in a patent infringement case could assert that "the thing, thus secured by patent, was not originally discovered by the patentee, but had been in use . . . or that [the patentee] . . . had surreptitiously obtained a patent for the discovery of another person."<sup>31</sup> As a result, if the defendant could prove that the patentee was not truly the first person to create the invention, the patentee lost the patent and the defendant was not liable for infringement. In 1836, a new patent act altered this infringement defense to provide a defense only when the patentee "surreptitiously or unjustly obtained the patent for that which was in fact invented or discovered by another, who was using reasonable diligence in adapting and perfecting the same."<sup>32</sup> The net result of these acts was that the first and true inventor was the

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gress to legislate upon the subject of patents is plenary by the terms of the Constitution, and as there are no restraints on its exercise, there can be no limitation of their right to modify them at their pleasure.").

<sup>25</sup> Act of Apr. 10, 1790, ch. 7., 1 Stat. 109 (superseded 1793).

<sup>26</sup> *Id.* §§ 5-6.

<sup>27</sup> George E. Frost, *The 1967 Patent Law Debate—First-to-Invent vs. First-to-File*, 1967 DUKE L.J. 923, 932.

<sup>28</sup> 140 U.S. 481 (1891).

<sup>29</sup> *Id.* at 489; see also *Seymour v. Osborne*, 78 U.S. (11 Wall.) 516, 552 (1870) (noting that "it is well [settled] that until the invention is so perfected and adapted to use it is not patentable under the patent laws"). In *Agawam Co. v. Jordan*, 74 U.S. (7 Wall.) 583 (1868), the Court concluded:

The settled rule of law is, that whoever first perfects a machine is entitled to the patent, and is the real inventor, although others may have previously had the idea and made some experiments towards putting it in practice. He is the inventor and is entitled to the patent who first brought the machine to perfection and made it capable of useful operation.

*Id.* at 602.

<sup>30</sup> See *infra* notes 33-47 and accompanying text.

<sup>31</sup> Act of Feb. 21, 1793, ch. 11, § 6, 1 Stat. 318, 322 (repealed 1836).

<sup>32</sup> Act of July 4, 1836, ch. 357, § 15, 5 Stat. 117, 123. This language was substantially

person who, while using reasonable diligence, in fact invented or discovered the invention first.

In *Dolbear v. American Bell Telephone Co. (Telephone Cases)*,<sup>33</sup> the U.S. Supreme Court held that the Patent Act does not require an applicant to actually build the invention before the application is filed.<sup>34</sup> In that case, Bell patent 174,465<sup>35</sup> was challenged because Bell had never built the telephone system described in the patent application.<sup>36</sup> The diagram and a short description accompanying it asserted that the apparatus disclosed would transmit vocal sounds, but Bell never built the apparatus or performed experiments before he filed the application.<sup>37</sup> The Supreme Court held that the patent was valid, despite the fact that Bell was only able to actually reduce the invention to practice after filing the application.<sup>38</sup> The Court noted:

It is quite true that when Bell applied for his patent he had never actually transmitted telegraphically spoken words so that they could be distinctly heard and understood at the receiving end of his line, but in his specification he did describe accurately and with admirable clearness his process, that is to say, the exact electrical conditions that must be created to accomplish his purpose . . . . The law does not require that a discoverer or inventor, in order to get a patent for a process, must have succeeded in bringing his art to the highest degree of perfection. It is enough if he describes his method with sufficient clearness and precision to enable those skilled in the matter to understand what the process is, and if he points out some practicable way of putting it into operation.<sup>39</sup>

Since the decision in the *Telephone Cases*, courts consider a patent application a *constructive* reduction to practice that is legally sufficient to satisfy the reduction to practice requirement of invention.

The U.S. Supreme Court strengthened the doctrine of constructive reduction to practice in 1926. In *Alexander Milburn Co. v. Davis-Bournonville Co.*,<sup>40</sup> the Court held that the entire content of a patent was considered "invented" as of the filing date.<sup>41</sup> The Court ruled that a description of an invention in a patent application that was filed in January 1911 and issued in 1912 was invented as of the filing date and foreclosed the patent of a different invention claimed in an application dated March 1911.<sup>42</sup> This was true even though the January appli-

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reproduced in the Patent Act of 1870, ch. 230, § 61, 16 Stat. 198, 208, and later in 35 U.S.C. § 69 (1946) (superseded by 35 U.S.C. §§ 102(g), 282 (1988)).

<sup>33</sup> 126 U.S. 1 (1888).

<sup>34</sup> *Id.* at 5.

<sup>35</sup> This patent was for "new and useful improvements in telegraphy," the precursor to today's telephone. *Id.* at 17.

<sup>36</sup> *Id.* at 5.

<sup>37</sup> *Id.* at 5-14.

<sup>38</sup> *Id.* at 535.

<sup>39</sup> *Id.* at 535-36.

<sup>40</sup> 270 U.S. 390 (1926).

<sup>41</sup> *Id.* at 399-402.

<sup>42</sup> *Id.*

cation did not claim the subject matter claimed in the March application.<sup>43</sup> The Court noted that "one really must be the first inventor in order to be entitled to a patent."<sup>44</sup> Because the first application sufficiently described the invention, the second applicant could not claim to be the first and true inventor.<sup>45</sup> As a result, absent other bars to patentability,<sup>46</sup> Congress recognizes the first person who files a patent application that is sufficient under the requirements of Section 112 of the Patent Act<sup>47</sup> as the first inventor and rightful patentholder *unless* a third party can prove that the third party is the true "first inventor."

It is clear that the Constitution grants the U.S. Congress the power

<sup>43</sup> *Id.* at 399. The January application described the subject matter of the March application without specifically claiming it. *Id.*

<sup>44</sup> *Id.* at 400 (citing *Coffin v. Ogden*, 85 U.S. (18 Wall.) 120 (1873)).

<sup>45</sup> *Id.* at 401. The rule of the *Milburn* case is now codified in § 102(e) of the Patent Act, which provides that a person is entitled to a patent unless "the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent." 35 U.S.C. § 102(e) (1988). As such, a previously filed copending application is treated as prior art just as a printed publication is prior art under § 102(a). *See id.* § 102(a) (1988). *See also* *Hazeltine Research, Inc. v. Brenner*, 382 U.S. 252, 254-55 (1965) (discussing the effect of § 102(e)).

<sup>46</sup> For the purposes of this Article, it is presumed that the invention satisfies the requirements of utility, 35 U.S.C. § 101 (1988), non-obviousness, *id.* § 103 (1988), and the novelty and loss of right requirements of § 102(a)-(f):

A person shall be entitled to a patent unless—

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States, or

(c) he has abandoned the invention, or

(d) the invention was first patented or caused to be patented, or was the subject of an inventor's certificate, by the applicant or his legal representatives or assigns in a foreign country prior to the date of the application for patent in this country on an application for patent or inventor's certificate filed more than twelve months before the filing of the application in the United States, or

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent, or

(f) he did not himself invent the subject matter sought to be patented . . .

*Id.* § 102(a)-(f) (1988).

<sup>47</sup> Section 112 of the patent laws delineates the precise requirements of adequate disclosure. *Id.* § 112 (1988). Significantly, the specification in a patent application:

shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

*Id.* The language of § 112 is very similar to the mandate of the Supreme Court in the *Telephone Cases*. *See supra* text accompanying note 39. To ensure that the patent application is a sufficient constructive reduction to practice according to the *Telephone Cases*, it must disclose information sufficient to enable one skilled in the art to make or use the invention based upon the "instructions" set forth in the specification. *See supra* text accompanying note 39.



to provide for the granting of patents to the "inventor" of an invention. It is also clear that the inventor need not actually make the invention as of the time of filing, but rather "constructive reduction to practice" is sufficient to establish a date of invention in an application that satisfies the requirements of Section 112 of the Patent Act. The remaining issue, then, is how the patent system should determine who the "first and true inventor" is in cases where two or more parties independently conceived of an invention and actually or constructively reduced it to practice at approximately the same time.<sup>48</sup>

The determination of the true "first inventor" is made according to a statutory definition. In 1952, Congress rewrote the entire patent law, codifying parts of the common law, refining the old statutory law, and establishing additional laws.<sup>49</sup> One development was section 102(g), the definition of the "first inventor."<sup>50</sup> The definition codified the theories of conception,<sup>51</sup> reduction to practice,<sup>52</sup> diligence,<sup>53</sup> and abandonment, suppression, and concealment.<sup>54</sup>

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<sup>48</sup> The 1790 Act stated that a patent could be repealed by a showing that the patentee was not the "first and true inventor." Act of Apr. 10, 1790, ch. 7, 1 Stat. 109, 111 (superseded 1793). The 1790 Act failed, however, to address the need for establishing the first and true inventor in cases of competing applications for a patent on the same invention. *Id.* Problems quickly arose when four independent inventors filed applications containing claims to steamboats or steamboat improvements. See P.J. Federico, *Patent Interferences in the United States Patent Office*, 2 INT'L REV. INDUS. PROP. & COPYRIGHT L. 21, 23-24 (1971). As a result, the 1790 Act included provisions for binding arbitration in cases of interfering applications. See 3 DONALD S. CHISUM, PATENTS § 10.02[1] (1993). The Patent Act of 1836 required the Commissioner of Patents to determine the first inventor in cases of interfering patents. Act of July 4, 1836, ch. 357, 5 Stat. 117 (codified as amended at 35 U.S.C. § 1 (1988)); see also CHOATE ET AL., *supra* note 15, at 117 (discussing the role of the Commissioner in interference disputes). Subsequent acts have all provided for interference proceedings and invalidations in cases of interfering patents. *Id.*

<sup>49</sup> The Patent Act of 1952 was codified in title 35 of the United States Code.

<sup>50</sup> 35 U.S.C. § 102(g) (1988).

<sup>51</sup> Conception is the mental process of invention or solving a problem with a specific tangible means of carrying out the idea. *Townsend v. Smith*, 36 F.2d 292, 295 (C.C.P.A. 1929) ("The conception of the invention consists in the complete performance of the mental part of the inventive art . . . [It is therefore] the formation in the mind of the inventor of a definite and permanent idea of the complete and operative invention as it is thereafter to be applied in practice that constitutes an available conception within the meaning of the patent law.").

<sup>52</sup> Reduction to practice may be actual or constructive. See *supra* notes 27-48 and accompanying text. The Court of Appeals for the First Circuit noted that "all the law exacts of the first conceiver in order to protect him in his right to the invention is that he shall proceed with reasonable diligence to [actually] reduce the invention to practice, or to file an application for a patent in conformity of the statutes [constructive reduction to practice]." *Automatic Weighing Mach. Co. v. Pneumatic Scale Corp.*, 166 F. 288, 298 (1st Cir. 1909).

<sup>53</sup> Diligence is the test of the inventor's effort to reduce the conceived idea to actual or constructive practice. The diligence must be reasonable, as "it was the intent of Congress to assure the first inventor who had completed the mental act of invention that he should not be deprived of his reward by reason of delays which he could not reasonably avoid in giving his invention to the public." *Hull v. Davenport*, 90 F.2d 103, 105 (C.C.P.A. 1937). An inventor can demonstrate sufficient diligence if "it be found that he was diligent from a time just prior to the second conceiver's entrance into the field to the first conceiver's reduction to practice either actually or constructively." *Id.* (citations omitted).

<sup>54</sup> Congress included the concepts of suppression and concealment to recognize that

A person shall be entitled to a patent unless—

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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.<sup>55</sup>

As a result, the "interfering parties"<sup>56</sup> must demonstrate the dates of conception and reduction to practice, the amount of diligence, and any acts 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 who first reduced an embodiment of the invention to practice. The rule is subject to two exceptions. The inventor who was the first to conceive the subject matter but the last to reduce to practice will prevail if he exercised reasonable diligence in reducing to practice from a time just prior to when the first person to reduce to practice conceived the subject matter. Further, the second to reduce to practice will prevail if the first abandoned, suppressed, or concealed the invention.<sup>57</sup>

Problems may arise, however, due to the uncertainty of this evaluation. For example, the precise dates of conception and reduction to practice may be difficult to ascertain, even with detailed records. The quality of diligence each party exercised in reducing their conceived invention to practice is a subjective determination that lies with the trier of fact. The amount of abandonment, suppression, or concealment sufficient to penalize an inventor is also subjective and is not defined in the statute. Despite these potential difficulties with determining the first and true inventor under section 112, the United States continues to award patents to the first to invent.<sup>58</sup>

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one who hides an invention from the public is not entitled to receive patent protection or to deny such protection to an independent inventor who is willing to disclose the invention to the public. In 1858, the U.S. Supreme Court held that an inventor who "designedly, and with the view of applying it indefinitely and exclusively for his own profit, withholds his invention from the public . . . [hinders] . . . the progress of science and the useful arts." *Kendall v. Winsor*, 62 U.S. (21 How.) 322, 328 (1858).

<sup>55</sup> 35 U.S.C. § 102(g) (1988).

<sup>56</sup> When an application for a patent would interfere with any other pending application, the Commissioner may declare an "interference." *Id.* § 135(a) (1988). The Board of Patent Appeals and Interferences then determines any questions of priority of the inventions. *Id.*

<sup>57</sup> 3 DONALD S. CHISUM, PATENTS § 10.01, at 10-4 (1994).

<sup>58</sup> The United States is one of only two nations in the world that awards the patent to the "first to invent." The other nation is the Philippines. *The Patent System Harmonization Act of 1992: Joint Hearing on S. 2605 and H.R. 4978 Before the Subcomm. on Patents, Copyrights and Trademarks of the Senate Comm. on the Judiciary and the Subcomm. on Intellectual Property and Judicial Administration of the House Comm. on the Judiciary*, 102d Cong., 2d Sess. 26 (1992) [hereinafter *Hearing*] (statement of Douglas B. Comer, Acting Commissioner, Patent and Trademark Office). Every other nation awards the patent to the first person to file an application for the

In addition to the debate over the system of awarding patents to the "first to invent," three other areas of U.S. patent law are receiving a great deal of attention. First, the U.S. patent system does not award prior user rights to anyone who was using the invention before the patentee. Instead, the prior use merely serves to invalidate the patent as not novel.<sup>59</sup> Second, U.S. law currently provides that the "limited" patent term runs for seventeen years from the date the patent issues.<sup>60</sup> Finally, applications for patents in the United States are kept in strict confidence for the entire pendency of the application.<sup>61</sup>

*B. Negotiations of the World Intellectual Property Organization—  
Failure of First-to-File*

While the United States maintains its own independent patent system, it has been an active participant in discussions for patent harmonization at the World Intellectual Property Organization (WIPO). The United Nations created WIPO for the purpose of worldwide promotion of patents, copyrights, trademarks, and other intellectual property rights.<sup>62</sup> The WIPO Committee of Experts on the Harmonization of Certain Provisions in Laws for the Protection of Inventions began to discuss worldwide patent harmonization in 1985 in Geneva, Switzerland.<sup>63</sup> The Committee completed a draft treaty of basic proposals in

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invention. *Id.* This first-to-file system is the cornerstone of meaningful patent harmonization. To achieve harmonization, the United States must abandon the two-hundred year-old first-to-invent system in favor of the universally accepted system of first-to-file. See *infra* notes 175-91 and accompanying text for an in-depth examination of the differences between first-to-file and first-to-invent.

<sup>59</sup> 35 U.S.C. § 102 (1988). Prior user rights are not necessary in a first-to-invent system because the prior use serves to invalidate the patent, thereby eliminating any need for a prior user defense. See *id.* In a first-to-file system, however, prior user rights would enable the prior user to continue to practice the invention despite the presence of a valid patent. Discussions concerning the adoption of a first-to-file system always contain an examination of the possibility of adopting prior user rights. See *infra* notes 251-64 and accompanying text.

<sup>60</sup> 35 U.S.C. § 154 (1988). For design patents, the patent term is fourteen years. *Id.* § 173 (1988). The controversy surrounding the patent term deals not with the length of the term, but the starting date of the term. While the United States provides that the term begins running on the date the patent issues, most countries have a patent term that begins to run on the date the patent is filed. See *infra* notes 276-82 and accompanying text.

<sup>61</sup> 35 U.S.C. § 122 (1988). Section 122 provides:

Applications 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.* Many people in this country argue that the confidentiality requirement is damaging to others who need to know what inventions are being considered by the Patent Office. They believe that applications should be published eighteen months after filing. See *infra* notes 265-75 and accompanying text.

<sup>62</sup> Convention Establishing the World Intellectual Property Organization, July 14, 1967, 21 U.S.T. 1749, 828 U.N.T.S. 3.

<sup>63</sup> *WIPO Experts Make Progress on Patent Harmonization Draft*, 41 Pat. Trademark & Copyright J. (BNA) No. 1013, at 231, 231 (Jan. 10, 1991).

1990.<sup>64</sup> A diplomatic conference met for the first time in 1991 to complete the final harmonization treaty.<sup>65</sup> The final session of the diplomatic conference was originally scheduled for July 1993, but the Clinton administration postponed it indefinitely.<sup>66</sup> The United States justified the delay due to the need to select a new commissioner of the Patent and Trademark Office and a need to formulate a clear position on patent harmonization.<sup>67</sup>

The WIPO draft treaty for patent harmonization contains two dozen articles. The most significant difference between the WIPO Basic Proposal and current U.S. law is found in section 2 of Article 9, which mandates that the "invention shall belong to the applicant with the earliest priority date."<sup>68</sup> This proposal would change the U.S. patent system from a first-to-invent into a first-to-file system, and would bring the laws into conformity with the rest of the industrialized world.<sup>69</sup> In 1987 Donald J. Quigg, Deputy Commissioner of Patents and Trademarks for the United States, announced that the United States might be willing to change from first-to-invent to first-to-file, but that he "has called in return for improved patent-protection standards around the world."<sup>70</sup> Such improved standards include: "(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."<sup>71</sup> The move to first-to-file would be a prerequisite, however, to the adoption of these concessions from other nations.<sup>72</sup>

The second significant change that must be made by the United States in order to conform with the WIPO Basic Proposal is the adoption of prior user rights. According to Article 20 of the WIPO proposal, any contracting party "may provide that a patent shall have no effect against a prior user who in good faith was using an invention or was making serious preparations for such use prior to the priority date

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<sup>64</sup> *Id.*

<sup>65</sup> *Patent Law Harmonization Hearings Scheduled, Comments Sought*, 46 Pat. Trademark & Copyright J. (BNA) No. 1144, at 370, 371 (Aug. 26, 1993).

<sup>66</sup> *Id.*

<sup>67</sup> *Id.*; see *WIPO Diplomatic Conference on Patent Harmonization Postponed at U.S. Request*, 45 Pat. Trademark & Copyright J. (BNA) No. 1128, at 536, 537 (Apr. 29, 1993).

<sup>68</sup> Basic Proposal for Patent Harmonization, at art. 9, *reprinted in WIPO Experts Make Progress on Patent Harmonization Draft*, *supra* note 63, at 232. The "earliest priority date" is the filing date of the original completed application. *Id.*

<sup>69</sup> See *supra* note 58 and accompanying text.

<sup>70</sup> Charles R. B. Macedo, *First-to-File: Is American Adoption of the International Standard in Patent Law Worth the Price?*, 18 AIPLA Q. J. 193, 195 n.3 (1990) (quoting United States Patent and Trademark Office, Press Release, U.S. Offers to Modify Stand on Patent Protection (Mar. 23, 1977)).

<sup>71</sup> *Patent System Harmonization Legislation is Debated in Joint Senate-House Hearing*, 44 Pat. Trademark & Copyright J. (BNA) No. 1080, at 3, 3 (May 7, 1992).

<sup>72</sup> *Id.*

of the application."<sup>73</sup> While the right to adopt prior user rights is not mandatory in this draft, many commentators in the United States see prior user rights as a necessary corollary to adoption of a first-to-file system.<sup>74</sup>

Third, the WIPO Basic Proposal would compel the mandatory publication of applications. Article 15 provides that "[a]pplications will be required to be published within a certain number of months after the priority date unless it has been withdrawn, abandoned, or rejected."<sup>75</sup> In those countries that provide for early publication, such publication typically occurs eighteen months after the priority date.<sup>76</sup> The United States proposed an alternative text for this section that would permit disclosure twenty-four months after the application is filed.<sup>77</sup> Either time frame would be a significant change for the United States, which strictly forbids any application disclosure until issuance of the patent.<sup>78</sup>

The final significant change deals with the term of the patent. Article 22 of the WIPO draft states: "The term of the patent will be for at least twenty years from the filing date. The twenty year period is calculated from the filing date of invoked parent applications, except for the priority application."<sup>79</sup> The Article allows countries to establish a term longer than twenty years, but mandates that the term begin on the priority date, not on the date the patent issued.<sup>80</sup> While the change in the patent's duration from seventeen to twenty years is not material, the specification of the start date is significant because the U.S. patent system begins counting the seventeen-year period on the date the patent is *issued*, not on the date the application is *filed*.<sup>81</sup>

The WIPO negotiations would clearly affect the U.S. patent system in a variety of ways. With the proposed adoption of first-to-file, prior user rights, early publication of applications, and a twenty-year patent

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<sup>73</sup> Basic Proposal for Patent Harmonization, at art. 20, reprinted in *WIPO Experts Make Progress on Patent Harmonization Draft*, *supra* note 63, at 237.

<sup>74</sup> See, e.g., Gary L. Griswold & F. Andrew Ubel, *Prior User Rights—A Necessary Part of a First-to-File System*, 26 J. MARSHALL L. REV. 567 (1993); see also *infra* notes 251-64 and accompanying text.

<sup>75</sup> Basic Proposal for Patent Harmonization, at art. 15, reprinted in *WIPO Experts Make Progress on Patent Harmonization Draft*, *supra* note 63, at 234.

<sup>76</sup> *Id.* at 235.

<sup>77</sup> *Id.*

<sup>78</sup> See *supra* note 61 and accompanying text.

<sup>79</sup> Basic Proposal for Patent Harmonization, at art. 22, reprinted in *WIPO Experts Make Progress on Patent Harmonization Draft*, *supra* note 63, at 239; see *infra* notes 276-82 and accompanying text.

<sup>80</sup> Basic Proposal for Patent Harmonization, at art. 22, reprinted in *WIPO Experts Make Progress on Patent Harmonization Draft*, *supra* note 65, at 239. The priority date is the date that the completed patent application is filed at the Patent Office, and Article 22 places a definite termination date on the patent that is known at the time of the filing date. *Id.* at 241. In America, by contrast, the termination date is not known until the patent actually issues, which may be several years after the priority date. See *infra* note 280.

<sup>81</sup> See *supra* note 61 and accompanying text. For a complete explanation of the significance of the difference, see *infra* notes 276-82 and accompanying text.

term beginning on the date of filing, the United States was on the path toward meaningful patent harmonization. If the contracting nations adopted the WIPO Basic Proposal, complete harmonization would not be far behind. The possibility of harmonization ended on January 24, 1994, however, with the announcement that the United States would maintain its system of first-to-invent.<sup>82</sup> Furthermore, the United States has no plans to resume patent harmonization negotiations at this time.<sup>83</sup> The January 1994 announcement ended almost a decade of negotiations at the World Intellectual Property Organization, and those seeking reform in the U.S. patent system must now seek reform elsewhere.

C. *The Advisory Commission on Patent Law Reform—Recommending Change*

While negotiations were underway at the World Intellectual Property Organization, the Patent and Trademark Office created an Advisory Commission on Patent Law Reform.<sup>84</sup> The purpose of the Advisory Commission was to advise the Secretary of Commerce on what changes were needed in the U.S. patent system.<sup>85</sup> After more than a year of debate and discussion, the Advisory Commission prepared a report in early 1992.<sup>86</sup>

In addition to announcements on other subjects,<sup>87</sup> the Advisory Commission made recommendations concerning a first-to-file system, prior user rights, early publication, and a twenty-year patent term.<sup>88</sup> First, the Advisory Commission recommended that the change to a first-to-file system should not be adopted unilaterally, but rather as part of a complete worldwide harmonization plan.<sup>89</sup> The Advisory Commission voted unanimously to recommend such a change as long as the harmonization package included provisions for a grace period and a

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<sup>82</sup> See *supra* text accompanying notes 2-3.

<sup>83</sup> *U.S. Says 'Not Now' on First-to-File and Agrees with Japan on Patent Term*, 47 Pat. Trademark & Copyright J. (BNA) No. 1164, at 285, 285 (Jan. 27, 1994).

<sup>84</sup> 55 Fed. Reg. 31,618 (1990). The formation of the Advisory Commission was announced in August 1990. *Advisory Commission Reviews Draft Recommendations on Patent Law Reforms*, 43 Pat. Trademark & Copyright J. (BNA) No. 1071, at 379, 383 (Mar. 5, 1992).

<sup>85</sup> *Advisory Commission Reviews Draft Recommendations on Patent Law Reforms*, *supra* note 84, at 383.

<sup>86</sup> The "Report of the Third Meeting of the Advisory Commission on Patent Law Reform" was signed on February 14, 1992, by Harry F. Manbeck, Jr., the Commissioner of Patents and Trademarks, and by Edward R. Kazenske, the Advisory Commission Executive Secretary. *Id.* The Report is the result of several meetings, including a two-day public meeting of the Advisory Commission. The Advisory Commission solicited public comments on each issue discussed. *Id.*

<sup>87</sup> The Advisory Commission also recommended that a federal law protecting trade secrets was not necessary, noted that computer program protection was adequate, and suggested improvements in the patent examination process. *Id.* at 383-84.

<sup>88</sup> *Id.* at 384.

<sup>89</sup> *Id.*

provisional application.<sup>90</sup> Second, the Advisory Commission recommended the adoption of limited prior user rights.<sup>91</sup> The specific nature of this right was not resolved by the Advisory Commission, although all commission members agreed that the right should be limited to use in the United States.<sup>92</sup> Third, the Advisory Commission agreed that the Patent and Trademark Office should provide for automatic publication<sup>93</sup> of patent applications within twenty-four months of filing, provided that a first office action<sup>94</sup> is available prior to publication to allow the applicant to become informed of the likelihood of patent issuance.<sup>95</sup> Finally, the Advisory Commission voted unanimously to support the recommendation to adopt a patent term of twenty years from the date of filing instead of the current seventeen-year term beginning on the date of issuance.<sup>96</sup> Despite the recommendations of the Advisory Commission, however, the Secretary of Commerce has not approved these proposals, and the U.S. Congress has not adopted them.

*D. The 1992 Patent System Harmonization Act—Another Failure for First-to-File*

Shortly after the Advisory Commission released its draft report in 1992, the U.S. Congress had an opportunity to adopt several of the report's recommendations. On April 9, 1992, Senator Dennis DeConcini (D-Ariz.)<sup>97</sup> and Representative William Hughes (R-N.J.)<sup>98</sup> introduced identical bills to harmonize the U.S. patent system with the rest of the world.<sup>99</sup> The Patent System Harmonization Act of 1992 contained those provisions which the United States would be required to adopt as part of a world patent harmonization treaty.<sup>100</sup> The keystone

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<sup>90</sup> *Id.*

<sup>91</sup> *Id.*

<sup>92</sup> *Id.*

<sup>93</sup> See *infra* note 104 for the definition of publication.

<sup>94</sup> An "office action" is a communication between the Patent Office and the patent applicant regarding the problems with the application and an explanation of the reasons why a patent application would be rejected. This provides the applicant with enough information to either amend or withdraw the application. *Patent System Harmonization Bills are Introduced in House and Senate*, 43 Pat. Trademark & Copyright J. (BNA) No. 1077, at 519, 519 (Apr. 16, 1992). See generally 35 U.S.C. § 132 (1988) (providing office action procedure).

<sup>95</sup> *Advisory Commission Reviews Draft Recommendations on Patent Law Reforms*, *supra* note 84, at 384.

<sup>96</sup> *Id.*

<sup>97</sup> *Hearing*, *supra* note 58, at (II). Senator DeConcini was the former Chairman of the Senate Subcommittee on Patents, Copyrights, and Trademarks. *Id.*

<sup>98</sup> *Id.* at (III). Representative Hughes was the former Chairman of the House Subcommittee on Intellectual Property and Judicial Administration. *Id.*

<sup>99</sup> The Senate and House bills were classified as S. 2605, 102d Cong., 2d Sess. (1992) and H.R. 4978, 102d Cong., 2d Sess. (1992), respectively.

<sup>100</sup> *Patent System Harmonization Bills are Introduced in House and Senate*, *supra* note 94, at 519. The bill, as printed in the Congressional Record, proposed a first-to-file system with prior user rights, early publication of applications, and a twenty-year patent term. S. 2605, 102d Cong., 2d Sess. (1992).

of the proposed legislation was the abandonment of the first-to-invent system in favor of the near universal practice of first-to-file.<sup>101</sup> The first-to-file change was accompanied by a means for provisional filing to secure early priority dates to allay fears that the first inventor would not win the "race" to the patent office.<sup>102</sup> Second, the legislation established prior user rights for those who develop and use an invention in good faith before it is patented by another in an effort to grant equitable treatment to the true first inventor.<sup>103</sup> Third, the legislation required the Patent and Trademark Office to "publish"<sup>104</sup> patent applications eighteen months after the application is filed rather than maintaining confidentiality throughout the examination process.<sup>105</sup> Finally, the legislation amended the patent term from seventeen years from the date of issuance to twenty years from the date of filing.<sup>106</sup>

In a statement regarding the purpose of the Patent System Harmonization Act of 1992,<sup>107</sup> Senator DeConcini stated that he introduced the legislation "to encourage healthy debate on the complex and far-reaching issue of patent harmonization."<sup>108</sup> He observed that "[o]ne of the most significant international developments involving intellectual property laws has been the recent heightened global interest in harmonizing certain aspects of national patent laws."<sup>109</sup> He commented that he believed that harmonization efforts could "lead to the most significant change in U.S. patent law since the Patent Act of 1836" and that "such drastic changes to fundamental aspects of our patent system should be examined and considered in Congress and not in a backroom meeting in Brussels or Geneva."<sup>110</sup> Senator DeConcini recognized that while a national consensus had not been achieved on some of the proposals contained in the legislation, Congress must "begin to debate the changes a harmonization treaty would exact on our domestic patent laws."<sup>111</sup>

Representative Hughes observed that patent harmonization could result in many benefits to American inventors.<sup>112</sup> Hughes contemplated that the Harmonization Act "anticipates the likely components

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<sup>101</sup> *Patent System Harmonization Bills are Introduced in House and Senate*, *supra* note 94, at 519.

<sup>102</sup> *Id.*

<sup>103</sup> *Id.*

<sup>104</sup> "Publication" within the meaning of the Patent and Trademark Office is simply opening the patent applications for public inspection. *Id.*

<sup>105</sup> *Id.*

<sup>106</sup> *Id.*

<sup>107</sup> S. 2605, 102d Cong., 2d Sess. (1992). This Act is known as the "Harmonization Act."

<sup>108</sup> 138 CONG. REC. S5288 (daily ed. Apr. 9, 1992) (statement of Sen. DeConcini).

<sup>109</sup> *Id.*

<sup>110</sup> *Id.* The comment about Brussels and Geneva is in reference to the work in those cities by the World Intellectual Property Organization. *See supra* notes 62-83 and accompanying text.

<sup>111</sup> 138 CONG. REC. S5288 (daily ed. Apr. 9, 1992) (statement of Sen. DeConcini).

<sup>112</sup> 138 CONG. REC. E1041 (daily ed. Apr. 10, 1992) (statement of Rep. Hughes). For example, harmonization legislation in the United States could induce other nations to



of a harmonization treaty and reflects the ensuing changes that might be called for in [American] patent laws."<sup>113</sup> He concluded by claiming to be "hopeful that multilateral negotiations will produce a treaty that benefits the American people and improves the protection of intellectual property worldwide."<sup>114</sup>

Despite the promise of patent harmonization, the U.S. Congress never enacted the Patent System Harmonization Act of 1992.<sup>115</sup> As a result, the United States continues to maintain its systems of first-to-invent, no prior user rights, no disclosure of applications, and a seventeen-year patent term beginning on the date of issuance.

*E. The Tenures of Lehman and Brown—Abandoning Harmonization "For Now"*

The Clinton administration, while emphasizing world trade in such treaties as the North American Free Trade Agreement (NAFTA)<sup>116</sup> and the General Agreement on Tariffs and Trade (GATT),<sup>117</sup> has not placed a high priority on patent harmonization. In April 1992, President Bill Clinton announced the nomination of Bruce Lehman to serve as Assistant Secretary of Commerce and Commissioner of Patents and Trademarks.<sup>118</sup> At his confirmation hearings before the Senate Judiciary Committee, Lehman stated that "a proper consensus has not been solicited from the intellectual property community on what position the United States should take in international negotiations [on the issue of patent harmonization]."<sup>119</sup> He promised to hold hearings to discuss and evaluate the alternatives, and that "eve-

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change their laws to reduce the time for patent examination, and could eliminate the high cost of filing different applications in every country. *Id.*

<sup>113</sup> *Id.*

<sup>114</sup> *Id.*

<sup>115</sup> See *Patent Harmonization Proposal Stirs Lively Debate at PTO Hearing*, 46 Pat. Trademark & Copyright J. (BNA) No. 1150, at 508, 509 (Oct. 14, 1993).

<sup>116</sup> On December 8, 1993, President Clinton signed the North American Free Trade Agreement Implementation Act, and the treaty took effect on January 1, 1994. North American Free Trade Agreement, Dec. 8 and 17, 1992, U.S.-Can.-Mex., 32 I.L.M. 289 (1993) [hereinafter NAFTA]. See also *Bill to Implement NAFTA is Signed With Provisions that Affect IP Law*, 47 Pat. Trademark & Copyright J. (BNA) No. 1158, at 139 (Dec. 9, 1993) (allowing patent applications to establish a date of invention by reference to knowledge or use of the invention in Canada or Mexico). The member nations are the United States, Canada, and Mexico. *Id.*

<sup>117</sup> General Agreement on Tariffs and Trade, *opened for signature* Oct. 30, 1947, T.I.A.S. No. 1700, 55 U.N.T.S. 187 [hereinafter GATT]. On December 8, 1994, President Clinton signed GATT, and it took effect on January 1, 1995. *Global Trade Pact Signed by Clinton*, CHI TRIB., Dec. 8, 1994, at 1C.

<sup>118</sup> *Senate Panel Holds Hearing on Nomination of Lehman to Head PTO*, 46 Pat. Trademark & Copyright J. (BNA) No. 1140, at 269, 269 (July 29, 1993). Lehman, an intellectual property attorney, who was Chief Counsel to the House Judiciary Subcommittee on Courts, Civil Liberties and the Administration of Justice from 1978 to 1983, was the Committee's chief legal advisor in the drafting of the 1976 Copyright Act and the 1980 Computer Software Amendments. *Id.*

<sup>119</sup> *Id.*

ryone with an opinion" would have an opportunity to speak.<sup>120</sup> On August 20, 1993, the Patent and Trademark Office fulfilled this promise by announcing public hearings on the issue of patent harmonization and consequent changes to U.S. laws.<sup>121</sup> The public was invited to comment on any aspect of the WIPO draft treaty,<sup>122</sup> including a first-to-file system, prior user rights, early application publication, and a twenty-year patent term.<sup>123</sup>

The testimony at the Patent and Trademark Office's harmonization hearings<sup>124</sup> demonstrated the controversy that exists over several of the harmonization proposals. On the first day of hearings, the witnesses debated the proposal to change to a first-to-file system.<sup>125</sup> Witnesses testifying in favor of the change to first-to-file argued that because the rest of the world is on a first-to-file system, American corporations and inventors who seek international protection are already bound by the first-to-file requirements.<sup>126</sup> They noted that if first-to-file were adopted as part of a complete harmonization package, the United States could demand that Europe and Japan "make patent protection abroad more accessible and certain" for inventors in the United States.<sup>127</sup> They asserted that adoption of first-to-file is a small concession to make in return for the concessions that could be obtained from other nations<sup>128</sup> and is the only way to remain globally competitive in a world that operates on a first-to-file system.<sup>129</sup> One commentator noted that first-to-file should be accompanied by an option for filing a simple provisional application to retain an early prior-

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<sup>120</sup> *Id.*

<sup>121</sup> *Patent Law Harmonization Hearings Scheduled, Comments Sought*, *supra* note 65, at 370.

<sup>122</sup> *See supra* notes 62-83 and accompanying text.

<sup>123</sup> *Patent Law Harmonization Hearings Scheduled, Comments Sought*, *supra* note 65, at 370-71.

<sup>124</sup> The hearings were held on October 7-8, 1993. *Patent Harmonization Proposal Stirs Lively Debate at PTO Hearing*, *supra* note 115, at 508. Dozens of witnesses testified for seven minutes each on a variety of subjects relating to patent harmonization. *Id.*

<sup>125</sup> *Id.* at 509. Under the current system, there is no need for a provisional application, as the filing date is not relevant to proving the date of invention. Under a first-to-file system, however, the first person who files automatically "wins" the patent. Some commentators are concerned that a first-to-file system would cause a "race" to the Patent Office, where two things will happen. First, the independent inventor or small business who cannot afford to file numerous applications as the invention is developed over several years will always lose the "race" to a wealthy corporation that can afford to file applications over and over as the invention is perfected. Second, applications will be of significantly less quality than they are today because speed will be emphasized over quality. Patent agents and attorneys will be under considerable pressure to rush to the Patent Office before doing a thorough job preparing the patent, thus resulting in weaker protection. A provisional application would relieve these concerns somewhat, as it would allow an inventor to file a very brief description of the invention to secure a patent date. The inventor could then spend additional time preparing a thorough application without the fear of losing the race to the Patent Office. *Id.*

<sup>126</sup> *Id.*

<sup>127</sup> *Id.*

<sup>128</sup> *See infra* notes 216-45.

<sup>129</sup> *Patent Harmonization Proposal Stirs Lively Debate at PTO Hearing*, *supra* note 115, at 509.

ity date.<sup>130</sup> According to the commentator, this provisional application would enable the small inventor to protect an invention as soon as possible without spending the money and time needed to file multiple applications at each stage in the "reduction to practice" phase in an effort to obtain a patent.<sup>131</sup> William L. LaFuze, the President of the American Intellectual Property Law Association (AIPLA),<sup>132</sup> testified that adoption of first-to-file with limited prior user rights would end the cumbersome interference procedure and would create more certainty and simplicity in the patent application process.<sup>133</sup>

Proponents of the change to first-to-file also noted that since the vast majority of patents are awarded to the first person to file an application, the American first-to-invent system is not materially different from a first-to-file system, and that few inventors would be hurt by the change.<sup>134</sup> Allan Mendelowitz, the Director of International Trade, Finance and Competitiveness at the General Accounting Office (GAO), reported that a GAO survey demonstrated that two-thirds of responding corporations supported adoption of a first-to-file system.<sup>135</sup>

Opponents of the adoption of first-to-file included universities, small companies, and independent inventors with limited resources.<sup>136</sup> They testified that the first-to-file system does not reward inventorship, but the winner of the "race" to the Patent and Trademark Office.<sup>137</sup> They asserted that the change would favor corporations and foreign companies at the expense of small independent inventors.<sup>138</sup> A primary concern of those opposed to first-to-file is that the small inventor had not yet been "heard in the harmonization debate."<sup>139</sup> Furthermore, some argued that changing to first-to-file would favor foreign companies at a time when American inventors only receive about fifty

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<sup>130</sup> *Id.* The commentator was Roger Smith, testifying on behalf of the Intellectual Property Owners, Inc. *Id.*

<sup>131</sup> *Id.*

<sup>132</sup> The AIPLA is an organization comprised of over 7,000 patent attorneys. *Hearing, supra* note 58, at 93 (statement of Robert B. Benson, past President, American Intellectual Property Law Association). The AIPLA has been actively involved in the harmonization effort for over 25 years. *Id.*

<sup>133</sup> *Patent Harmonization Proposal Stirs Lively Debate at PTO Hearing, supra* note 115, at 509.

<sup>134</sup> *Id.*

<sup>135</sup> *Id.*

<sup>136</sup> *Id.* Mr. Mendelowitz conceded that the survey did not poll universities or individual inventors. *Id.* He said the survey ignored this constituency because "they generally have limited experience in filing for patents overseas." *Id.*

<sup>137</sup> *Id.*

<sup>138</sup> *Id.*

<sup>139</sup> *Id.* at 510. Sherm Fishman of the Small Entity Patent Owners Association complained because the hearings were not announced on the AP wires, but in the Federal Register. *Id.* The complaint is that while small inventors generally oppose harmonization and first-to-file, they did not all know about the hearings because small inventors typically do not have the same access to the Federal Register as corporate attorneys. Small entities felt left out of a process that could have resulted in a system that they opposed. The lack of notice in mainstream publications created a concern that the testimony at the hearings did not truly represent the opinions of all Americans (especially small or independent inventors). *Id.*

percent of the patents in this country.<sup>140</sup> Representatives of the Association of University Technology Managers testified that research universities opposed first-to-file unless there was an option for provisional application filing.<sup>141</sup> Testifying in regard to the effect of harmonization on university research, the president of Hampshire College suggested that first-to-file would be detrimental because it would "place a premium on secrecy in research."<sup>142</sup>

The issues of prior user rights, early publication, and a revised patent term received little attention at the hearings. The issue of prior user rights was divided along the same lines as the issue of adopting first-to-file. Those who favor a first-to-file system argued that prior user rights are "a logical accompaniment to a first-to-file regime."<sup>143</sup> They noted that those who practice innovative trade secrets should not lose the rights to their trade secrets merely because someone independently discovers the same invention after the trade secret has been in use.<sup>144</sup> Roger Smith, testifying on behalf of the Intellectual Property Owners, said that limited prior user rights are "an essential safety valve under the first-to-file system."<sup>145</sup> He asserted that prior user rights should be restricted to activities within the United States, should require either actual use or substantial progress and reduction to practice, should be an absolute defense to infringement, and should protect trade secrets.<sup>146</sup> Those opposed to prior user rights argued that such rights would encourage secrecy and would unfairly give trade secret holders a "free ride" on valid patents, thereby reducing the value of the patent system.<sup>147</sup>

Supporters of early publication observed that publication of applications benefits the inventor and the public by "speed[ing] public access to technical information."<sup>148</sup> In addition, supporters claimed that the costs of early publication would be reduced by future automation in the filing process.<sup>149</sup> William LaFuze, President of the AIPLA, suggested the possibility of accelerated examinations for those who desire a patentability opinion prior to publication to allow the applicant to determine his or chances for patentability before a possible trade se-

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<sup>140</sup> *Id.*

<sup>141</sup> *Id.*

<sup>142</sup> *Id.*

<sup>143</sup> *Id.*

<sup>144</sup> *Id.*

<sup>145</sup> *Id.*

<sup>146</sup> *Id.*

<sup>147</sup> *Id.*

<sup>148</sup> *Id.* at 511.

<sup>149</sup> *Id.* Under § 102(e) of the Patent Act, if a patent issues on a confidential application that was filed before a subsequent inventor discovers the invention, the patent becomes prior art, invalidating the subsequent filer's patent. 35 U.S.C. § 102(e) (1988). Therefore, the first application acts as secret prior art against the second application; prior art that the second inventor could not know existed.

cret is published.<sup>150</sup>

The proposal to adopt a twenty-year patent term to begin on the date of filing received near unanimous support at the hearings.<sup>151</sup> Witnesses agreed that such a change was a simple solution to the threat of "submarine patents."<sup>152</sup> Many speakers at the hearings suggested that the proposals regarding early publication and a twenty-year patent term were sufficiently important to warrant unilateral change and need not be part of a harmonization package.<sup>153</sup>

Less than four months after the hearings ended, the United States agreed to make a significant change in their patent laws. In January 1994, the United States stated that it would adopt a system in which patents would be valid until twenty years after the date of filing the patent application, instead of seventeen years from the date the patent is granted.<sup>154</sup> This decision was part of an agreement between Bruce Lehman, Commissioner of the U.S. Patent and Trademark Office, and Wataru Aso, Commissioner of Patents for Japan.<sup>155</sup> In exchange for changing the patent term in the United States, "Japan agreed to accept patent applications filed in English, provided that a Japanese translation follows within a reasonable time."<sup>156</sup> While Bruce Lehman signed an agreement, it cannot become law until the U.S. Congress enacts legislation to make the change in the statutory scheme.<sup>157</sup>

While progress was made by the Patent and Trademark Office on the subject of a revised patent term, the move toward a first-to-file system abruptly ended on January 24, 1994, when Commerce Secretary Ron Brown issued a statement that the United States would not pursue first-to-file.<sup>158</sup> He claimed that small inventors and entrepreneurs would not benefit by the change, and that the first-to-invent framework has served America well in the past.<sup>159</sup> Speculation exists that the decision not to pursue first-to-file was based upon a concern in the Clinton

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<sup>150</sup> *Patent Harmonization Proposal Stirs Lively Debate at PTO Hearing, supra* note 115, at 511.

<sup>151</sup> *Id.*

<sup>152</sup> *Id.* A patent that does not issue until years after the inventor files an application is known as a "submarine patent" because it "surfaces" after an industry is established around an invention that no one knew was going to be patented, thus creating large liability for the industry. See *infra* notes 276-82 and accompanying text for an examination of "submarine patents" and the reasons why a revised patent term would eliminate the threat of such patents in the future.

<sup>153</sup> *Patent Harmonization Proposal Stirs Lively Debate at PTO Hearing, supra* note 115, at 511.

<sup>154</sup> Andrew Pollack, *U.S. Agrees to Alter Patents' Period of Coverage*, N.Y. TIMES, Jan. 24, 1994, at D2.

<sup>155</sup> *Id.*

<sup>156</sup> *Id.*

<sup>157</sup> The agreement states that by June 1, 1994, the U.S. Patent and Trademark Office will introduce legislation to amend the patent term in the United States from seventeen years from the date of patent issuance to twenty years from the date of filing. *U.S. Says 'Not Now' on First-to-File and Agrees with Japan on Patent Term, supra* note 83, at 286. Congress has not yet acted on the proposed changes.

<sup>158</sup> *Id.* at 285.

<sup>159</sup> *Id.*

administration about upsetting an important constituency, the small inventor and entrepreneur, and that proposing a change would cost too much in political capital.<sup>160</sup> Regardless of the reason, the decision not to pursue first-to-file signified the end of possible patent harmonization in the near future and the end of the harmonization developments at the World Intellectual Property Organization.<sup>161</sup>

*F. The Patent Term and Publication Reform Act of 1994—Missing First-to-File*

On February 11, 1994, Senator DeConcini once again attempted to introduce change into the patent system of the United States, but this time his proposed legislation was missing a key element of patent harmonization—first-to-file.<sup>162</sup> Senate Bill 1854 contains two major changes for the U.S. patent system. First, the Bill adopts a twenty-year patent term that begins on the date of filing a complete application.<sup>163</sup> Second, the Bill mandates early publication of patent applications eighteen months after the application is filed.<sup>164</sup> Unlike the legislation introduced in 1992, this Bill contains no provisions for accelerated patent examination.<sup>165</sup>

While introducing the legislation, Senator DeConcini argued that the change to a twenty-year patent term beginning on the date of filing was necessary because under the current system, there is no incentive to efficiently prosecute a patent application.<sup>166</sup> Instead, he noted, applicants have a large incentive to delay prosecution until the industry is established around the invention, thereby collecting greater damages

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<sup>160</sup> *Id.* at 286.

<sup>161</sup> Riordan, *supra* note 2, at D2. The decision by Commerce Secretary Brown is significant because the Patent and Trademark Office is an agency of the Commerce Department. As a result, that Office is bound by Secretary Brown's decision. 35 U.S.C. §§ 1, 3, 6 (1988). While the Congress could theoretically pass first-to-file legislation despite Secretary Brown's decision not to pursue first-to-file, it is highly unlikely that this would occur because changes in patent law typically come from the Patent and Trademark Office or the Commerce Secretary, not from the U.S. Congress. Until the Patent and Trademark Office asks for a change, the U.S. Congress hesitates to implement change. One indication of the administration's influence is that the patent legislation introduced on February 11, 1994 was missing first-to-file provisions. S. 1854, 103d Cong., 2d Sess. (1994).

<sup>162</sup> *Bill Proposes 20-Year Patent Term and 18-Month Publication of Applications*, 47 Pat. Trade-mark & Copyright J. (BNA) No. 1167, at 354, 354-55 (Feb. 17, 1994).

<sup>163</sup> *Id.* The Bill also extends the term of design patents from fourteen years from issuance to seventeen years from filing. *Id.* at 355. This portion of the legislation fulfills the agreement by Bruce Lehman with Japan to increase the patent term. See *supra* notes 156-57 and accompanying text.

<sup>164</sup> *Bill Proposes 20-Year Patent Term and 18-Month Publication of Applications*, *supra* note 162, at 354-55.

<sup>165</sup> *Id.* at 355.

<sup>166</sup> *Id.* Today, if a patent is prosecuted efficiently and issues early, the market for the product may not yet have developed around the product. A delay in prosecution could lead to the patent issuing as the market for the product is booming, thereby earning the patentee greater royalties. See *infra* notes 276-82 and accompanying text.

from infringers.<sup>167</sup> Senator DeConcini claimed that "submarine patents" would be eliminated by a patent term that begins on the date of filing, because applicants would have greater incentive to prosecute efficiently and quickly to receive maximum protection.<sup>168</sup>

On the issue of early publication, Senator DeConcini noted that secrecy in applications under the status quo jeopardizes the development of technology.<sup>169</sup> Furthermore, automatic publication would "facilitate the use of technology by American innovators and permit the identification of potential patent conflicts earlier than [is] now possible."<sup>170</sup> Senator DeConcini concluded his remarks by urging support for legislation "that will bring certainty to the term of a patent and reduce abuse of our patent system."<sup>171</sup> Congress has taken no action on this proposed legislation.<sup>172</sup>

### III. The Case for Patent Harmonization

The history of the patent system in the United States, especially the developments in the past year, indicates that the country is unsure about how to proceed in the new global economy. By pulling out of the WIPO discussions, the United States has shown that it does not want to proceed with the most significant change in U.S. patent law

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<sup>167</sup> *Bill Proposes 20-Year Patent Term and 18-Month Publication of Applications*, *supra* note 162, at 355. See *infra* notes 276-82 and accompanying text.

<sup>168</sup> *Bill Proposes 20-Year Patent Term and 18-Month Publication of Applications*, *supra* note 162, at 355. Senator DeConcini stated that the proposal "puts the U.S. patent system on par with the systems of other industrialized nations, establishes certainty in patent terms, and respects the constitutional premise of our patent system—that inventors are entitled to the fruits of their discoveries for only a limited period." 140 CONG. REC. S1524 (daily ed. Feb. 11, 1994) (statement of Sen. DeConcini).

<sup>169</sup> 140 CONG. REC. S1524 (daily ed. Feb. 11, 1994) (statement of Sen. DeConcini).

<sup>170</sup> *Id.*; see also *Bill Proposes 20-Year Patent Term and 18-Month Publication of Applications*, *supra* note 162, at 355.

<sup>171</sup> 140 CONG. REC. S1524-25 (daily ed. Feb. 11, 1994) (statement of Sen. DeConcini).

<sup>172</sup> Representative William Hughes introduced the "Patent Term Amendment Act of 1994" on May 26, 1994. H.R. 4505, 103d Cong., 2d Sess. (1994); see also *20-Year Patent Term Bill is Introduced for Administration*, 48 Pat. Trademark & Copyright J. (BNA) No. 1182, at 121 (June 2, 1994) (discussing provisions contained in the Patent Term Amendment Act). House Bill 4505 provides a twenty-year patent term from the date the application is filed. H.R. 4505, 103d Cong., 2d Sess. (1994). The Bill does not, however, provide for early publication of patent applications. *Id.*

Senator DeConcini introduced additional legislation in July 1994 which provided a defense to patent infringement for those who independently use an invention before it is patented. S. 2272, 103d Cong., 2d Sess. (1994); see also *Bill is Introduced to Provide Patent Infringement Defense to Prior Users*, 48 Pat. Trademark & Copyright J. (BNA) No. 1187, at 241 (July 14, 1994) (discussing prior user provisions of legislation). Under Senate Bill 2272, "the person claiming prior user rights must have commercially used . . . the invention in the United States before the filing or priority date of the patent application." *Id.* at 242. On September 30, 1994, Senator DeConcini introduced a bill that provides for: (1) early publication of applications eighteen months after filing; (2) provisional royalty awards; and (3) prior art effect for published applications. S. 2488, 103 Cong., 2d Sess. (1994); see also *Administration Bill on 18-Month Publication of Patents is Introduced*, 48 Pat. Trademark and Copyright J. (BNA) No. 1198, at 599 (Oct. 6, 1994) (discussing three primary objectives of Senate Bill 2488). See *infra* notes 251-64 and accompanying text for a discussion of prior user rights.

since 1836<sup>173</sup> without being absolutely sure that harmonization is in the best interests of inventors, consumers, and the nation in general. Congress will likely enact the proposed changes in the patent system regarding patent term and early publication in some form soon, but adoption of a first-to-file system and prior user rights will not be enacted in the foreseeable future.<sup>174</sup> Beginning with first-to-file, the most significant element of patent harmonization, this section will examine each of these four proposals—first-to-file, prior user rights, disclosure of applications, and a twenty-year patent term beginning on the date of filing. Each independent discussion contains a brief background explaining exactly what a change would require. Each section will also demonstrate why the proposed changes are in the best interests of American corporations, universities, and small inventors. The United States must make the concession of adopting first-to-file if it hopes to achieve meaningful reform in the rest of the world. Adoption of these four proposals is the necessary first step toward meaningful and beneficial patent harmonization.

*A. The United States Should Adopt First-to-File*

The most divisive issue in the harmonization debate is whether the United States should adopt a first-to-file system. Currently, if two people claim to be the inventor of an invention, the United States awards the patent to the inventor who can demonstrate that he was the “first to invent.”<sup>175</sup> Attempting to prove who is the “first and true inventor” is a difficult task and is open to questions regarding conception, reduction to practice, diligence, and suppression.<sup>176</sup> Nearly every nation other than the United States grants the patent to the first person to file a patent application.<sup>177</sup> For the United States to be a part of any meaningful patent harmonization treaty, it must abandon its system of first-to-invent and adopt the first-to-file system.<sup>178</sup> Thus, the United States should adopt a first-to-file patent system for three reasons: (1) the first-to-file system is superior to a system of first-to-invent;<sup>179</sup> (2) the change will not pose a significant harm to American inventors;<sup>180</sup> and (3) adoption of first-to-file will enable the United States to exact concessions from other nations to the benefit of this country.<sup>181</sup>

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<sup>173</sup> 138 CONG. REC. S5282, S5288 (daily ed. Apr. 9, 1992) (statement of Sen. DeConcini).

<sup>174</sup> See *supra* notes 158-61 and accompanying text.

<sup>175</sup> See *supra* notes 27-49 and accompanying text.

<sup>176</sup> See *supra* notes 50-61 and accompanying text.

<sup>177</sup> See *supra* note 58.

<sup>178</sup> William S. Thompson, *Reforming the Patent System for the 21st Century*, 21 AIPLA Q.J. 171, 181 (1993).

<sup>179</sup> See *infra* notes 182-91 and accompanying text.

<sup>180</sup> See *infra* notes 192-96 and accompanying text.

<sup>181</sup> See *infra* notes 197-215 and accompanying text.



### 1. *First-to-File Is Superior to First-to-Invent*

The first-to-file system is superior to the first-to-invent system, and the United States would benefit from the change. Initially, the first-to-invent system places a difficult burden on American inventors. American inventors are required to keep accurate records of all acts of invention in the event that a patent is involved in an interference proceeding and the inventor is required to prove conception, reduction to practice, and diligence.<sup>182</sup> The first-to-invent system results in complicated and expensive interference proceedings that would be unnecessary if the United States adopted a first-to-file system.<sup>183</sup> Importantly, the small independent inventor is at a major disadvantage in an interference proceeding against a large corporation.<sup>184</sup> Currently, interference proceedings are "cumbersome, inadequate, and often seemingly inexplicable."<sup>185</sup> However, if the United States adopts first-to-file, the question of right to a patent between interfering parties would be satisfied by a quick examination of filing dates, thus eliminating the need for interference proceedings.<sup>186</sup> As a result, the cost of the patenting process to the parties and the patent society "would be greatly diminished under a first to file system."<sup>187</sup> In fact, a first-to-file system may "prove a significant advantage to small companies and independent inventors when contrasted with the complications, costs, and difficulties associated with proving that an inventor made an invention first [under the current system]."<sup>188</sup> Adoption of a first-to-file system will end the inherent disadvantage of independent inventors in interference proceedings against large corporations, as a simple comparison of filing dates will end any question of priority.

In addition to being expensive and cumbersome, the first-to-invent system is unpredictable. Under the first-to-invent system, an issued patent is never safe from an allegation that another person

<sup>182</sup> See *Hearing, supra* note 58, at 26 (statement of Douglas B. Comer, Acting Commissioner, Patent and Trademark Office).

<sup>183</sup> See *id.* For an explanation of the complicated interference process, see 3 DONALD S. CHISUM, PATENTS § 10.09, at 10-199 to 10-219 (1994).

<sup>184</sup> See *Hearing, supra* note 58, at 112 (statement of Robert B. Benson, former President, American Intellectual Property Law Association). Robert A. Armitage observed that "[m]any independent inventors are grossly disadvantaged—losing patent interferences when they were in fact both first to invent and first to file—simply because the burden of the patent interference is too much to bear." *Id.* at 199 (statement of Robert A. Armitage, Vice President, Corporate Patents and Trademarks, The Upjohn Company).

<sup>185</sup> Thomas M. Marshall, *New Interference Rules—Boom or Bust*, 1967 PAT. L. ANN. 79, 106-07.

<sup>186</sup> See REPORT OF THE PRESIDENT'S COMMISSION ON THE PATENT SYSTEM, "TO PROMOTE THE PROGRESS OF . . . USEFUL ARTS" IN AN AGE OF EXPLODING TECHNOLOGY 5-6 (1966).

<sup>187</sup> Gregory J. Wrenn, *What Should be Our Priority—Protection for the First to File or the First to Invent?*, 72 J. PAT. [& TRADEMARK] OFF. SOC'Y 872, 878 (1990).

<sup>188</sup> *Hearing, supra* note 58, at 8 (statement of Hon. Harry F. Manbeck, Jr., Commissioner, Patent and Trademark Office); see also *Patent System Harmonization Legislation is Debated in Joint Senate-House Hearing, supra* note 71, at 3 (discussing potential advantages to small inventors in a first-to-file system).

developed the invention first. Under Section 102(g) of the Patent Act, a person is not entitled to a patent if another person invented the invention first.<sup>189</sup> Therefore, at any time during the patent term a third party has the opportunity to demonstrate a prior act of invention that can destroy a patent under Section 102(g).<sup>190</sup> According to the president of the AIPLA, one advantage to a first-to-file system is "an end to the cumbersome interference procedure for defining inventorship, and more certainty and simplicity in the application process."<sup>191</sup> Changing to first-to-file will settle the question of inventorship at the time the applicant files an application, and will end the uncertainty and unpredictability that can arise under the current first-to-invent system.

## 2. *Changing to First-to-File Would Be a Detriment to Few*

Adoption of a first-to-file system does not affect the vast majority of patent applicants, and the change would not be nearly as harmful as some predict.<sup>192</sup> First, most American companies already operate on a first-to-file system, so a change to first-to-file would not have a substantial effect. Since the rest of the world awards the patent to the first person to file a patent application, American companies with foreign interests who are already bound by the first-to-file system in other countries would not be adversely impacted by a change to first-to-file in the United States.<sup>193</sup>

Large American corporations would not be affected by a change to a first-to-file system, and neither would most independent inventors. Statistics for the fiscal years from 1988 to 1991 indicate that out of approximately 170,000 patent applications, the average number of inventors who were second to file, but first to invent, was only fifty-five per year.<sup>194</sup> Because only a fraction of patentees in the United States are independent inventors, the statistics demonstrate that only one to four independent inventors per year would lose a patent under the first-to-file system out of over 170,000 applications that are filed every year.<sup>195</sup> Furthermore, if the United States adopted a first-to-file system,

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<sup>189</sup> 35 U.S.C. § 102(g) (1988). See, e.g., *New Idea Farm Equip. Corp. v. Sperry Corp.*, 916 F.2d 1561, 1566-67 (Fed. Cir. 1990). The Court of Appeals for the Federal Circuit held that "[i]t is well established that, in a priority contest, the party first to conceive and first to reduce to practice prevails." *Id.*

<sup>190</sup> 35 U.S.C. § 102(g).

<sup>191</sup> *Patent Harmonization Proposal Stirs Lively Debate at PTO Hearing*, *supra* note 115, at 509.

<sup>192</sup> For a summary of the attacks on patent harmonization, see Coe A. Bloomberg, *In Defense of the First-to-Invent Rule*, 21 AIPLA Q.J. 255 (1993); see also Charles R.B. Macedo, *First-to-File: Is American Adoption of the International Standard in Patent Law Worth the Price?*, 18 AIPLA Q.J. 193 (1990) (discussing benefits of retaining the first-to-file system).

<sup>193</sup> See *Patent Harmonization Proposal Stirs Lively Debate at PTO Hearing*, *supra* note 115, at 509.

<sup>194</sup> See Peter V.D. Wilde, *Reality on Patents: The Early Filer Gets the Worm*, *Bus. Wk.*, Feb. 15, 1993, at 12.

<sup>195</sup> *Id.*

the first inventors in that small fraction of cases would have the incentive to file sooner, thus reducing the number of applicants who are first to invent but second to file to almost zero. Thus, a change to first-to-file would not affect a significant number of inventors.<sup>196</sup> The United States should not refuse to adopt meaningful patent harmonization because of the possibility of a tiny fraction of first inventors losing patent rights due to delay in filing.

### 3. *NAFTA and GATT Compel First-to-File to Avoid Difficult Interferences*

Adoption of international agreements like NAFTA and GATT requires the United States to recognize foreign use in interference proceedings in the future, a practice that will complicate the proceedings and burden the small inventor and university researcher. The United States must adopt a first-to-file system to avoid this problem. Section 104 of the Patent Act states that "an applicant for a patent, or a patentee, may not establish a date of invention by reference to knowledge or use thereof, or other activity with respect thereto, in a foreign country."<sup>197</sup> Therefore, in interference proceedings, proof of acts of inventorship are not valid if the act occurred in a foreign country. The result is that in an interference proceeding between an American inventor and a foreign inventor, the American inventor is entitled to the benefit of the invention date, while the foreign inventor is required to use the filing date.<sup>198</sup> This is a huge advantage for American inventors in close interference proceedings, as the American must simply prove that the requisite conception and reduction to practice occurred prior to the filing date of the foreign inventor. This advantage is one reason that some Americans do not want to adopt first-to-file—they assert that they will lose the statutory edge provided to American inventors by Section 104 of the Patent Act because conception and reduction to practice will no longer be relevant to establish entitlement to a patent. Instead, the winner of the "race" to the Patent Office will receive the patent, regardless of the date of American reduction to practice. Small inventors fear that large foreign corporations will always win this "race" due to the disparity in resources.

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<sup>196</sup> The statistics of the Patent and Trademark Office indicate that interference proceedings are extremely rare in comparison to the number of applications filed. Cases in which a subsequent filer succeeds in an interference proceeding are even less frequent. For instance, in 1990, there were 174,711 applications filed at the Patent Office, and only 222 interferences were terminated in that year. 1990 COMM. PAT. & TRADEMARKS ANN. REP. In 1991 there were only 235 interference proceedings for 178,083 patent applications. 1991 COMM. PAT. & TRADEMARKS ANN. REP. Of all interferences terminated, only approximately 30% result in the patent being awarded to the subsequent filer. Ian A. Calvert & Michael Sofocleous, *Interference Statistics for Fiscal Years 1989 to 1991*, 74 J. PAT. [& TRADEMARK] OFF. SOC'Y 822, 824 (1992). These figures indicate that a subsequent filer receives a patent in less than 0.03% of all patent applications filed each year. *Id.*

<sup>197</sup> 35 U.S.C. § 104 (1988).

<sup>198</sup> See Riordan, *supra* note 2, at D2.

Two treaties recently passed by the United States and other nations, however, will eliminate the American advantage of Section 104 of the Patent Act, and the resulting complications will result in a need to adopt first-to-file. The first significant international treaty that will affect Section 104 is the North American Free Trade Agreement (NAFTA).<sup>199</sup> According to the intellectual property provisions of NAFTA, each party<sup>200</sup> must "accord nationals of the other parties treatment no less favorable than that it accords to its own nationals with regard to the protection and enforcement of intellectual property rights."<sup>201</sup> One significant change to the patent laws as a result of NAFTA is the amendment of Section 104 of the Patent Act to provide that "any patent applicant or patentee may establish a date of invention by reference to knowledge or use of the invention in Canada or Mexico."<sup>202</sup> As a result, Section 104 no longer favors American inventors over those in Canada or Mexico. Any North American corporation is now entitled to prove date of invention in an interference proceeding. American inventors must now compete with large companies with more resources, more lawyers, and more records from three nations in interference proceedings, and the statutory advantage that the small inventor with little resources once had over foreign corporations in Canada and Mexico no longer exists.

The second major treaty is the broader General Agreement on Tariffs and Trade (GATT).<sup>203</sup> After seven years, the Uruguay Round<sup>204</sup> of negotiations ended on December 15, 1993.<sup>205</sup> GATT passed the House on November 29, 1994<sup>206</sup> and President Clinton signed it on December 8, 1994.<sup>207</sup> Negotiators for GATT called the agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs) one of the most significant sections of the pact.<sup>208</sup> Article 27 of the TRIPs Agreement requires that patents must be available "without discrimination as to the place of invention."<sup>209</sup> To avoid such dis-

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<sup>199</sup> NAFTA, *supra* note 116.

<sup>200</sup> The "parties" are Canada, the United States, and Mexico. *Id.*

<sup>201</sup> *Bill to Implement NAFTA is Signed With Provisions that Affect IP Law*, *supra* note 116, at 139.

<sup>202</sup> *Id.*; see 35 U.S.C. § 104(a) (Supp. V 1993).

<sup>203</sup> GATT, *supra* note 117.

<sup>204</sup> General Agreement on Tariffs and Trade-Multilateral Trade Negotiations (The Uruguay Round): Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations, GATT Doc. MTN/FA (Dec. 15, 1993), *reprinted in* 33 I.L.M. 1 (1994). The Uruguay Round began in December 1986 in Punta del Este, Uruguay. *GATT Negotiators Hail TRIPs Pact as Success*, 47 Pat. Trademark & Copyright J. (BNA) No. 1162, at 222, 223 (Jan. 13, 1994).

<sup>205</sup> *Uruguay Round of GATT Talks are Concluded with IP Provisions*, 47 Pat. Trademark & Copyright J. (BNA) No. 1160, at 170, 170 (Dec. 23, 1993).

<sup>206</sup> 140 CONG. REC. H11493 (daily ed. Nov. 29, 1994).

<sup>207</sup> *Global Trade Pact Signed by Clinton*, *supra* note 117, at 1C.

<sup>208</sup> *GATT Negotiators Hail TRIPs Pact as Success*, *supra* note 204, at 222.

<sup>209</sup> See *Uruguay Round of GATT Talks are Concluded with IP Provisions*, *supra* note 205, at 171 (quoting Art. 27 of TRIPs).

crimination, the United States must further amend or repeal Section 104 of the Patent Act to allow foreign acts of invention to be used in establishing dates of invention for interference proceedings.<sup>210</sup> This will place the small American inventor in the same position as the large foreign corporation in an interference proceeding. The inevitable result in a first-to-invent system is that American inventors and foreign conglomerates will "become embroiled in complicated proceedings over who invented what first . . . . 'In a few years, small entities are going to come kicking and screaming into the Patent Office for a first-to-file system.'"<sup>211</sup> Furthermore, allowing everyone to prove inventorship will "open the floodgates to messy, lengthy, expensive, patent interference proceedings."<sup>212</sup> According to one commentator, "[t]rial testimony, and other proofs relating to conception, diligence and reduction to practice of an invention made anywhere in the world could increase the costs of an interference trial significantly."<sup>213</sup> Now that NAFTA and GATT are both law in the United States, the American inventor will be better served by the simple and efficient first-to-file system, because interference proceedings, already a complicated and expensive drain on the resources of American innovators,<sup>214</sup> will become even more difficult, more expensive, and less successful than in the past.<sup>215</sup> American recognition of the importance of world trade is evident in its adoption of NAFTA and GATT. Now the United States must recognize the importance of world harmonization in patent laws and adopt the first-to-file system.

#### 4. *First-to-File is the Key to Meaningful and Beneficial Patent Harmonization*

Most significantly, the United States should adopt the first-to-file system because it is the keystone of meaningful world patent harmonization. If the United States were to give up the first-to-invent system in favor of first-to-file, it could demand reform in other countries to the benefit of American inventors, both corporate and independent. The WIPO Harmonization Treaty contains several articles consistent with U.S. patent law and favorable to the American inventor, and adoption of a first-to-file system will enable the United States to pressure other countries to adopt those provisions. One commentator stated that harmonization "presents the United States with a unique opportunity to strengthen the protection for the invention of American industry and

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<sup>210</sup> See *id.*

<sup>211</sup> Riordan, *supra* note 2, at D2 (quoting patent attorney Robert A. Armitage).

<sup>212</sup> Teresa Riordan, *An Outspoken Inventor Protests Efforts to 'Harmonize' Global Rules*, N.Y. TIMES, Nov. 29, 1993, at D2.

<sup>213</sup> Edward G. Fiorito, *The WIPO "Basic Proposal" for Harmonization of Patent Laws Viewed from the U.S. Practitioners Point of View*, 19 AIPLA Q.J. 24, 37 (1991).

<sup>214</sup> See *supra* notes 182-91 and accompanying text.

<sup>215</sup> See *supra* notes 56-58, 182-91 and accompanying text.

individual inventors around the world."<sup>216</sup> Harmonization will benefit American inventors in several ways.

*a. International Grace Period*

The United States could demand a grace period of international scope.<sup>217</sup> Currently, the U.S. patent system grants a one-year grace period during which a public disclosure will not be considered prior art for the purpose of a section 102 statutory bar to patentability.<sup>218</sup> The grace period enables American inventors to publish results of tests and to make preliminary public sales without fear of losing the right to possibly valuable patent protection.<sup>219</sup> Most other countries operate on the theory of absolute novelty without a grace period, however, and will not issue a patent if there has been any disclosure prior to the date of filing.<sup>220</sup> As a result, when an American inventor publishes an invention in reliance upon the grace period, he or she automatically forfeits any right to a patent "in virtually every country other than the United States."<sup>221</sup> While most large American corporations have adapted to the absolute novelty requirements of other countries, independent inventors are often not aware of the adverse consequences of early publication, and therefore forfeit foreign rights unknowingly.<sup>222</sup> University researchers that place a premium on publication often give up foreign patent rights in favor of early publication.<sup>223</sup> The result is that foreign companies have a repository of information in the U.S. Patent Office in the form of patents that can only be valid in this country due to the grace period.<sup>224</sup> This information can be freely used in the rest of the world, and the American inventor has no protection.<sup>225</sup> This problem could be rectified if the United States was able to pressure the rest of the world to adopt an international grace period.<sup>226</sup> In addition to first-to-file, the WIPO Treaty provided a one-

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<sup>216</sup> *Hearing, supra* note 58, at 6 (statement of Hon. Harry F. Manbeck, Jr., former Commissioner, Patent and Trademark Office).

<sup>217</sup> Thompson, *supra* note 178, at 176.

<sup>218</sup> *Id.* Section 102(b) of the Patent Act states that a "person shall be entitled to a patent unless . . . the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States." 35 U.S.C. § 102(b) (1988).

<sup>219</sup> Thompson, *supra* note 178, at 176.

<sup>220</sup> *Id.*

<sup>221</sup> *Id.*

<sup>222</sup> *Id.*

<sup>223</sup> *Id.* The former Commissioner of the Patent and Trademark Office testified that "U.S. inventors, particularly those in the university community who follow the rule of publish or perish, have lost rights abroad due to early publication." *Hearing, supra* note 58, at 6 (statement of Hon. Harry F. Manbeck, Jr., former Commissioner, Patent and Trademark Office).

<sup>224</sup> Thompson, *supra* note 178, at 176.

<sup>225</sup> *Id.*

<sup>226</sup> *Id.*

year international grace period for inventor-derived disclosures.<sup>227</sup> American adoption of a first-to-file system as part of a complete harmonization package would enable the United States to pressure the rest of the world to adopt an extremely valuable grace period that would benefit small inventors and universities in this country.<sup>228</sup> This benefit alone would justify the change to first-to-file; a small price to pay for international protection of American innovation.

*b. Elimination of Pre-Grant Oppositions*

Another benefit of harmonization is the elimination of the opportunity to file pre-grant oppositions. In many countries today, after a patent application is published, members of the public are allowed to examine the application and file pre-grant oppositions stating reasons why a patent should not be issued.<sup>229</sup> In the United States, however, only the Patent Examiner is permitted to cite reasons for rejecting an application.<sup>230</sup> The use of pre-grant oppositions in those countries where it is tolerated is conducive to abuse.<sup>231</sup> The practice allows competitors of an inventor to file numerous oppositions to delay the grant of a patent.<sup>232</sup> In a few cases, these delays can last until *after* the patent term has expired.<sup>233</sup> The harmonization treaty contemplated by WIPO specifically eliminates the practice of pre-grant oppositions.<sup>234</sup> If the United States adopted a first-to-file system, it could pressure other nations to eliminate the abusive pre-grant opposition process as part of a harmonization treaty, thereby benefiting American inventors in those countries.

*c. International Doctrine of Equivalents*

Patent harmonization would also require other nations to adopt a system similar to the doctrine of equivalents in the United States. In this country, if a device that is not precisely identical to the patented device "performs substantially the same function in substantially the same way to obtain the same result," a patentee may invoke the doctrine of equivalents to claim infringement.<sup>235</sup> This doctrine prevents potential infringers from making minor alterations or insignificant

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<sup>227</sup> *Id.*

<sup>228</sup> *Id.* The general consensus is that "European countries are quite opposed to a grace period and will adopt one only in the context of a treaty package." *Id.* at 180.

<sup>229</sup> *Hearing, supra* note 58, at 6 (statement of Hon. Harry F. Manbeck, Jr., former Commissioner, Patent and Trademark Office).

<sup>230</sup> 35 U.S.C. § 132 (1988).

<sup>231</sup> *Hearing, supra* note 58, at 6-7 (statement of Hon. Harry F. Manbeck, Jr., former Commissioner, Patent and Trademark Office).

<sup>232</sup> *Id.*

<sup>233</sup> *Id.* at 7.

<sup>234</sup> *Id.*

<sup>235</sup> *Sanitary Refrigerator Co. v. Winters*, 280 U.S. 30, 42 (1929) (quoting *Machine Co. v. Murphy*, 97 U.S. 120, 125 (1877)). The Court observed: "A close copy which seeks to use the substance of the invention, and although showing some change in form and position, uses

substitutions to avoid infringement, while still gaining all of the benefits of the innovation. In most countries however, "the nature of the laws and the judicial practice of some countries has resulted in patents being interpreted so narrowly by courts that minor changes allow an infringer to escape liability."<sup>236</sup> The WIPO draft harmonization treaty includes a provision for the doctrine of equivalents.<sup>237</sup> Furthermore, the treaty prevents courts from limiting the scope of the claims in the patent to the literal meaning of their wording.<sup>238</sup> If the United States would adopt a first-to-file system, it could pressure other countries to adopt the doctrine of equivalents, thereby increasing worldwide protection for American inventors.

#### d. *English-Language Filings*

An additional benefit to harmonization is the ability to file patent applications in English and supply a translated application within two months.<sup>239</sup> Currently, American inventors must obtain a translation of the application before filing. This results in two problems when attempting to obtain protection abroad. First, in a "race" to the foreign nation's patent office, an American inventor is placed at a disadvantage to an inventor who can speak the language of that country due to the delay in obtaining a translation. Second, if an error is made during translation which is essential to the scope of the claims or the patentability of the entire invention, the error is not correctable, and the American inventor either loses the patent or obtains greatly reduced coverage due to a clerical mistake.<sup>240</sup> The WIPO draft harmonization treaty permits the filing date of the English language original application to serve as the priority date of the patent for purposes of the "race" to the patent office.<sup>241</sup> Furthermore, the English language application would be considered the "official" application for purposes of correcting typographical or clerical errors in translation.<sup>242</sup> An agreement between the United States and Japan signed on January 20, 1994, provides that American inventors will be permitted to file an English

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substantially the same devices, performing precisely the same offices with no change in principle, constitutes an infringement." *Id.*

<sup>236</sup> *Hearing, supra* note 58, at 7 (statement of Hon. Harry F. Manbeck, Jr., former Commissioner, Patent and Trademark Office).

<sup>237</sup> Basic Proposal for Patent Harmonization, at art. 21, *reprinted in WIPO Experts Make Progress on Patent Harmonization Draft, supra* note 63, at 238.

<sup>238</sup> *Id.*

<sup>239</sup> Basic Proposal for Patent Harmonization, at art. 8, *reprinted in WIPO Experts Make Progress on Patent Harmonization Draft, supra* note 63, at 232. This provision will also enable foreign applicants to file an application in the United States in languages other than English. *Id.*

<sup>240</sup> *Hearing, supra* note 58, at 7 (statement of Hon. Harry F. Manbeck, Jr., former Commissioner, Patent and Trademark Office).

<sup>241</sup> Basic Proposal for Patent Harmonization, at art. 8, *reprinted in WIPO Experts Make Progress on Patent Harmonization Draft, supra* note 63, at 232.

<sup>242</sup> *Hearing, supra* note 58, at 7 (statement of Hon. Harry F. Manbeck, Jr., former Commissioner, Patent and Trademark Office).



language application to establish a priority date so long as a Japanese translation follows "in a reasonable period of time."<sup>243</sup> If the United States adopted a first-to-file system as part of a harmonization package, it could demand this change from all other nations, thereby benefiting American inventors.

*e. Reduced Cost*

The costs of a universal, harmonized patent system would be greatly reduced, thereby increasing the small inventor's accessibility to the world market. As one commentator noted:

Such harmony in international patent practice would avoid costs involved with the dual anomaly that can occur in today's world . . . . A universal first to file system would save the transaction costs associated with securing multiple licenses for world-wide practice of the invention. Such harmony in international patent laws would also reduce the time and expense required for an inventor to obtain international protection.<sup>244</sup>

Harmonization of patent laws would save independent inventors and university researchers time and money, and would expand their zone of protection to nations that they were never able to reach under the isolationist first-to-invent system.

For American inventors to enjoy the benefits of patent harmonization throughout the world, the United States must pay a relatively small price: this country must move from a first-to-invent system to first-to-file.<sup>245</sup> Implementation of a first-to-file system in this country will allow the United States to join in the efforts of the international community to obtain meaningful patent harmonization. The WIPO harmonization treaty calls for change in the patent laws of every country, and the United States is no exception. Harmonization will enable the American inventor to expand the zone and scope of patent protection around the world, and adoption of a first-to-file system is a small price to pay for international acceptance and recognition of American innovation.

*5. Provisional Applications Will Protect the American Inventor in a First-to-File System*

The United States should adopt a system of provisional applications to allay the concerns of small inventors that they will always lose the race to the patent office. 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

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<sup>243</sup> Pollack, *supra* note 154, at D2.

<sup>244</sup> Wrenn, *supra* note 187, at 879.

<sup>245</sup> *Hearing, supra* note 58, at 8 (statement of Hon. Harry F. Manbeck, Jr., former Commissioner, Patent and Trademark Office).

the same invention.<sup>246</sup> They also fear the added cost of filing an application after every minor improvement is made to ensure priority, instead of waiting until the invention is complete.<sup>247</sup> A provisional application filing would enable the inventor to obtain an early filing date at little cost.<sup>248</sup> The Patent Office could require the provisional application to contain items such as a brief description of the invention, the names of all inventors, and a small filing fee. The inventor would then be required to file a complete application within a set period of time to retain the filing date of the provisional application as the priority date.<sup>249</sup> This simple, low-cost system of establishing priority is superior to the current means of establishing priority—the complex, expensive, and inefficient interference practice.<sup>250</sup> It should also minimize the concerns of the independent inventor that the first-to-file system would reward paperwork over invention.

*B. The United States Should Adopt Prior User Rights*

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. If the United States adopted a first-to-file system, prior inventors could no longer invalidate a patent under Section 102(g) of the Patent Act.<sup>251</sup> Without prior user rights, the subsequent inventor who won the race to the Patent Office could prevent the prior inventor from using his invention. This result is unfair because the prior inventor should be allowed to practice the invention developed by that inventor. To restore equity, the United States should adopt limited prior user rights to enable the prior user to continue to use the invention. If the United States adopted a form of prior user rights, the “first and true inventor” currently protected under American law would not lose the right to practice the invention if another inventor were the first to file. Instead, the first filer is awarded the patent, but the first inventor is permitted to practice the invention. This equitable solution rewards

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<sup>246</sup> Bloomberg, *supra* note 192, at 260.

<sup>247</sup> *Id.*

<sup>248</sup> Roger Smith, testifying on behalf of the Intellectual Property Owners Inc. at the 1993 Patent Harmonization Hearings, noted that a provisional application would “protect the small inventor or university laboratory that cannot afford to file a full-fledged application.” *Patent Harmonization Proposal Stirs Lively Debate at PTO Hearing, supra* note 115, at 509. See *supra* notes 130-31 and accompanying text.

<sup>249</sup> One commentator suggested that a provisional application system would allow the inventor to obtain a priority date, and “then later, if the invention is proven or they believe it is worth the cost of a full application, they would be able to file a full application within a year.” *Hearing, supra* note 58, at 8 (statement of Hon. Harry F. Manbeck, Jr., former Commissioner, Patent and Trademark Office).

<sup>250</sup> *Patent System Harmonization Legislation is Debated in Joint Senate-House Hearing, supra* note 71, at 3-4.

<sup>251</sup> 35 U.S.C. § 102(g) (1988). Section 102, which defines the first inventor as the one to first conceive and reduce to practice while exhibiting due diligence and not suppressing or concealing the invention, would be repealed and replaced by the provisions of first-to-file. See *id.*

the person who first made the invention available to the public by means of a patent application but also recognizes and rewards the achievement of the first inventor.

The United States should adopt a prior user right to ensure that American innovators are treated equitably. It is unfair to enforce a patent against someone who used the invention prior to the application for patent by a subsequent inventor. Such prior use indicates that the prior user did not benefit at all from the patent disclosure. Because the American patent system operates on a quid pro quo philosophy,<sup>252</sup> and because the prior inventor did not gain any benefit from the patent disclosure, the prior user should not be obligated to refrain from using the invention.

The United States should adopt prior user rights to allow American innovators to enjoy the same rights enjoyed by foreign inventors. If the United States did not adopt prior user rights with a first-to-file system, foreign owners of American patents could prohibit use by American prior users.<sup>253</sup> Americans who hold patents in other nations, however, cannot enjoin prior users in those countries because those nations grant prior user rights.<sup>254</sup>

The United States should also adopt prior user rights to respect and protect American trade secrets.<sup>255</sup> Without a prior user right, trade secret holders risk losing the right to practice the trade secret if another innovator independently discovers the trade secret and receives a valid patent.<sup>256</sup> Without prior user rights, American industry has little incentive to utilize trade secret protection when such protection might otherwise be in the best interests of the company.<sup>257</sup> Adop-

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<sup>252</sup> The temporary patent protection "against free competition is awarded in the faith that it will serve the public interest." S. Chesterfield Oppenheim, *A New Approach to Evaluation of the American Patent System*, 33 J. PAT. [& TRADEMARK] OFF. SOC'Y 555, 555 (1951). The patent system is indeed a quid pro quo arrangement: the nation and the public receive the benefits of innovation by means of the patent, a public document that must be written to enable one skilled in the art to practice the invention, while the innovator, the patentee, receives a limited monopoly of seventeen years to practice the invention and to reap the economic benefits of innovation. *See id.*

<sup>253</sup> THE ADVISORY COMMISSION ON PATENT LAW REFORM, A REPORT TO THE SECRETARY OF COMMERCE 49 (1992).

<sup>254</sup> *Id.*

<sup>255</sup> A trade secret "may consist of any formula, pattern, device, or compilation of information which is used in one's business, and which gives him an opportunity to obtain an advantage over competitors who do not know or use it." RESTATEMENT OF TORTS § 757 cmt. b (1939).

<sup>256</sup> *See* Ridsdale Ellis, *Subsequent Inventor's Patent Rights with Regard to an Invention Previously Made by Another Who Kept It Secret*, 35 J. PAT. [& TRADEMARK] OFF. SOC'Y 259, 285 (1953) ("A user of a secret process or machine would never know when he would wake up to find he had to stop using his process or machine.").

<sup>257</sup> For example, certain inventions, such as process innovations, are extremely difficult to protect by patent because the result of the process might be indistinguishable from the product of other processes. As a result, inventors of innovative processes might wish to protect the innovation by trade secret and not by patent. However, if someone else patents the process later, the prior user loses the right to practice the trade secret and becomes liable to the patentee.

tion of prior user rights will protect the trade secret holder from the risk that a subsequent discoverer will patent the invention to the exclusion of the "first and true inventor." The prior user should be permitted to continue the secret use made prior to the filing of an application by another to eliminate the risk that the prior user might be required to cease use simply because the user did not desire to seek patent protection.<sup>258</sup>

The prior user right adopted by the United States should not be overly broad; instead, a limited and defined class of prior users should be entitled to protection. First, the "rights should be based only upon activity . . . prior to the earliest filing date to which the relevant claim or claims of the patent is or are entitled."<sup>259</sup> The use should be continuous, as prior users who abandoned experimentations or use of an invention should not be permitted to resume activity.<sup>260</sup> The use should be in the United States only, as prior use in a foreign country is of no benefit to the United States, and the right to use an invention in a foreign nation does not affect the American patent right. Additionally, the prior use should "have been done in good faith and without derivation from the patentee"<sup>261</sup> in order to prevent someone from taking the benefits of the patentee's innovation from the patentee. Finally, a prior user right should only protect those who independently invent the invention, not those who take the invention from the patentee.

The nature of the use that is entitled to a prior user right should also be clearly defined. While some argue that the prior user must have used or substantially prepared the invention *commercially*,<sup>262</sup> the prior user right should extend to *anyone* who used the invention prior to the filing of the patent. Prior university research or purely scientific research should not be barred merely because the innovators did not choose to commercially exploit the innovation. So long as the right that is granted by the prior user right does not expand the scope of prior use or activity which created the right, the prior user right should restrict the noncommercial prior user to that use. To ensure a just result, the "right created by the prior use or preparation should be

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<sup>258</sup> A prior user might not seek patent protection for a variety of reasons, none of which justifies the enforcement of a subsequently filed patent against him or her. For example, a small inventor with limited resources (or even a pragmatic large corporation) will not want to spend the time or money needed to seek patent protection on every minor improvement developed.

<sup>259</sup> THE ADVISORY COMMISSION ON PATENT LAW REFORM, A REPORT TO THE SECRETARY OF COMMERCE 49 (1992).

<sup>260</sup> Gary L. Griswold & F. Andrew Ubel, *Prior User Rights—A Necessary Part of a First-to-File System*, 26 J. MARSHALL L. REV. 567, 580 (1993).

<sup>261</sup> THE ADVISORY COMMISSION ON PATENT LAW REFORM, A REPORT TO THE SECRETARY OF COMMERCE 49 (1992).

<sup>262</sup> See, e.g., *id.* The Report states that "the prior user right must be based upon either actual use in commerce of the patented invention, or upon substantial material preparations for such commercial use." *Id.*

limited to continuation of the particular activity which gives rise to the right."<sup>263</sup> The prior user right should not permit the prior user to expand the scope of the prior use, because to allow expansion would erode the patent right unfairly. Furthermore, the prior user right should be personal and not transferable to avoid a significant alteration in the nature of the use and to respect the personal nature of the equitable right.<sup>264</sup>

C. *The United States Should Adopt Early Disclosure of Patent Applications*

A decision to publish patent applications prior to issuance, while not as controversial as first-to-file or prior user rights,<sup>265</sup> would still be a major reversal of U.S. patent policy—a policy premised on secrecy during patent prosecution.<sup>266</sup> This significant change, however, would be extremely beneficial for American innovators. Currently, inventors often expend substantial resources in time and money to develop an invention that is secretly making its way through the prosecution process, only to discover that someone else had already developed the same invention.<sup>267</sup> Early application disclosure would enable American innovators to use the disclosed technology in the development of other inventions, and would allow inventors to examine possible conflicts between their inventions and information that is disclosed.<sup>268</sup> Publication would benefit Americans by “preventing duplication of research, signaling promising areas of research, and indicating which fields or research topics are being pursued by other firms.”<sup>269</sup> Early publication will benefit small inventors by allowing them to assess their likelihood of receiving a patent before undertaking the expensive process of pursuing a patent.<sup>270</sup> Early publication would also aid the Patent Office by allowing applicants to cite to other applications as prior art.<sup>271</sup> As a result, searches and examinations would be more efficient,

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<sup>263</sup> *Id.*

<sup>264</sup> *Id.*

<sup>265</sup> Most speakers at the 1993 Patent Harmonization hearings agreed that applications should be published after eighteen or twenty-four months. *Patent Harmonization Proposal Stirs Lively Debate at PTO Hearing*, *supra* note 115, at 511.

<sup>266</sup> 35 U.S.C. § 122 (1988).

<sup>267</sup> 140 CONG. REC. S1524-25 (daily ed. Feb. 11, 1994) (statement of Sen. DeConcini).

<sup>268</sup> *Id.* at S1525.

<sup>269</sup> *Id.*

<sup>270</sup> *Id.*

<sup>271</sup> *Id.* Patent applicants have a duty to disclose to the Patent Office “all information known to that individual to be material to patentability.” 37 C.F.R. § 1.56 (1993). This includes prior art. *Id.* However, under the current system, while unpublished applications become prior art if the patent issues, 35 U.S.C. § 102(e) (1988), an applicant has no access to the unpublished applications. Therefore, the potentially most significant prior art is not available to the applicant for § 1.56 disclosures. If the applicant has access to applications, he or she would be expected to disclose any material prior art in the prosecution of the patent application. 37 C.F.R. § 1.56.

saving money and time.<sup>272</sup>

Congress should adopt procedural safeguards to complement a policy of publishing patent applications. Congress should not require a patent applicant to risk disclosure of a valuable trade secret in a patent application if there is a possibility that the patent will not issue. Without safeguards, the Patent Office would release an application containing such trade secrets to the public, the patent could be denied, and the applicant may lose all rights to the trade secret. The Patent and Trademark Office should allow accelerated examination for those applicants who want a patentability opinion and at least one office action prior to publication. Accelerated examination will allow the applicant to make an informed decision about whether to pursue the application or to withdraw the application to avoid publication.<sup>273</sup> Furthermore, applicants who successfully receive a patent on a published application should be allowed to receive protection for the period between publication and issuance. A reasonable royalty provision would protect the applicant during the pendency of the application when the innovation disclosed is not yet entitled to formal patent protection.<sup>274</sup> One commentator at the 1993 Patent Harmonization hearings called the royalty proposition a "no-brainer."<sup>275</sup> The royalty provision is essential because absent such a provision, a third party could simply read a published patent application and commercially exploit it before the patent issues. A royalty provision would enable the successful applicant to receive all of the benefits of the applicant's innovation.

*D. The United States Should Adopt a Twenty-Year Patent Term Beginning on the Filing Date*

The least controversial of the four proposals discussed in this Article is the decision to adopt a twenty-year patent term that begins on the date of filing a complete patent application.<sup>276</sup> According to the

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<sup>272</sup> The primary problem with early publication is cost. The former commissioner of the Patent and Trademark Office estimated the annual cost at \$34.3 million for publication of entire applications and \$10.5 million for laying open applications. *Hearing, supra* note 58, at 19 (statement of Hon. Harry F. Manbeck, Jr., former Commissioner, Patent and Trademark Office). The past president of AIPLA, however, commented that this cost would be drastically reduced when the United States adopts a system of electronic filing, and that in any event, early publication is "of such an advantage that . . . the American industry would be willing to pay an appropriate fee for such a benefit." *Id.* at 113 (statement of Robert B. Benson, past President, American Intellectual Property Law Association).

<sup>273</sup> It is for this reason that the AIPLA supports an accelerated examination. *Patent Harmonization Proposal Stirs Lively Debate at PTO Hearing, supra* note 115, at 511.

<sup>274</sup> Until a patent actually issues, the patentee is not entitled to exclude others from making, using, or selling the invention. Therefore, to restore equity, a reasonable royalty calculated in the same fashion as the royalty of issued patent infringement damages would enable the patentee to recover damages for the time prior to patent issuance. *Id.*

<sup>275</sup> *Id.*

<sup>276</sup> *Id.*

AIPLA, a supporter of a revised patent term, the current system provides an incentive to delay prosecution until the industry surrounding the invention develops as a means of earning more in royalty payments.<sup>277</sup> Senator DeConcini agreed, stating that under the current system, inventors "have no incentive to have their filed patent application prosecuted expeditiously. Rather, they have an incentive to prolong the period they spend at the Patent Office, benefiting from the secrecy of their application and thereby extending the life of their patent."<sup>278</sup> Some applicants have successfully delayed their patent applications in the Patent Office until an industry is established in the patented technology—often over twenty years from the filing date.<sup>279</sup> When it finally issues, the patent surprises those in the industry who were not aware of the delayed pending application, and it has serious detrimental effects on the industry.<sup>280</sup> The adoption of a twenty-year patent term that begins on the filing date grants inventors protection for a limited time, and does not enable abuse. Applicants would have incentive to prosecute patent applications expeditiously to receive the maximum protection, and potential infringers will benefit by knowing exactly what was being patented. The new system would produce certainty in a confusing and inefficient process, and would save time and money at the Patent Office.<sup>281</sup> The United States should adopt a twenty-year patent term that begins on the date a completed application is filed.<sup>282</sup>

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<sup>277</sup> *Patent System Harmonization Legislation is Debated in Joint Senate-House Hearing, supra* note 94, at 4.

<sup>278</sup> 140 CONG. REC. S1524 (daily ed. Feb. 11, 1994) (statement of Sen. DeConcini).

<sup>279</sup> *Id.*

<sup>280</sup> *Id.* at S1525. For example, Jerome Lemelson applied for a patent for a "machine vision device" on December 4, 1956. Stewart Yerton, *The Sky's the Limit*, THE AM. LAW., May 1993, at 64. It took Lemelson thirty-six years to receive a patent on some parts of this device, and the patents for other parts have yet to be issued. *Id.* This contrasts sharply with the nineteen month average pendency of U.S. patent applications. *Id.* These patents received the full benefits of the seventeen-year term beginning on the date of issuance, and the applications remained confidential throughout the pendency. *Id.* Meanwhile, an entire industry evolved around machine vision technology, independently developed by other companies. *Id.* As a result of the patents that were delayed for over thirty years, Lemelson is currently enjoying royalty payments from the auto industry in sums exceeding \$100 million per year, money that could be spent on developing new technology in the industry. *Id.* at 66. If the patent had issued in nineteen months, the auto industry would still have been required to pay Lemelson a royalty, but the royalty would have been less, and would have been paid before the industry became entirely dependent on "machine vision" technology. While Lemelson did nothing illegal to delay the patent's issuance for over thirty years, someone "who springs a patent on an unsuspecting research community has added nothing to the research . . . and his patents [contribute] nothing more than a patent tax to discourage innovation and exploitation of technology." *Id.* at 69 (quoting Harold Wegner, Director of the Intellectual Property Program, George Washington University National Law Center).

<sup>281</sup> Applicants would file fewer amendments to intentionally delay the date of the patent grant, and examinations would therefore be simpler, thus saving the Patent Office money.

<sup>282</sup> There are two other reasons why such a change should be made. First, a twenty-year patent term is included in the Trade Related Aspects of Intellectual Property Rights (TRIPs) Agreement of the Uruguay round of the General Agreement on Tariffs and Trade (GATT), and the United States must consider the change as a party to that agreement. *See GATT*

#### IV. The Future is Now

The United States is at a crossroads. For the past two hundred years, the United States has successfully based its growth and prosperity on domestic success. Gradually, however, the United States has begun to accept that the true frontier for American prosperity lies elsewhere. As the world economy begins to unify, Americans are becoming more dependent on world trade and international cooperation. In the past year, NAFTA and GATT have served to demonstrate America's resolve to trade freely with nations around the world. Unfortunately, the United States appears to be afraid of taking an extremely important step in its evolution into a global partner.

By refusing to adopt a patent system based upon first-to-file, the United States is ignoring the needs of American innovators. The current interference system is archaic, inefficient, and expensive. With the passage of NAFTA and GATT, American inventors will no longer enjoy the statutory bias in favor of Americans for interference proceedings. A first-to-file system with a provisional application will not harm the small inventor. Rather, it will protect the inventor who deserves to be protected—the one who is the first to grant the knowledge of research and innovation to the rest of the world, thereby promoting the progress of useful arts. First-to-file will also signify that the United States is ready to be a part of true global patent harmonization, a process that will enable American innovators to reap the benefits of concessions, such as an international grace period, from other nations. Adoption of a prior user right will protect the first to invent, and will recognize the right of an innovator to practice his or her craft without fear of losing that right to a subsequent inventor. A twenty-year patent term and early publication will prevent abuse of the patent system and will further promote the progress of useful arts.

Commerce Secretary Brown said that America would possibly pursue patent harmonization at some time in the future. It is time that Secretary Brown and the U.S. Congress recognize that for millions of American corporations, small businesses, universities, and independent inventors, the "future" is now.

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*Negotiators Hail TRIPs Pact as Success*, *supra* note 208, at 223 (discussing provisions and success of TRIPs agreement). Second, the Clinton administration agreed with Japan to adopt a twenty-year patent term. *See supra* notes 155-57 and accompanying text.