C. *Protection for the Record Companies*

It is true that not all artists who declare bankruptcy do so for good-faith reasons. It may well be the case that an artist does not have any real financial burden necessitating bankruptcy, only a desire to reject a recording contract. In such a situation, the record company should be protected. As previously mentioned, however, there are already adequate safeguards in the judicial system that protect the record companies from bad faith filers. A court can reject an artist's bankruptcy petition if it finds bad faith.

There is also another possible solution. The court, in certain circumstances, should be able to award damages to the record companies. "Contracts that are clearly unconscionable or otherwise illegal should still be declared unenforceable."[186] However, where a court finds that the contract is favorable to both parties, and the artist is simply looking to leave the record company, it should award damages to the record company in an amount that represents the fair worth of the artist to the company.

D: *The Bottom Line*

If the Bankruptcy Reform Act of 2001 passes and the compromise provision takes effect, or if a similar provision someday becomes law, the music industry as a whole will suffer. Inequities in bargaining power lead to these unfavorable contracts, and unfavorable contracts lead to bankruptcy filings by artists. Therefore, legislators should focus on reforming contract law instead of unfairly singling out musicians in bankruptcy reform.

*Risa C. Letowsky**

186 *Id.* at 410. *See also* Motown Record Corp. v. Brockert, 160 Cal. App. 3d 123, 139 (Cal. Ct. App. 1984) (concluding that option exercised by appellee record companies restraining appellant from performing her singing and songwriting talents for any other company was invalid because it left all discretion with appellees, violated the concept of fundamental fairness, and failed to satisfy the requirements of a new contract).

* Production Editor, *Cardozo Arts & Entertainment Law Journal*; J.D., 2002, Benjamin N. Cardozo School of Law; B.S. Business and Economics, *magna cum laude*, 1999, Lehigh University. The Author wishes to thank the staff and board of the *Cardozo Arts & Entertainment Law Journal*. The Author also wishes to thank Professor Burton Lipshie for all his guidance. This Note is dedicated to the Author's family.

THE AMERICAN INVENTORS PROTECTION ACT OF 1999: AN ANALYSIS OF THE NEW EIGHTEEN-MONTH PUBLICATION PROVISION*

INTRODUCTION

The controversy over whether pending patent applications in the United States should be published[1] prior to patent issuance has stimulated much debate and interest in recent years.[2] After numerous legislative attempts at implementing an early publication system,[3] the American Inventors Protection Act of 1999 ("AIPA") was finally enacted on November 29, 1999.[4] The AIPA introduced several changes to United States patent law, including a requirement to publish patent applications eighteen months after their earliest filing dates.[5] Although it may appear as if the United States had altered its system in response to various problems that led to the enactment of an early publication system, it is doubtful that the new publication provision of the AIPA will have any significant impact on the U.S. patent system.

Prior to enacting the AIPA, the U.S. patent law system maintained the confidentiality of patent applications until the Patent

* All views, opinions and errors in this Note should be attributed solely to the Author.

1 "Publication" of patent applications is "to open patent applications for public inspection." *See Patent System Harmonization Bills are Introduced in House and Senate*, 43 PAT. TRADEMARK & COPYRIGHT J. (BNA) No. 1077, at 519, 520 (1992).

2 *See generally* Symposium, *Early Patent Publication: A Boon or Bane? A Discussion on the Legal and Economic Effects of Publishing Patent Applications after Eighteen Months of Filing*, 16 CARDOZO ARTS & ENT. L.J. 601 (1998) [hereinafter Symposium].

3 This Note will refer to a system requiring publication of patent applications prior to issuance of a patent as an "early publication system," "automatic publication system," or "pre-grant publication system." Because the average patent pendency period is now twenty-four months, most patents will be published prior to issuance. *See TAF Special Report During the Periods of January 1997 to June 2000*, U.S. Patent and Trademark Office (Aug. 2000), Explanation of Data, *at* http://www.uspto.gov (last visited Mar. 14, 2001). The Technology Assessment and Forecast (TAF) Branch is a branch of the Information Products Division, and periodically issues general statistical reports of patenting activity at the USPTO. *See id.* The TAF report also points out that the patent's pendency can be variable from one patent to another, determined by many factors including PTO workload (which varies between technologies), budget and manpower, and patent printing schedules. *See id. But see, e.g.*, James E. Hudson, III, Comment, *The U.S. – Japan Agreement for Eighteenth Month Publication of U.S. Patent Applications: How Should it Be Implemented?*, 5 J. INT'L L. & PRAC. 87, 92 (1996) (stating that the "average U.S. patent pendency is nineteen months"); ROBERT PATRICK MERGES, PATENT LAW & POLICY: CASES AND MATERIALS 35-36 (2d ed. 1997) (stating that the "'average' prosecution takes approximately two to three years").

4 American Inventors Protection Act of 1999, Pub. L. No. 106-113, § 4001, 113 Stat. 1501A-552 (1999).

5 *See* Domestic Publication of Foreign Filed Patent Application Act of 1999, Pub. L. No. 106-113, § 4502(a), 113 Stat. 1501A-561 (1999) (codified as amended at 35 U.S.C. § 122 (2000)).

and Trademark Office[6] ("PTO") issued a patent.[7] The underlying rationale for maintaining secrecy of the applicant's invention was to protect the inventor's trade secret if the PTO ultimately refused to issue a patent.[8] If a patent did not issue, the contents of the patent application remained undisclosed to the public.[9]

In contrast, almost all other major industrialized countries, beginning in the late 1960s, had adopted an automatic publication requirement prior to issuance of a patent.[10] For example, the Japanese patent system permits publication of patent applications for public inspection before the Japanese Patent Office determines whether a patent will be issued.[11] The underlying purpose behind enacting an early publication system was to promote technological development through early dissemination of new inventions to the public.[12]

The new publication provision of the AIPA requires early publication of pending U.S. patent applications eighteen months after filing.[13] However, applicants who do not file their patent application in any foreign publishing country[14] may opt out of this automatic publication requirement under 35 U.S.C. § 122(b)(2)(B)(i).[15] Unfortunately, this broad exception prevents the U.S. patent system from achieving any meaningful goal of enacting an early publication system. Instead, the patent reform act may even weaken the U.S. patent system by creating an additional administrative burden for the PTO[16] and slowing down the patent application process without providing the benefits of an early publication system.

This Note will demonstrate that the new publication provision of the AIPA fails to have any major impact on the U.S. patent system because of the broad exemption for applicants that do not file abroad. Part I explains the patent application process of the United States patent system prior to the AIPA and after its enactment. Part II describes the evolution of the AIPA in the international intellectual property regime and its legislative history. Part III analyzes the arguments favoring and opposing the automatic publication system that led to the enactment of the AIPA. Part IV argues that the new publication provision does not significantly alter the pre-AIPA patent system of the United States due to the broad exception under 35 U.S.C. § 122(b)(2)(B)(i). This Note concludes that the exception under 35 U.S.C. § 122(b)(2)(B)(i) should be deleted, and that the adoption of an automatic publication system without any limitations is in the best interest of the United States.

I. BASIC OVERVIEW OF THE AIPA

A. *United States Patent System Prior to the AIPA*[17]

An inventor who doubts whether a patent will issue for his invention is faced with a dilemma.[18] If the inventor relies on trade secret law, protection of his invention will be limited because of the risks of reverse engineering,[19] faithless employees, and difficulties

[6] Subtitle G of the AIPA slightly reorganizes the PTO into a U.S. agency within the Commerce Department called the United States Patent and Trademark Office ("USPTO"). *See* Patent and Trademark Office Efficiency Act, Pub. L. No. 106-113, § 4713, 113 Stat. 1501A-572, 1501A-575 (1999).

[7] 35 U.S.C. § 122 provided that "applications for patent 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." 35 U.S.C. § 122 (1994).

[8] *See* Paul A. Ragusa, Note, *Eighteen Months to Publication: Should the United States Join Europe and Japan by Promptly Publishing Patent Applications?*, 26 GEO. WASH. J. INT'L L. & ECON. 143, 148 (1992); *see also* Symposium, *supra* note 2, at 613-14 (explaining that individual inventors oppose the publication requirement because it discloses their trade secrets without any reward if the PTO rejects their application for the issuance of a patent).

[9] *See* Symposium, *supra* note 2, at 602-03; *see also* Ragusa, *supra* note 8, at 148.

[10] *See* J.W. BAXTER, 2 WORLD PATENT LAW AND PRACTICE § 5.01[3], at 5-8 to 5-15 (2001) (providing a list of countries that have adopted the automatic publication system, including the United States after the enactment of AIPA); Symposium, *supra* note 2, at 602 (describing that in 1964, the Dutch were the first to adopt the publication system eighteen months after filing applications).

[11] *See* Ragusa, *supra* note 8, at 148.

[12] *See id.* at 144-45; *see also* Hudson, *supra* note 3, at 92-93 (explaining that the Japanese patent system's underlying policy for early publication of patent application is to "teach industry new innovations"); Jeffrey A. Wolfson, Note, *Patent Flooding in the Japanese Patent Office: Methods for Reducing Patent Flooding and Obtaining Effective Patent Protection*, 27 GEO. WASH. J. INT'L L. & ECON. 531, 540-49 (1994) (supporting the view that the underlying policy of the early publication system of Japan is to promote technology through early dissemination of new technology).

[13] *See* Domestic Publication of Foreign Filed Patent Application Act of 1999, Pub. L. No. 106-113, § 4502(a), 113 Stat. 1501A-561 (1999) (codified as amended at 35 U.S.C. § 122 (2000)).

[14] A publishing country refers to a country that requires publication of applications eighteen months after filing.

[15] Domestic Publication of Foreign Filed Patent Application Act § 4502(a) .

[16] *Cf. Bill to Restructure PTO, Reform Patent Law is Debated Before Judicial Panel*, 54 PAT. TRADEMARK & COPYRIGHT J. (BNA) No. 1326, at 22, 22 (1997) (statement by PTO Commissioner Bruce Lehman) (arguing against the Kaptur amendment to H.R. 400 that proposed an exception to the pre-grant publication requirement for small businesses and independent inventors. Commissioner Lehman stated that "a bifurcated system would be an administrative burden for the PTO and would slow down processing of patent applications.").

[17] See Ragusa, *supra* note 8, at 146–48 for a discussion of the basic U.S. patent application system prior to the AIPA.

[18] *See* PAUL GOLDSTEIN, COPYRIGHT, PAT., TRADEMARK AND RELATED STATE DOCTRINES 171 (4th ed., David L. Shapiro et al. eds., The Foundation Press 1997) (giving the example of an inventor's choice between relying on trade secret law or pursuing a patent for his invention).

[19] Reverse engineering is a technique used to recreate a secret formula or process by retracing the steps essential to its creation. Individuals who are not in a confidential rela-

of enforcement.[20] If the inventor decides to apply for a patent, however, not only is he faced with the possibility that the PTO may refuse to issue a patent, but after a patent issues and his trade secrets are revealed to the public, it may later be invalidated.[21]

Prior to the AIPA, section 122 of the Patent Act[22] partially reduced the difficulty of this choice by maintaining the secrecy of a patent application during patent prosecution.[23] The underlying objective was to preserve the trade secret rights of the inventor until a patent was issued.[24] If the PTO refused to issue a patent, the inventor could still rely on trade secret law for protection, because his secret information had not been disclosed to the public.[25]

Despite this advantage of the secrecy rule, the enactment of an early publication system was being suggested by many academics and practitioners. Supporters of a pre-grant publication system argued that publication benefits the inventor and the public in several ways, including early access to new technological information, reduction of research and development costs by preventing duplicative research, and a more accurate patent examination process.[26] In light of its rapid technological growth and pressure for faster commercialization of technology,[27] it was time for the U.S. to respond to new demands engendered by these developments.

After years of domestic debate and continuous international efforts towards patent harmonization,[28] on November 29, 1999, President Clinton signed the American Inventors Protection Act of 1999 into law.[29] Section 4502 of Subtitle E of the AIPA ("Domestic Publication of Foreign Filed Patent Applications Act of 1999") amended section 122 of the Patent Act.[30] The newly codified 35 U.S.C. § 122(b) provides for publication of patent applications after eighteen months from the filing date,[31] but with a broad exception for applicants who do not file their applications abroad,[32] as discussed in detail below.

B. *U.S. Publication System After the Enactment of AIPA*[33] *and Other Relevant Statutory Changes*

1. Publication Requirement

Section 4502(a) of Subtitle E of the AIPA ("Domestic Publication of Foreign Filed Patent Applications Act of 1999") amended section 122 of the Patent Act.[34] This subtitle provides that most applications filed on or after November 29, 2000[35] will be pub-

tionship with the trade secret owner are free to engage in reverse engineering. *See id.* at 132.

20 *See id.* Comment (b) to the Restatement of Torts, Second, section 757 defines a trade secret as "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 (SECOND) OF TORTS § 757 cmt. a (1939). Further, comment (b) explains the difference between a patent and a trade secret:

> A trade secret may be a device or process which is patentable; but it need not be that. Novelty and invention are not a requisite to trade secret. Protection of patent is based on a policy of rewarding and encouraging development of secret processes, but protection of trade secret is merely against breach of good faith and reprehensible means of learning another's secret.

Id. cmt. b; *see also* Scott D. Marrs, *Inside Story on Trade Secrets: Protective Measures are Necessary to Preserve a Company's Vital Information*, 86 A.B.A. J. 77 (2000) (providing suggestions as to how businesses may protect their trade secrets, including conducting background checks on employees with access to vital company information, requiring employees to sign a confidentiality agreement, and educating employees about the confidential nature of trade secrets).

21 This was referred to as "secret prior art" under § 102(e) prior to the AIPA. *See* discussion *infra* Part III.B.2.

22 The Intellectual Property Clause of the U.S. Constitution authorizes Congress to reward exclusive rights for limited times to authors and inventors "to their respective writings and discoveries." U.S. CONST. art. I, § 8, cl. 8. Title 35 of the United States Code codifies the basic patent laws that Congress has enacted in accordance with this constitutional power and sets forth standards of patent applications. Throughout this Note, Title 35 of the United States Code will be referred to as the "Patent Act." *See* MERGES, *supra* note 3, at 35.

23 The process of obtaining a patent from the PTO is known as "prosecution." *See* MERGES, *supra* note 3, at 35. Applications for patents were kept in confidence unless special circumstances existed. *See* 35 U.S.C. § 122 (1994).

24 *See* GOLDSTEIN, *supra* note 18, at 171; *see also* Ragusa, *supra* note 8, at 148; Len S. Smith, Note, *Promoting the Progress of Science and America's Small Entity Inventors: Inventing an Improved U.S. Patent Application Publication Provision Out of the Prior Art*, 77 WASH. U. L.Q. 585, 590-91 (1999).

25 *See* GOLDSTEIN, *supra* note 18, at 171.

26 *See infra* Part III.B.

27 *See* Symposium, *supra* note 2, at 618-19 (explaining that with the emergence of the Internet and pressure for faster commercialization of technology, the lag time between publication of applications and the actual grant of the patent plays a critical role).

28 *See generally* Symposium, *supra* note 2; *see also* Robert W. Pritchard, *The Future Is Now – The Case for Patent Harmonization*, 20 N.C. J. INT'L L. & COM. REG. 291, 291 n.1 (1995) (describing "patent harmonization" as a "phrase used to describe the standardization of patent laws throughout the world").

29 *See* American Inventors Protection Act of 1999, Pub. L. No. 106-113, 113 Stat. 1501A-552 (1999).

30 *See* Domestic Publication of Foreign Filed Patent Application Act of 1999, Pub. L. No. 106-113, § 4502(a), 113 Stat. 1501A-561 (1999) (codified as amended at 35 U.S.C. § 122(b)(1)(A) (2000)).

31 *See* Domestic Publication of Foreign Filed Patent Application Act § 4502(a) (codified as amended at 35 U.S.C. §122(b)(1)(A) (2000)).

32 *See id.*

33 *See generally* 4 DONALD S. CHISUM, CHISUM ON PATENTS § 11.02[4][e] (2000); *see also* DONALD S. CHISUM, THE AMERICAN INVENTORS PROTECTION ACT OF 1999: EIGHTEEN MONTH PUBLICATION, FIRST INVENTOR DEFENSE, INTER PARTES REEXAMINATION, PRIOR ART REVISIONS, TERM EXTENSION (2000).

34 *See* Domestic Publication of Foreign Filed Patent Application Act § 4502(a).

35 *See* Robert Clarke, *Implementing the American Inventors Protection Act of 1999*, USPTO Today, *at* http://www.uspto.gov (Aug. 2000). Section 4508 of the Domestic Publication of Foreign Filed Patent Application Act of 1999 provides "Sections 4502 through 4507, and the amendments made by such sections, shall take effect on the date that is 1 year after the date of enactment of this Act." Domestic Publication of Foreign Filed Patent Application Act § 4508. The date of enactment of the Domestic Publication of Foreign Filed Patent Application Act was November 29, 1999. *See id.*

lished eighteen months after their earliest effective filing date.[36]

As a general matter, the amended § 122(a) continues the secrecy rule that patent applications will be maintained in confidence.[37] However, paragraph (1)(A) of the newly created § 122(b) provides an exception to this general rule.[38] Section 122(b)(1)(A) provides that "each application for a patent shall be published . . . promptly after the expiration of a period of 18 months from the earliest filing date for which a benefit is sought under this title."[39] The application may be published earlier than the end of the eighteen-month period if the applicant so requests.[40]

35 U.S.C. § 122(b)(2)(A) creates several exceptions to the new automatic publication provision of § 122(b)(1)(A). First, it excludes an application from the publication requirement if the application is (1) no longer pending, (2) subject to a secrecy order, (3) a provisional application, or (4) a design patent application.[41]

Second, § 122(b)(2)(B)(i) prohibits publication if the applicant expressly requests that her application not be published.[42] In the request, the applicant must certify that "the invention disclosed in the application has not and will not be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication of applications 18 months after filing."[43]

[36] *See* 37 C.F.R. § 1.211 (2001). The effective filing date is "the earliest claimed U.S. or foreign filing date". 145 Cong. Rec. S14718 (daily ed. Nov. 17, 1999). The effective filing date, also known as the priority date, can be a date other than the actual filing date of the patent application. *See* Ragusa, *supra* note 8, at 144 n.7.

[37] *See* Domestic Publication of Foreign Filed Patent Application Act of 1999 § 4502(a).

[38] *See id.*

[39] *Id.*

[40] *See id.*

[41] The amended § 122(b)(2)(A) provides:

(A) An application shall not be published if that application is –
(i) no longer pending
(ii) subject to a secrecy order under section 181 of this title;
(iii) a provisional application filed under section 111(b) of this title; or
(iv) an application for a design patent filed under chapter 16 of this title.

Domestic Publication of Foreign Filed Patent Application Act of 1999 § 4502(a).

[42] Domestic Publication of Foreign Filed Patent Application Act § 4502(a) (codified as amended at 35 U.S.C. § 122(b)(2)(B)(i) (2000)).

[43] *Id.* An applicant may rescind the request at any time. *See id.* § 122(b)(2)(B)(ii). Further, an applicant who has made a request but subsequently files an application in a foreign country that requires publication of applications eighteen months after filing must notify the PTO no later than forty-five days after the date of foreign filing. *See id.* §122(b)(2)(B)(iii). If the applicant rescinds the request under § 122(b)(2)(B)(ii) or notifies the PTO that the applicant's application was filed in a foreign country under § 122(b)(2)(B)(iii), the application is published eighteen months after filing or "as soon as is practical after [the eighteen month date]." *See id.* §122(b)(2)(B)(iv).

2. Scope of Publication

One of the concerns raised by opponents of an early publication system was the scope of disclosure to the public.[44] Patent applications filed in the United States are required to be much more detailed than applications filed in other major patent systems.[45] If an inventor files his application both in the United States and in a foreign publishing country, he runs the risk of disclosing vital trade information to his foreign competitors because of the broader scope of domestic disclosure.[46]

The new patent reform legislation has responded to this concern by limiting the scope of publication for applicants who disclose more subject matter in their U.S. application than in any corresponding foreign application.[47] If an inventor files an application both in the U.S. and a foreign country, either directly or through the Patent Cooperation Treaty ("PCT"),[48] the applicant can limit the scope of publication by submitting a redacted copy of his application to the PTO.[49] This process enables the applicant to eliminate details that will not be published in any of his foreign applications.[50]

[44] *See Patent Term and Patent Disclosure Legislation: Hearing Before the Comm. on Small Bus. of the House of Representatives*, 104th Cong. (1996), *microformed on* No. Y4.SM1:104-74 (U.S. Gov't Printing Office) at 7 [hereinafter Small Business Hearings] (testimony of Mr. Orville "Nip" Litzsinger, Vice President of the Alliance for American Innovation, Inc., primary representative for independent small business innovators, individual small entities, and universities) (arguing against implementing an early publication system because "the level of detail on a patent application in the United States must be in much more detail than it is on an overseas copy").

[45] This is known as the "best mode requirement" under 35 U.S.C. § 112. Section 112 states in pertinent part that "[t]he specification. . .shall set forth the best mode contemplated by the inventor of carrying out his invention." 35 U.S.C. § 112 (2000). The U.S. patent system is the only one that has a best mode requirement, although patent laws in both Japan and Europe reflect some of the same underlying concerns as the U.S. best mode requirement. *See* MERGES, *supra* note 3, at 750.

[46] *See* Small Business Hearings, *supra* note 44, at 7 (testimony of Mr. Orville Litzsinger) (stating that implementing an early publication system would be an open invitation to "legalize industrial espionage").

[47] *See* Domestic Publication of Foreign Filed Patent Application Act § 4502(a).

[48] "The PCT is a multilateral treaty among more than 50 nations that is designed to simplify the patenting process when an applicant seeks a patent on the same invention in more than one nation." 145 CONG. REC. S14718 n.10 (daily ed. Nov. 17, 1999) (referring to HERBERT F. SCHWARTZ, PATENT LAW & PRACTICE 22 n.72 (2d ed., Federal Judicial Center, 1995). The signatories to the PCT have agreed to permit an applicant to wait for up to thirty months after the initial filing of a patent application in one country to begin the prosecution of the application in another country. *See* MERGES, *supra* note 3, at 458. This allows the inventor more time to test the product, decide which countries' protection is worthwhile, and pay the patent office filing fees in the various countries. *See id.*

[49] *See* Domestic Publication of Foreign Filed Patent Application Act § 4502(a); *see also* 145 CONG. REC. S14719 (daily ed. Nov. 17, 1999).

[50] *See* 145 CONG. REC. S14719 (daily ed. Nov. 17, 1999).

3. New Provisional Rights

The AIPA created an additional right to compensate applicants whose applications are published under the newly codified § 122(b). Section 4504 of Subtitle E of the AIPA added a "provisional right" under 35 U.S.C. § 154(d).[51] If a patent is issued, the patentee has a right to recover a "reasonable royalty" from any person who commits acts that would otherwise constitute patent infringement.[52] Provisional rights are available from the period of publication of the application to the patent's issuance date.[53] One commentator has pointed out that the new patent legislation does not provide for an injunction, enhanced damages, or attorneys' fees during this period.[54]

There are several statutory limitations on the availability of provisional royalties. First, the alleged infringer must have "actual notice"[55] of the published patent application.[56] Second, claims[57] in

[51] *See* Domestic Publication of Foreign Filed Patent Application Act of 1999 § 4504 (codified as amended at 35 U.S.C. § 154(d)(1) (2000)). For a list of countries that provide provisional pre-grant protection against infringement, see BAXTER, *supra* note 10, § 5.01[4], at 5-15 to 5-5-21.

[52] The newly codified 35 U.S.C. § 154(d)(1)(A),(B) provides:

> (d) PROVISIONAL RIGHTS. –
> (1)IN GENERAL. – In addition to other rights provided by this section, a patent shall include the right to obtain a reasonable royalty from any person who, during the period beginning on the date of publication of the application for such patent under section 122(b), or in the case of an international application filed under the treaty defined in section 351(a) designating the United States under Article 21(2)(a) of such treaty, the date of publication of the application, and ending on the date the patent is issued –
> (A)(i) makes, uses, offers for sale, or sells in the United States the invention as claimed in the published patent application or imports such an invention into the United States; or
> (ii) if the invention as claimed in the published patent application is a process, uses, offers for sale, or sells in the United States or imports into the United States products made by that process as claimed in the published patent application; and
> (B) had actual notice of the published patent application and, in the case in which the right arising under this paragraph is based upon an international application designating the United States that is published in a language other than English, had a translation of the international application into the English language.

Domestic Publication of Foreign Filed Patent Application Act § 4505 (codified as amended at 35 U.S.C. § 154(d)(1) (2000)).

[53] *See id.*

[54] *See* Robert C. Scheinfeld & Parker H. Bagley, *Recent Statutory Changes*, N.Y.L.J., Jan. 26, 2000, *available in* LEXIS, News Library, NYLJ File.

[55] The USPTO does not anticipate publishing any guidance to define the term "actual notice." *See* Clarke, *supra* note 35.

[56] *See* Domestic Publication of Foreign Filed Patent Application Act of 1999 § 4504. The published applicant must give actual notice of the published application to the alleged infringer and explain what acts give rise to provisional rights. *See* 154 CONG. REC. S14719 (daily ed. Nov. 17, 1999).

[57] Section 112 requires a patent application to include a "specification" that describes the invention and "the manner and process of making and using it." 35 U.S.C. § 112 (2000). The specification must "conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." *Id.* More than a century ago, Professor William Robinson of Yale defined the purpose of the patent claim as follows: ". . ."[T]he statutes require not only that the inventor shall fully *describe* his invention in the specification, so that any person skilled in the art can practice it, but also that he shall particularly point out and distinctly *claim* the part, which he claims as his invention or discovery." 2 W. ROBINSON, THE LAW OF PATENTS FOR USEFUL INVENTIONS § 504 (1890), *reprinted in* GOLDSTEIN, *supra* note 18, at 384.

the published application must be "substantially identical" to the claims of the patent that is ultimately issued.[58] Undoubtedly, clarification of the phrase "substantially identical" requires a whole new jurisprudence,[59] because the PTO does not anticipate publishing any guidance to define this term.[60] Nevertheless, this requirement would provide the public with some guidance as to the specific behavior to avoid between publication and grant.[61] Third, an action for reasonable royalties must be brought within six years of the patent's issuance.[62] Finally, the date the USPTO receives a copy of the publication in the English language will be the date used to determine the scope of provisional rights for international applications filed under the PCT.[63]

[58] The newly codified § 154(d)(2) provides:

> The right under paragraph (1) to obtain a reasonable royalty shall not be available under this subsection unless the invention as claimed in the patent is substantially identical to the invention as claimed in the published patent application.

Domestic Publication of Foreign Filed Patent Application Act § 4504 (codified as amended at 35 U.S.C. § 154(d)(2) (2000)).

[59] *See* Scheinfeld & Bagley, *supra* note 54 (stating that "[i]t remains to be seen how the phrase 'substantially identical' will be construed").

[60] *See* Clarke, *supra* note 35.

[61] *See* 145 CONG. REC. S14719 (daily ed. Nov. 19, 1999).

[62] The newly codified § 154(d)(3) provides:

> The right under paragraph (1) to obtain a reasonable royalty shall be available only if an action is brought not later than 6 years after the patent has been issued. The right under paragraph (1) shall not be affected by the duration of the period described in paragraph (1) [i.e., the publication to issuance period].

Domestic Publication of Foreign Filed Patent Application Act of 1999 § 4504 (codified as amended at 35 U.S.C. § 154(d)(3) (2000)).

[63] The newly codified § 154(d)(4)(A) provides:

> The right under paragraph (1) to obtain a reasonable royalty based upon the publication under the treaty defined in section 351(a) of an international application designating the United States shall commence on the date on which the Patent and Trademark Office receives a copy of the publication under the treaty of the international application, or, if the publication under the treaty of the international application is in a language other than English, on the date on which the Patent and Trademark Office receives a translation of the international application in the English language.

Domestic Publication of Foreign Filed Patent Application Act § 4504 (codified as amended at 35 U.S.C. § 154(d)(4)(A) (2000)).

4. Prior Art Effect[64] Under § 102(e)[65]

A patent claim will be unpatentable if the information is already known to others, referred to as "prior art,"[66] or if the claims are not "nonobvious" in light of the prior art.[67] Prior to the AIPA, under §102(e) of the Patent Act, a patent issued to an earlier-filing applicant has a prior art effect as of its "filing date" against a later-filing applicant, even if that application was maintained in secrecy by the USPTO.[68] The earlier-filing applicant simply has to "describe" an invention in her patent application and does not have to "claim" the subject matter.[69] Without §102(e), the earlier-filing applicant could be forced to license technology from the later-filing applicant that she herself invented at an earlier date, merely because she failed to "claim" the technology.[70] Thus, §102(e) created an incentive to obtain an early filing date for prior art purposes.[71]

Section 4505 amended § 102(e) to treat applications "published" by the PTO in the same manner as a patent "issued" by the

64 Prior art known to the applicant must be disclosed during prosecution of the application. *See generally* 6 CHISUM, *supra* note 33, §19.03[2][b]; *see also* 37 C.F.R. §1.56(a) (2001) (providing that "[e]ach individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the [PTO], which includes a duty to disclose to the [PTO] all information known to that individual to be material to patentability" and "no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct"); *see also* BAXTER, *supra* note 10, § 4.03[27], at 4-15 (stating that Rule 56 requires submitting prior art; the duty of disclosure was modified to promote efficiency of the examination process by encouraging timely submission of prior art).

65 Congressman Moorhead made some technical changes to H.R. 3460 in the 104th Congress. *See infra* Part II. H.R. 3460 originally amended § 102(e) to give prior art effect to published applications, to published international applications designating the United States under the PCT, and to patents that are actually granted. Under the Moorhead amendment, such prior art effect is given to international applications or patents only if the application is in the English language. *See Pending Patent Reforms are Approved by Judiciary Committee*, 52 PAT. TRADEMARK & COPYRIGHT J. (BNA) No. 1282, at 197, 197 (June 13, 1996). Section 4505 of the AIPA incorporated the Moorhead amendment in § 102(e)(1):

> [A]n application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) *only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language.*

Domestic Publication of Foreign Filed Patent Application Act of 1999 § 4505 (codified as amended at 35 U.S.C. §102(e) (2000)) (emphasis added).

66 35 U.S.C. § 102(a).

67 *Id.* § 103.

68 *See* MERGES, *supra* note 3, at 369; discussion *infra* Part III.B.2.

69 *See* 35 U.S.C. § 102(e) (1994).

70 *See* MERGES, *supra* note 3, at 369.

71 *See* Scheinfeld & Bagley, *supra* note 54.

PTO.[72] Accordingly, if a U.S. patent application is published, it may be given prior art effect as of its earliest effective U.S. filing date against any subsequently filed U.S. application.[73] An "issued" U.S. patent remains unchanged as a § 102(e) prior art reference as of its U.S. filing date.[74] For applications that are filed abroad, the foreign filing date will not be the effective filing date of the U.S. published application for prior art purposes.[75] However, international applications designating the United States under the PCT in the English language are given prior art effect as of their international filing date.[76]

5. Publication Fee

Section 4506 of the AIPA authorizes the PTO to recover the costs of early publication required under §122(b) by charging a separate publication fee.[77] The fee for publication, set forth in 37 C.F.R. §1.18(d), is $300.[78]

II. EVOLUTION OF THE AIPA

Prior to enacting the AIPA, the U.S. patent system was faced with a challenge: Should the United States adopt a pre-grant publication system, and would this system provide sufficient benefits to justify changing the current system? On the one hand, the pre-AIPA system of maintaining the secrecy of pending patent applications seemed to be working well.[79] Supporters of this secrecy rule claimed that their trade secrets would still be protected if the PTO ultimately refuses to grant a patent for their inventions.[80] Furthermore, studies reveal that in the past, independent inventors were

72 Domestic Publication of Foreign Filed Patent Application Act of 1999 § 4505 (codified as amended at 35 U.S.C. § 122(e) (2000)).

73 *See* 145 CONG. REC. S14719 (daily ed. Nov. 17, 1999).

74 Although the statutory language of the newly amended § 102(e) does not use the term "describe," "[t]he prior art effect accorded to patents under section 4505 remains unchanged from the present section 102(e) of the Patent Act." *Id.*

75 *See id.*

76 *See id.*

77 *See* Domestic Publication of Foreign Filed Patent Application Act of 1999 § 4506.

78 *See* 37 C.F.R. § 1.18(d) (2001). Effective as of October 1, 2001, the publication fee is $300, and no small entity discount is available. *See* Karin Tyson, *Overview of Eighteen-Month Publication, at* http://www.uspto.gov (last visited Feb. 11, 2002).

79 *See* Jeffery E. Robertson, Note, *If It Ain't Broke, Don't Fix It: The Unnecessary Scope of Patent Reform as Embodied in the "21st Century Patent System Improvement Act" and "The Omnibus Patent Act of 1997,"* 5 J. INTELL. PROP. L. 573 (1998) (arguing against implementing an early publication system because of the risk of exploitation of U.S. innovation by foreign competitors).

80 *See* Ragusa, *supra* note 8, at 169 (stating that those who oppose the automatic publication system argue that valuable trade secrets would be revealed before patent rights are established); see also Small Business Hearings, *supra* note 44, for arguments by representatives of small businesses opposing the eighteen month publication system.

the ones who contributed to the economic growth of the United States with the most important inventions.[81] Because independent inventors have no incentive to apply for a patent without adequate protection, implementing an automatic publication system raised concerns that such a system may lead to a weaker patent system and ultimately to a weaker U.S. economy.[82]

On the other hand, international and domestic pressures called for the harmonization of the U.S. patent system with the pre-grant publication systems of other major industrial nations.[83] As the world's economic leader, the United States could no longer pretend that its patent system was unrelated to the patent systems of these other countries.[84] Back at home, supporters claimed that implementing an early publication system would stimulate industrial growth in numerous ways.[85] For instance, by laying open an application to the public, industries would have early access to state

[81] *See Hearings on H.R. 359, H.R. 632, H.R. 1732, and H.R. 1733 Before the Subcomm. on Courts and Intellectual Property of the Comm. on the Judiciary House of Representatives*, 104th Cong. 137-39 (1995) [hereinafter Hearings of Patent Application Publication Act of 1995] (statement of Congressman Dana Rohrabacher from California). Congressman Rohrabacher stressed the endorsement of H.R. 359 and S. 284 which established a patent term of twenty years from filing or seventeen years from grant, whichever is longer. *See id.* He claimed that independent inventors have invented the most important inventions of this century, including the MRI, the jet engine and penicillin, because these individuals knew they had a guaranteed property right to seventeen years of protection. *See id.* at 137-38. He argued that because it takes a considerable amount of time for the PTO to issue a patent, this guaranteed protection is vital to independent inventors. *See id.; see also id.* at 368-90 (statement of David L. Hill, President of the Patent Enforcement Fund, Inc.). Mr. Hill showed a study by the U.S. Department of Commerce establishing that the most important inventions of the last century came from independent inventors. *See id.* The study, prepared in January 1967, revealed that although large companies perform almost all of the R&D, this was not indicative of "innovative" performance. *See id.* Independent inventors and small technologically based companies were responsible for a large percentage of the important inventions. *See id.*

[82] *See id.* at 358-62. Mr. Hill testified that the U.S. patent system was the best in the world, and enacting a pre-grant publication system would "degrade it severely." *Id.* He claimed that great inventions that contributed to the growth of the United States almost always came from the work of independent inventors working alone or very small companies rather than from those employed by major corporations. *See id.* Individuals and small companies rely on patents for their inventions to grow successfully, allowing them to raise capital for further research and development. As the corporation grows, he argued, employees are directed towards the established program and are less inclined to be innovative thinkers. *See id.* Although the vast majority of R&D expenditures are from major corporations, they are almost entirely improvements on existing products. *See id.* Therefore, the pioneering inventions by individual inventors and small companies are responsible for the growth of the economy of the United States and should be protected. *See id.*

[83] *See infra* Part II.

[84] *See* Hearings of Patent Application Publication Act of 1995, *supra* note 81, at 90-91 (statement of Andrew Kimbrell, Executive Director of the International Center for Technology Assessment, a nonprofit corporation devoted to alert policy makers and the public to new advances in technology). Mr. Kimbrell argued that the U.S. is in a global economy, and it can no longer pretend that its patent system is unrelated to those of Japan and Europe.

[85] *See infra* Part.III.B.

of the art technology and may avoid duplicative research.[86] In addition, the American public would have prompt access to new technology published in the English language.[87]

Congress enacted the AIPA in an attempt to accomplish two objectives: to achieve meaningful harmonization with the rest of the world, and to create a stronger U.S. economy with a stronger patent system. However, it remains to be seen whether either of these two objectives would be successfully realized with the broad exemption under §122(b)(2)(B)(i).

A. *Efforts Towards Harmonization*

1. WIPO Efforts Towards Patent Harmonization

On July 14, 1967, the United Nations created the World Intellectual Property Organization ("WIPO") to "promote the protection of intellectual property rights" worldwide.[88] Despite its refusal to join the other major patent systems for many years, the United States had been an active member of WIPO in the discussion for patent harmonization.[89]

In 1990, the WIPO Committee of Experts on the Harmonization of Certain Provisions in Laws for the Protection of Inventions completed a draft treaty for patent harmonization.[90] Article 15 of the draft treaty proposed a publication system of patent applications.[91] The practice of most countries was to publish applications eighteen months after the priority date.[92] However, the United States proposed an alternative text for this section to permit disclosure twenty-four months after the application was filed,[93] perhaps indicating its reluctance to deviate from the secrecy rule practiced in the U.S. at the time. Since the 1990 WIPO draft treaty, the United States had taken small steps towards achieving the goal of patent harmonization and to adopt the various proposals set out in

[86] *See* Ragusa, *supra* note 8, at 162; *see also infra* Part III.B.1.

[87] *See infra* Part III.B.1.

[88] Convention Establishing the World Intellectual Property Organization, T.I.A.S. No. 6932, at 1749, 1771, July 14, 1967.

[89] *See* Pritchard, *supra* note 28, at 299.

[90] *See id.* at 299–300. The WIPO Committee of Experts on Harmonization of Certain Provisions in Laws for the Protection of Inventions began to discuss the possibility of worldwide patent harmonization in 1985 in Geneva, Switzerland. *See id.* at 299. For other major proposals in the WIPO draft treaty, see *id.* at 300-02.

[91] *See WIPO Experts Make Progress on Patent Harmonization Draft*, 41 PAT. TRADEMARK & COPYRIGHT J. (BNA) No. 1013, at 231, 234 (1991). Article 15 provides that "applications will be required to be published within a certain number of months after the priority date unless it has been withdrawn, abandoned, or rejected." *Id.*

[92] *See id.*

[93] *See id.* at 235.

the treaty.[94]

2. Agreement between U.S. and Japan

For many years, the United States and Japan had made numerous attempts to harmonize their patent systems.[95] On August 16, 1994, Secretary of Commerce Ronald Brown and Japanese Ambassador Takakazu Kuriyama signed an agreement ensuring that both countries would make significant changes to their patent system.[96] Under the agreement, the United States agreed to introduce legislation by September 30, 1994 to make patent applications filed after January 1, 1996 publicly available eighteen months after the filing date.[97]

Despite criticism that intellectual property was being used as a bargaining chip in international trade agreements,[98] Congress introduced such legislation in an attempt to adopt the early publication system and meet its end of the agreement.[99]

3. Domestic Efforts by the United States Patent Office

During the WIPO negotiations of patent harmonization, the USPTO announced in August 1990 that an Advisory Commission on Patent Law Reform would be created to advise the Secretary of Commerce on changes that were necessary to improve the U.S. patent system.[100] In 1992, the Advisory Commission prepared a report[101] which included a recommendation that automatic publication within twenty-four months of filing should be implemented,[102] provided that a first office action[103] is available prior to publication to allow an applicant to determine whether he should withdraw or amend his application.[104]

B. *Domestic Congressional Movements*[105]

1. Failed Attempts of the 102d, 103d and 104th Congress

Shortly after the Advisory Commission of the USPTO released its draft report in 1992,[106] the House and Senate introduced identical bills in the 102d Congress, both entitled the "Patent System Harmonization Act of 1992" ("Harmonization Act").[107] The Harmonization Act proposed the adoption of an automatic publication system eighteen months after the application was filed[108] without any exceptions.[109] The Harmonization Act also provided a "reasonable royalty" provision for applicants who were ultimately granted a patent.[110] At a joint hearing held before the Senate Subcommittee on Patents, Copyrights and Trademarks and the House Subcommittee on Intellectual Property and Judicial Administration, many witnesses supported the proposed eighteen-month pub-

---

94 *See* Kevin Cuenot, *Perilous Potholes in the Path Toward Patent Law Harmonization*, 11 J. LAW & PUB. POL'Y 101, 112-14 (1999) (discussing the major proposals of the WIPO draft treaty and the efforts of the United States to adopt the proposals. However, on January 24, 1994, Commerce Secretary Ronald H. Brown announced that the United States would maintain their first-to-invent system "while keeping open the option of full patent harmonization in the future."); *US 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); Pritchard, *supra* note 28, at 302 (arguing that the 1994 announcement by Commerce Secretary Brown "ended the possibility of harmonization." The "first-to-file" system, granting patents to patentees that are first to file for the invention, has been implemented by most major patent systems. The U.S. still refuses to implement such a system and continues a "first-to-invent" system, granting patents to individuals that are the first to invent the new technology and not the first person that filed a patent application for it.); PAUL GOLDSTEIN, *supra* note 18, at 424-25 (discussing the difference between the first-to-invent and first-to-file system).

95 On January 20, 1994, Commissioner of Patents and Trademarks Bruce Lehman reached an agreement with Commissioner of the Japanese Patent Office Wataru Asou on a twenty year-from-filing patent term in the United States and on the acceptability of English-language patent applications in Japan. *See US says 'Not Now' on First-to-File and Agrees with Japan on Patent Term, supra* note 94, at 285.

96 *See* Exchange of Letters Containing Patent System Agreement, U.S.-Japan, 34 I.L.M. 121, Aug. 16, 1994.

97 *See Treaties: U.S. – Japan Concludes Agreement on Re-Examination and Publication*, 48 PAT. TRADEMARK & COPYRIGHT J. (BNA) No. 1192, at 412, 413 (Aug. 18, 1994).

98 *See* Hearings of Patent Application Publication Act of 1995, *supra* note 81, at 85 (testimony of Kenneth F. Addison, Jr., President, Oklahoma Inventor's Congress).

99 *See infra* Part II.B.

100 *See Advisory Commission Reviews Draft Recommendations on Patent Law Reforms*, 43 PAT. TRADEMARK & COPYRIGHT J. (BNA) No. 1071, at 379, 383 (Mar. 5, 1992). The Advisory Commission consisted of "no more than 15 members appointed by the Secretary of Commerce." *Id.*

101 The "Report of the Third Meeting of the Advisory Commission on Patent Law Reform" was signed on February 14, 1992 by the Commissioner of Patents and Trademarks Harry F. Manbeck Jr., who chaired the Advisory Commission, and by Edward R. Kazenske, the executive secretary of the Advisory Commission. *See id.*

102 *See id.* at 384.

103 *See* Pritchard, *supra* note 28, at 303 n.94 (explaining an "office action" as "a communication between the Patent Office and the patent applicant regarding the problems with the application and an explanation of the reasons why the patent application would be rejected").

104 *See Advisory Commission Reviews Draft Recommendations on Patent Law Reforms, supra* note 100, at 384.

105 For a brief explanation of the basic legislative process in the United States, see KUNTZ ET AL., THE PROCESS OF LEGAL RESEARCH 206-23 (5th ed. 2000).

106 *See supra* note 101 and accompanying text.

107 *See Patent System Harmonization Bills are Introduced in House and Senate, supra* note 1, at 519.

108 *See id.* Section 4 of S. 2605 added § 122(b), providing that "[t]he commissioner shall publish patent specifications . . . following the time provided in this section for the opening to public inspection of the application for patent." S. 2605, 102d Cong. § 4 (1992). It further added § 122(c), providing that "[b]eginning 18 months after the filing date of an application for patent,. . .such application. . .shall be open to public inspection." *Id.* Similar language is included in H.R. 4978, 102d Cong. § 4 (1992). For a discussion of other provisions included in S. 2605 and H.R. 4978, see Pritchard, *supra* note 28, at 303-05.

109 However, protection was afforded to applicants who believed publication would jeopardize their trade secret protection by an expedited review and examination of the patent application. *See* S. 2605 §§ 5, 137 and H.R. 4978 § 5.

110 *See* S. 2605 § 6 and H.R. 4978 § 6.

lication system.[111] Although the Harmonization Act was never enacted, testimony at the joint hearing indicated that many academics and industry leaders were in favor of implementing an early publication system.[112]

In response, the 103d and 104th Congress made further attempts to introduce similar legislation to institute a publication system. Two bills were introduced in the 103d Congress: the "Patent Term and Publication Reform Act of 1994"[113] and the "Patent Application Publication Act of 1994."[114] Both bills included provisions for publication of patent applications eighteen months after filing[115] with provisional royalty rights to protect patentees against acts of infringement.[116] The 103d Congress failed to pass either bill.

Subsequently, the 104th Congress also introduced two new bills. The first was entitled the "Patent Application Publication Act

[111] *See generally Joint Hearing Before the Subcomm. on Patents, Copyrights & 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. (1992) [hereinafter Hearings of Patent System Harmonization Act of 1992].

[112] *See id.* at 66-78 (statement of Professor Robert P. Merges, Associate Professor of Law, Boston University School of Law). Professor Merges testified that the Harmonization Act was a "much-needed change in our legal system." *Id.* He supported the eighteen-month publication provision, stressing that the key contribution an inventor can make is not so much the invention itself but the "early disclosure" of his new invention to others in the same field. *See id.*; *see also id.* at 96-103 (statement of Robert B. Benson, Past President, American Intellectual Property Law Association). Mr. Benson stated that the eighteen-month publication system assures that the PTO can examine applications promptly "to a degree utterly impossible under our existing law mandating secrecy of patent applications." *See id.* Further, in a public hearing held by the USPTO on October 7 and 8, 1993 to reconsider the U.S. position on patent law reform, many witnesses continued to show support for an early publication system. *See Patent Harmonization Proposal Stirs Lively Debate at PTO Hearing*, 46 PAT. TRADEMARK & COPYRIGHT J. (BNA) No. 1150, at 508 (Oct. 14, 1993). In addition to commenting on the eighteen-month publication proposal, the public was invited to comment on first-to-file system, prior user rights, and a twenty-year patent term. *See* Pritchard, *supra* note 28, at 305-10.

[113] S. 1854, 103d Cong. (1994). Senate Bill 1854 was introduced before the August 16, 1994 agreement between the United States and Japan. *See supra* Part II.A.2. S. 1854 did not provide for accelerated examination of applications or first office actions within eighteen months of filing. *See Bill Proposes 20-Year Patent Term and 18-Month Publication of Applications*, 47 PAT. TRADEMARK & COPYRIGHT J. (BNA) No. 1167, at 354, 354-55 (Feb. 17, 1994). Accelerated examinations and first office actions were accommodations proposed to give applicants a chance to decide whether to proceed with their application before it is published. *See id.* Applications that were maintained "in secrecy under any order under Chapter 17" were not subject to this publication requirement. S. 1854 § 2.

[114] S. 2488, 103d Cong. (1994); *see also Administration Bill on 18-Month Publication of Patents is Introduced*, 48 PAT. TRADEMARK & COPYRIGHT J. (BNA) No. 1198, at 599 (Oct. 6, 1994). This bill was introduced in accordance with the August 16, 1994 agreement with Japan, where the United States agreed to institute an early publication system by January 1, 1996. Inventions that are no longer pending or subject to national security secrecy orders under 35 U.S.C. § 181 were exempt from the publication requirement under S. 2488. *See id.* at 600.

[115] *See* S. 1854 § 2 and S. 2488 § 4.

[116] *See* S. 1854 § 2 and S. 2488 § 5.

of 1995."[117] This bill, similar to prior bills, provided for an eighteen-month publication system[118] and rights to provisional royalties for acts of infringement during the period of publication until the patent was issued.[119] However, unlike prior bills, applicants that were accorded "independent inventor" status[120] were exempt from this publication requirement if they made a request not to publish their applications until three months after first office action[121] by the PTO, provided their invention was not filed in a foreign country.[122] This bill died in Congress.

The second bill introduced in the 104th Congress was entitled the "Omnibus Patent Bill" and incorporated all the provisions set forth in the Patent Application Publication Act of 1995.[123] Although the House Judiciary Committee approved this bill, it was never enacted.[124]

2. 105th Congress

Two new bills were introduced in the 105th Congress that, according to one commentator, "rocked the U.S. patent law community."[125] House Bill 400 was cited as the "21st Century Patent System Improvement Act."[126] In the initial version of House Bill 400, the exception to the publication requirement eighteen months after filing[127] was not only limited to independent inventors, but to all applicants who requested their application not be published, as long as they only filed in the United States.[128] However, Representative Marcy Kaptur of Ohio offered an amend-

[117] H.R. 1733, 104th Cong. (1995).

[118] *See id.* § 2.

[119] *See id.* § 4.

[120] Section 2 of H.R. 1733 specified that the independent inventor must be accorded status under section 41(h). *See id.* § 2.

[121] *See supra* note 103.

[122] *See* H.R. 1733 § 2. Section 2 of H.R. 1733 also provided for other exceptions to the publication requirement, including applications for design patents under chapter 16, provisional applications filed under section 111(b) and an application that is no longer pending. *See id.*

[123] H.R. 3460, 104th Cong. (1996). The Omnibus Patent Bill was a combination of three bills. Title II corresponded to H.R. 1733. *See Pending Patent Reforms are Approved by Judiciary Committee*, *supra* note 65, at 197. Section 201 of H.R. 3460 provided the eighteen-month publication provision and § 204 provided the royalty provision. *See* H.R. 3460 §§ 201, 204.

[124] *See Pending Patent Reforms are Approved by Judiciary Committee*, *supra* note 65, at 197.

[125] Kelly L. Morron, *Patent Bills Provoke Strong Response*, N.Y.L.J., Mar. 9, 1998, *available at* LEXIS, News Library, NYLJ File. For a comparison of the two bills, see H.R. REP. 1 No. 06-287, at 31-32 (1999). See also Robertson, *supra* note 79, for a detailed discussion of H.R. 400 and S. 507.

[126] H.R. 400, 105th Cong. (1997).

[127] *See id.* § 200.

[128] *See id.* § 202.

ment[129] to limit the exception only to small businesses,[130] universities, and independent inventors.[131] The bill was passed with the Kaptur amendment by the House of Representatives,[132] but was never enacted.

Senate Bill 507, entitled "The Omnibus Patent Act of 1997," also included an eighteen-month publication provision and a provisional royalty rights section.[133] However, Senate Bill 507 expanded the exemption to all applicants that only filed in the United States, similar to the initial version of its House counterpart.[134] The Senate Judiciary Committee approved the bill,[135] but opposing parties to the legislation kept the bill from moving to the Senate floor for final action.[136]

3. 106th Congress

Numerous bills were introduced in the 106th Congress prior to the enactment of the AIPA. House Bill 1907,[137] also entitled the

129 *See* 143 CONG. REC. H1731 (daily ed. Apr. 23, 1997) (statement of Rep. Kaptur).

130 This exemption would apply to applications:

> filed by a small business concern entitled to reduced fees under section 41(h)(1) of this title, by an individual who is an independent inventor entitled to reduced fees under such section, or by an institution of higher education (as defined in section 1202 of the Higher Education Act of 1965) entitled to reduced fees under such section 41(h)(1).

H.R. 400 § 202. H.R. 400 dropped the reexamination provision. *See Bill to Restructure PTO, Reform Patent Law is Debated Before Judiciary Panel*, 54 PAT. TRADEMARK & COPYRIGHT J. (BNA) No. 1326, at 22, 23 (May 8, 1997); *see also* Robertson, *supra* note 79, at 582-83 (discussing the reexamination provision of S. 507 that was stricken from H.R. 400 as a result of the Kaptur amendment).

131 *See* H.R. 400 § 209(2). If any of the following conditions applied, the "small business" exception will not be available to such applicant: (1) the application has been pending for more than five years from filing; (2) it has not been previously published by the PTO; (3) it is not under PTO appellate review; (4) it is not under an interference proceeding; (5) it is not under any secrecy order; (6) it is not being diligently pursued by the applicant; and (7) it has not been abandoned. *See id; see also House Passes Bill to Create PTO and Reform Patent Law*, 53 PAT. TRADEMARK & COPYRIGHT J. (BNA) No. 1324, at 539, 539 (Apr. 24, 1997).

132 *See House Passes Bill to Create PTO and Reform Patent Law, supra* note 131, at 539. The Kaptur amendment was passed by a vote of 220 to 193. *See* 143 CONG. REC. H1740 (daily ed. Apr. 23, 1997).

133 *See* S. 507, 105th Cong. (1997). Title II of the bill was entitled "The Patent Publication Act of 1997." *Id.*

134 *See id.* § 202. This was in response to a view that all users should benefit from the provisions of S. 507. *See* S. REP. NO. 105-42, at 51 (1997). The bill, however, acknowledged the concerns of independent inventors and small businesses, and provided an additional provision requiring the Commissioner of Patents to appoint an ombudsman to advise them of their concerns. *See id; see also Judiciary Committee Approves Bill to Reorganize PTO, Amend Patent Law*, 54 PAT. TRADEMARK & COPYRIGHT J. (BNA) No. 1329, at 83, 83 (May 29, 1997); Robertson, *supra* note 79, at 580.

135 *See Judiciary Committee Approves Bill to Reorganize PTO, supra* note 134, at 83.

136 *See Copyright Reforms Passed, but Major Patent Bill is in Limbo as Session Ends*, 55 PAT. TRADEMARK & COPYRIGHT J. (BNA) No. 1354, at 96, 100 (Dec. 4, 1997).

137 H.R. 1907, 106th Cong. (1999). Section 402 provided for an early publication system

"American Inventors Protection Act of 1999," passed the House[138] and was approved by the Senate Judiciary Committee[139] but was never enacted. Senate Bill 1948, entitled the "Intellectual Property and Communications Omnibus Reform Act of 1999," is in effect today.[140] Title IV of this new bill is cited as the "American Inventors Protection Act of 1999."[141] Senate Bill 1948 was incorporated into House Bill 3194, the omnibus appropriations bill that was signed into law on November 29, 1999.[142]

III. TWO CONFLICTING INTEREST GROUPS

The AIPA was undoubtedly compromise legislation, attempting to satisfy two conflicting interest groups.[143] Small business entities and individual inventors opposed a pre-grant publication system, arguing that their trade secret will be exploited by larger corporate entities if a patent is not granted for their invention. On the other hand, large multi-national corporations strenuously argued in favor of implementing an early publication system, claiming several benefits, including earlier access to new information and harmonization with other major patent systems. The main arguments raised by both groups are discussed below.

A. *Arguments Against an Early Publication System*

1. Copying and Stealing Valuable Trade Secrets Prior to Patent Issuance

Opponents of the early publication system strongly believed that implementing such a pre-grant publication system would be an "open invitation for every company in the world to steal the publicized technology."[144] They argued that it would be particu-

eighteen months after filing an application. *See id.* § 402. Section 404 provided for provisional royalty rights. *See id.* § 404.

138 *See House Passes Patent Reform and PTO Reorganization Bill*, 58 PAT. TRADEMARK & COPYRIGHT J. (BNA) No. 1436, at 398, 412 (Aug. 5, 1999).

139 *See Senate Judiciary Committee Clears Bills to Reform Patent Law, Adjust PTO Fees*, 59 PAT. TRADEMARK & COPYRIGHT J. (BNA) No. 1448, at 4, 4 (Nov. 4, 1999). The Senate version of H.R. 1907, S. 1798, was introduced by Senator Hatch and approved by the Senate Judiciary Committee on November 2, 1999. *See id.*

140 *See* S. 1948, 106th Cong. (1999); *see also* 145 CONG. REC. S14708 (daily ed. Nov. 17, 1999) (statement of Sen. Lott).

141 S. 1948 § 4001 (enacted).

142 *See Signing of IP Reforms Amends Work-for-Hire, Leaves "First Inventor Defense" Unclear*, 59 PAT. TRADEMARK & COPYRIGHT J. (BNA) No. 1452, at 330, 330 (Dec. 2, 1999).

143 *See* Symposium, *supra* note 2, at 604 (noting that the publication proposal "exposes a growing fault line in the patent community" between large corporations, which support the proposal, and small inventors who oppose it).

144 Hearings of Patent Application Publication Act of 1995, *supra* note 81, at 137-39 (statement of Rep. Dana Rohrabacher of California).

larly damaging for small business entities and individual inventors because their trade secrets would be revealed to the public before patent rights are granted, allowing larger companies to exploit their trade secrets.[145] The "big guys" with more resources can steal and copy the "little guy's" idea,[146] leaving the "little guy" without any patent protection and no reward for their inventions.

The new royalty rights provision of 35 U.S.C. §154(d) is a response to this concern.[147] As discussed earlier,[148] §154(d) allows patentees to recover reasonable royalties against an alleged infringer from the period of publication of the application to the patent's issuance date. Furthermore, to avoid exploitation of valuable trade secret if the PTO ultimately refuses to grant a patent for the invention after publication, the exception under §102(b)(2)(B)(i) permits applicants' non-disclosure of their applications, provided they only file in the United States.[149] With this additional protection, the inventor may still rely on state trade secret law because his invention has not been revealed to the public.

However, §102(b)(2)(B)(i) raises a further concern. If the exemption to the publication requirement applies to all applicants

[145] See Small Business Hearings, *supra* note 44, for arguments by representatives of small businesses opposing the eighteen month publication system. *See also* Symposium, *supra* note 2, at 613-14. Representative Dana Rohrabacher of California showed strong opposition to the early publication requirement in the 104th and 105th Congress. *See also* Hearings of Patent Application Publication Act of 1995, *supra* note 81, at 139 (arguing that "publishing any type of patent application before it receives patent protection would be a heinous crime against America"); 143 CONG. REC. H1731 (daily ed. Apr. 23, 1997) (statement of Rep. Rohrabacher) (opposing the publication requirement, because "America's worse adversaries, people who want to destroy this country," will have all of the information of American inventors even before the patent is issued. It is a "formula. . .for stealing of our technology to be used against us."). Representative Kaptur conceded that a pre-grant publication system was an "open invitation to stealing . . . . . and copying," and offered the Kaptur amendment to H.R. 400 to protect small businesses. *Id.* (statement of Rep. Kaptur). For a discussion of the Kaptur amendment, see *supra* Part II.B.2.

[146] During a floor debate on the H.R. 400 (the 21st Century Patent System Improvement Act) in the 105th Congress, Representative Michael Forbes argued that the new bill was telling the little guys to come up with a good idea so that after eighteen months, whether they will have a patent or not, the whole world may see their idea and can copy that idea. *See* 143 CONG. REC. H1587 (daily ed. Apr. 16, 1997) (statement of Rep. Forbes). Rep. Forbes called H.R. 400 the "Steal American Technology Act." *See id.*

[147] *See* Domestic Publication of Foreign Filed Patent Application Act of 1999, Pub. L. No. 106-113, § 4504, 113 Stat. 1501A-561, 1501A-564 (1999) (codified as amended at 35 U.S.C. § 154(d)(1) (2000)).

[148] *See supra* Part I.B.3.

[149] *See supra* Part I.B.1. In addition, "The First Inventor Defense Act of 1999" in Subtitle C of the AIPA protects inventors that rely on trade secret protection rather than patent protection. *See* The First Inventor Defense Act of 1999, Pub. L. No. 106-113, § 4302, 113 Stat. 1501A-555, 1501A-555 (1999) (codified as amended at 35 U.S.C. § 273 (2000)). This defense requires defendants to demonstrate that, acting in good faith, they "reduced the invention to practice at least one year before the effective filing date of the patent, and commercially used the invention before the effective filing date of the patent." *Id.* However, it is a limited defense in that it is confined solely to infringement actions involving patented business methods. *See* Clarke, *supra* note 35.

that do not file abroad, even to larger corporations that decide not to seek the protection of a foreign patent system for that particular invention, now the "little guys" cannot see the "big guy's" developments. Consequently, the "little guys" may spend their limited resources on researching technology that the "big guys" have already developed. One of the benefits of an early publication system is earlier access to technological innovation, thereby allowing applicants to invest their valuable resources in other areas their competitors have not yet pursued. Because certain applicants may avoid publicizing their applications under §102(b)(2)(B)(i), the U.S. patent system under the AIPA cannot enjoy this very benefit of an early publication system. Unless §102(b)(2)(B)(i) is removed, applicants may continue to waste their limited resources by engaging in duplicative research, proving especially harmful to the "little guys."

2. Fear of Misappropriation of Technology

A corollary to the issue of stealing and copying prior inventions was the concern that entities with more resources would misappropriate the newly discovered technology of smaller businesses. After an independent inventor or small business entity files an application for a new invention, any major corporation with sufficient resources may patent around him by filing applications in adjacent areas of his newly disclosed technology, only making incremental changes.[150] When the individual inventor finally receives his patent with broad claims, he finds "a picket fence by a multitude of minor patents had been erected around his territory."[151] If numerous "incrementally different" patents are issued, the patent rights in the original product become virtually worthless.[152] If the independent inventor varies slightly from his idea, he runs the risk of running into his larger competitor's patent.[153] In effect, valuable intellectual property rights that should have been his are taken

[150] *See* 143 CONG. REC. H1728 (daily ed. Apr. 23, 1997) (statement of Rep. Hunter). Representative Hunter, during a congressional debate before the Judicial Panel on H.R. 400, read an excerpt from a patent lawyer that summarizes the problem of early publication:

> If early stage inventions of start-ups . . . are prematurely disclosed, the innovators will quickly lose any advantage to establish[ed] financially stronger imitators. Unless start-up businesses can get a strong foothold in the marketplace before infringers appear so that they can afford to assert their patent rights, these rights become virtually worthless.

Id.

[151] *Id.*

[152] *See* Hearings of Patent Application Publication Act of 1995, *supra* note 81, at 358 (testimony of David L. Hill, President, Patent Enforcement Fund, Inc.).

[153] *See* 143 CONG. REC. H1728 (daily ed. Apr. 23, 1997) (statement of Rep. Hunter).

away from him.[154]

This practice, often referred to as "patent flooding," is a serious problem in Japan, which has adopted an early publication system.[155] Critics fear that implementing a pre-grant publication system would also result in patent flooding in the United States.[156] This places smaller business entities at a disadvantage because they often lack financial resources to file for numerous patents simultaneously.

However, a few fundamental differences between the Japanese patent system and the U.S. patent system may eliminate this concern. First, an applicant seeking a patent from the USPTO is required to disclose all material prior art that is known to him, or he may be subject to penalties.[157] However, in Japan, applicants need only "check" prior art and disclosure of prior art is not mandatory.[158] Therefore, in the United States, where disclosure of material prior art known to the applicant is mandatory, applicants would be less inclined to practice "patent flooding."

Second, the scope of patent protection in Japan is narrower than the scope of patent protection in the United States.[159] This feature results in more patent applications being filed with the Japanese patent office.[160] Because the scope of protection in the United States is broader, an applicant filing in the United States will not have to file numerous patents. Finally, because the United States still practices a "first-to-invent" system rather than a "first-to-file" system, applicants are not in a hurry to win the race to the patent office.[161]

3. Additional Publication Costs

A third argument raised by opponents of the publication system was the additional publication fee the applicants must incur.[162]

154 *See* Hearings of Patent Application Publication Act of 1995, *supra* note 81, at 358 (testimony of David L. Hill, President, Patent Enforcement Fund, Inc.).

155 *See* 143 CONG. REC. H1728 (daily ed. Apr. 23, 1997) (statement of Rep. Hunter). Representative Hunter also argued that there are almost no high-technology start up businesses in Japan and Europe because they both practice an early publication system. Those countries are "production" heavy and not "idea" heavy. *Id. See generally* Wolfson, *supra* note 12.

156 *See* Ragusa, *supra* note 8, at 173.

157 *See* 37 C.F.R. § 1.56(a) (2001); *see also supra* note 64.

158 *See* Wolfson, *supra* note 12, at 542 n.76; *see also* BAXTER, *supra* note 10, § 4.03, at 4-7 to 4-8 (acknowledging that only a few countries have properly dealt with the problems of inadequate examination and listing countries that require applicants to furnish particulars of prior art cited against corresponding applications in other countries, excluding Japan).

159 *See* Wolfson, *supra* note 12, at 541.

160 *See id.*

161 *See* Pritchard, *supra* note 28, at 302.

162 *See* Ragusa, *supra* note 8, at 172.

Indeed, the AIPA allows the PTO to recover the cost of publication.[163] As of October 1, 2001, the fee is $300, and no small entity discount is available.[164]

It is doubtful that the additional publication fee would be a major financial burden, especially if the applicants are small business entities and independent inventors. Entities that qualify as a small business concern pay only fifty percent of most requisite patent fees, such as filing fees and maintenance fees.[165] This small entity discount for other fees offsets the burden of an additional publication fee.

4. Inefficient Patent Processing

Some critics argued that implementing an early publication system would result in inefficient patent prosecution. The argument focused on the six-month differential between the publication of patent applications eighteen months after filing and the average patent pendency period, which is currently twenty-four months.[166] Why go through the trouble and expense of publishing the contents of an application when a patent will be issued and published six months later?[167] With this additional step, the PTO would experience an additional administrative burden that may result in longer patent processing periods.

However, the likelihood that patents would be issued six months after publicizing an application is remote. The average patent pendency period is exactly what it claims to be – an "average."[168] The time it takes for a patent to be prosecuted may take

163 Domestic Publication of Foreign Filed Patent Applications Act of 1999, S. 1948, 106th Cong. § 4506 (1999).

164 *See* Tyson, *supra* note 78.

165 35 U.S.C. § 41(h)(1) provides:

> Fees charged under subsection (a) or (b) shall be reduced by 50 percent with respect to their application to any small business concern as defined under section 3 of the Small Business Act, and to any independent inventor or nonprofit organization as defined in regulations issued by the Director.

35 U.S.C. § 41(h)(1) (2000). A "small business concern" that is eligible for reduced patent fees is one:

> (a) Whose number of employees, including affiliates, does not exceed 500 persons; and
>
> (b) Which has not assigned, granted, conveyed, or licensed (and is under no obligation to do so) any rights in the invention to any person who made it and could not be classified as an independent inventor, or to any concern which would qualify as a non-profit organization or a small business concern under this section.

Small Business Size Regulations, 13 C.F.R. § 121.802 (2001).

166 *See supra* note 3.

167 This argument was raised by Dr. Robert Rines. *See* Symposium, *supra* note 2, at 628.

168 *See id.* (response by Mr. Herbert Wamsley to this issue) (stating that "[w]hile subma-

several years.[169] In the meantime, if the application is published in eighteen months after it is filed, there is "less mystery" about what is going on in the Patent Office.[170] Early disclosure of newly developed technology would promote economic efficiency by allowing applicants to invest in other, more fruitful fields that their competitors have not yet pursued.[171]

Unfortunately, the exception under §102(b)(2)(B)(i) deprives the patent industry of the benefits of early disclosure. The so-called "submarine patent" problem[172] would not be completely eliminated because applicants that avoid the publication requirement under §102(b)(2)(B)(i) by filing only in the United States may continue to engage in this strategy.[173] Consequently, many applications by these submariners would continue pending in the PTO for a long time. Unless the contents of all patent applications are disclosed in eighteen months, the public will continue to be uncertain about what their competitors are engaging in, and thus generating inefficiency both for the patent processing system in the PTO and for the patent applicants.[174]

B. *Arguments in Favor of an Early Publication System*

1. Early Disclosure of New Technology

In supporting an early publication system, Professor Merges stressed that new technology is valuable only if it is timely.[175] He

rine patents are dying, they are not dead yet. There are still a lot of those ten-year patents around").

169 *See* MERGES, *supra* note 3, at 35 (providing that some applications are reviewed quickly and are issued within a year of the date of application, but others languish in the PTO for years and some even decades).

170 Bruce A. Lehman testified in the Patent Application Publication Act of 1995 Hearings that the eighteen month publication system would ultimately help applicants because there is "less mystery" about what is going on in the Patent Office, and also patent examiners will have prior art available eighteen months after the application is submitted. *See* Hearings of Patent Application Publication Act of 1995, *supra* note 81, at 36 (statement of Bruce A. Lehman, Assistant Secretary of Commerce and Commissioner of Patents and Trademarks, Patent and Trademark Office, U.S. Department of Commerce).

171 *See* Hearings of Patent System Harmonization Act of 1992, *supra* note 111, at 78 (statement by Professor Merges) (stating that the earlier new information is available, the better it serves the goals of disclosure, such as indicating which fields are being pursued by other firms so that they may pursue other, more fruitful topics). *See* discussion *infra* Part III.B.1.

172 *See* discussion *infra* Part III.B.3.

173 *See* 143 CONG. REC. H1732 (daily ed. Apr. 23, 1997) (statement of Rep. Conyers) (arguing against the Kaptur amendment to H.R. 400 in the 105th Congress that exempts small businesses from the publication requirement, stating that the submarine patent problem would continue because small businesses also engage in this strategy).

174 *See* Hearings of Patent Application Publication Act of 1995, *supra* note 81, at 36 (statement of Bruce A. Lehman, Assistant Secretary of Commerce and Commissioner of Patents and Trademarks, Patent and Trademark Office, U.S. Department of Commerce).

175 *See* Hearings of Patent System Harmonization Act of 1992, *supra* note 111, at 78.

stated that the key contribution an inventor can make is not only the invention itself, but also the "early disclosure" of his new invention to others in the same field.[176]

Early disclosure of newly developed technology provides several economic benefits. First, the early publication system allows firms to avoid duplicative research and optimizes investment decisions, because competitors' accomplishments are often transparent.[177] Second, scientific advancement is promoted by an early publication system because inventors can proceed to develop in areas that their competitors have not yet pursued.[178] One proponent commented that "scientists and engineers are given timely insights into the advances in technology, allowing them to quickly assess the state of the art in a particular field."[179]

A third advantage is that the American public will have early access to information of foreign-origin patent applications in the English language.[180] Prior to the AIPA, foreign industries and individuals had access to patent applications in their own language eighteen months after an application is filed in their own country, because foreign nations were practicing an early publication system.[181] For example, if an American inventor developed new technology and filed for a patent application both in Japan and in the United States, Japanese industries had access to the new technology before their United States competitors. Although it was possible to obtain English translations of patent applications published in Japan and other foreign publishing countries, this was not an option for business entities with limited resources.[182] Statistics

176 *See id.* at 67, 78.

177 *See* Hearings of Patent Application Publication Act of 1995, *supra* note 81, at 64, 67 (testimony of Michael K. Kirk, Executive Director, American Intellectual Property Law Association); *see also* Symposium, *supra* note 2, at 618.

178 *See* Hearings of Patent System Harmonization Act of 1992, *supra* note 111, at 78.

179 *See* Hearings of Patent Application Publication Act of 1995, *supra* note 81, at 248 (statement of Roger L. May, Assistant General Counsel, Intellectual Property Practice Group of Ford Motor Company).

180 *See Senate Panel Considers Patent Reforms, Patent and Trademark Office Operations*, 47 PAT. TRADEMARK & COPYRIGHT J. (BNA) No. 1170, at 422, 423 (Mar. 10, 1994). Mr. Gary L. Griswold, appearing for the Intellectual Property Owners, supported an early publication system. *See id.*

181 *See* Ragusa, *supra* note 8, at 166.

182 *See* Hearings of Patent Application Publication Act of 1995, *supra* note 81, at 166 (testimony of James L. Fergason, President, Optical Shields, Inc. and an independent inventor). Mr. Fergason supported an early publication system, stating that the automatic publication system would save traveling costs and translation fees for independent inventors as well. *See id.* Because the United States did not practice a publication system, he went to Japan for new information and paid for translation costs. *See id.* Mr. Fergason argued that with the new system, individual inventors can more accurately assess the need for investment in a particular area without having to go to foreign countries to get the new information and pay for translation costs. *See id.*

show that seventy-five to eighty percent of all patent applications pending in the United States are also filed and published abroad.[183] Because the United States did not have a publication system prior to the AIPA, this disadvantaged United States inventors and businesses competing in the global marketplace. By implementing an automatic publication system, United States researchers and scientists have the same advantage of "prompt, native-tongue publication of cutting-edge technology that their Japanese counterparts have enjoyed for decades."[184]

2. Prompt and Accurate Examination of Applications by the PTO

Proponents also claim that an early publication system will assure the PTO a more accurate and complete patent examination process.[185] During the examination process, the PTO must evaluate prior-filed patent applications to determine the patentability of later-filed applications.[186] Prior to the AIPA, the PTO at times has failed to consider earlier-filed applications until patents were actually issued for the application.[187] If the earlier-filed application issues late, and the patent examiner did not consider it when examining the later-filed application, an incomplete patent examination has resulted.[188] The PTO will have issued a patent thinking that the novelty and nonobviousness test has been met, when in fact, there was a piece of "prior art" that should have stopped the patent from issuing.[189]

If a pre-grant publication system were implemented, the published patent "application" would take place of the published "issued" patent.[190] Not only is it likely that the patent examiner will consider the earlier-filed patent application for a more accurate examination, but the applicants themselves may also cite any pertinent application the PTO may have overlooked.[191]

A more accurate patent examination process generates a more efficient patent system and results in several economic benefits to all participants in the marketplace. Because inventors and industries may rely more heavily on the PTO's examination process with an early publication system, they may commit substantial resources to their inventions without fear that their patents would be later invalidated.[192] Further, less patent litigation will result because the likelihood that the patent will be later invalidated is reduced.[193] The overall cost benefit that a more reliable and accurate patent examination process generates is enormous.[194]

The new publication requirement of the AIPA purported to provide a more efficient patent examination system pursuant to these economic goals. Unfortunately, the amended §102(e) only gives prior art effect to "published" applications.[195] Therefore, applications exempt under §102(b)(2)(B)(i) are only given prior art effect when they "issue" as a patent, essentially allowing the patent examination process for those exempt applications to remain unchanged from that of the pre-AIPA system.[196]

The pre-AIPA system suffered from what was known as "secret prior art" created under §102(e).[197] Professor Merges gives an example of how "secret prior art" may hurt patent applicants:

> You invent something, and scour the prior art to see if you are first. You find nothing. Encouraged, you file a patent application. Later[,] perhaps even after your patent has issued[,] you discover that an application filed earlier than yours described some features of your invention.[198] If the description in this

183 *See* Symposium, *supra* note 2, at 606-07 (noting that roughly 45% of U.S. applications are filed by foreign applicants and another 30% are filed by corporations that file internationally); *see also* 145 CONG. REC. H6949 (daily ed. Aug. 3, 1999) (statement of Rep. Dooley) (noting that 80% of all patent applications pending in the U.S. are also filed and published in other countries, which means that foreign competitors can review U.S. patent applications); 143 CONG. REC. H1725 (daily ed. Apr. 23, 1997) (statement of Rep. Goodlatte) (stating that 45% of patents filed in the United States are filed by foreign inventors). The number of foreign origin utility patent applications between 1989 and 1999 range between 43% to 46% of the total applications filed in the U.S. according to the statistics issued by the PTO. *See U.S. Patent and Trademark Office/Office of Information Dissemination Services/Technology Assessment and Forecast Program, available at* http://www.ipo.gov (last visited Feb. 12, 2001).

184 *See* Hearings of Patent System Harmonization Act of 1992, *supra* note 111, at 104 (statement of Robert B. Benson, Past President, American Intellectual Property Law Association).

185 *See id.* at 103.

186 *See id.*

187 *See id.*

188 *See id.*

189 *See* Hearings of Patent Application Publication Act of 1995, *supra* note 81, at 36 (statement of PTO Commissioner Bruce Lehman).

190 *See* Hearings of Patent System Harmonization Act of 1992, *supra* note 111, at 103.

191 *See id.*

192 *See id.*

193 *See* Hearings of Patent Application Publication Act of 1995, *supra* note 81, at 36 (statement of PTO Commissioner Bruce Lehman). Mr. Lehman testified that the eighteen-month publication system would ultimately help applicants by providing a much more effective patent examination process. *See id.* Because patent examiners will have prior art available eighteen months after the application is submitted, it is less likely that the PTO will miss some piece of prior art in its examination, and therefore reduce the likelihood that the patent would be later invalidated in litigation. *See id.*

194 *See* Hearings of Patent System Harmonization Act of 1992, *supra* note 111, at 104.

195 *See supra* Part I.B.4.

196 *See id.*

197 *See* Hearings of Patent System Harmonization Act of 1992, *supra* note 111, at 83 (statement of Professor Robert P. Merges).

198 *See supra* Part I.B.4. An earlier-filing applicant simply has to "describe" an invention in her patent application and does not have to "claim" the subject matter.

> patent application is complete enough to make your invention obvious, your patent is invalid. There was *no way* you could have discovered this before you filed, but it is "prior art" against you anyway.[199]

This "secret prior art" problem under §102(e) will continue to linger as long as applicants may avoid the publication requirement under §102(b)(2)(B)(i) by only filing in the United States. If secret prior art is not brought to the applicant's attention during the application process, it can be discovered during patent litigation, resulting in a significant waste of resources in expensive litigation over a patent that may now be deemed invalid based on previously unknown prior art.[200] For small business entities and individual inventors with limited resources, this can be even more pressing a problem in view of the high costs of patent litigation.

The exception under §102(b)(2)(B)(i) should be deleted to allow patent examiners access to all relevant prior art eighteen months after patent applications are submitted.[201] With a more accurate patent examination process, applicants that rely on patent protection will be more inclined to spend research and development costs for their inventions, without fear of having their patent invalidated in litigation.[202]

3. Elimination of the "Submarine Patent" Problem

Proponents of an early publication system claim that such a system would eliminate the "submarine patent" problem that has "long plagued the U.S. patent system."[203] Some critics challenge the very existence of a submarine patent problem, but studies show that there has been an epidemic of submarine patents since the mid-eighties.[204] Although applicants now have less incentive to engage in submarine patent strategies due to the new patent term of twenty years from its "filing" date rather than seventeen years measured from its "issue" date,[205] submariners may still attempt to manipulate the system within the twenty-year period.

Submarine patents are patent applications that have been delayed in the PTO for several years by the patent applicant before a patent is finally issued.[206] After filing for a patent on broad areas of new technology, the inventor intentionally prolongs his review at the PTO by re-filing slightly different versions of his application[207] so that the patent will be issued long after the industry has been established for that technology.[208] In the meantime, competitors would adopt the later-patented technology, thinking it was publicly available information.[209] After the "submariner" is issued a patent, the competitor that unknowingly adopted the patented information is required to negotiate a license with the late-arriving patentee against a threat of a lawsuit.[210] This practice causes disruptions in the marketplace,[211] prevents advancement of new technology, results in expenditure of unnecessary costs to develop technology that has already been developed, increases patent litigation, and may even result in a start-up company that relied on this publicly available information to shut down their operations.[212]

With adequate disclosure of patent applications eighteen months after their filing date, these competitors are provided with necessary information to make the requisite business decision before entering into a particular field and given warnings of potential legal claims to the technology.[213] However, because applicants may opt out of the mandatory publication requirement under §102(b)(2)(B)(i), the submarine patent problem will not be completely eliminated. Small business entities may try to manipulate the system as they have in the past.[214] Even foreign inventors that

199 Hearings of Patent System Harmonization Act of 1992, *supra* note 111, at 83 (statement of Professor Robert P. Merges) (underlined in original text).

200 *See* Hearings of Patent Application Publication Act of 1995, *supra* note 81, at 36 (statement of Bruce Lehman) (stating that patent litigation "is very hard to get in and out of court for less than a half a million dollars").

201 *See id.* (stating that implementing a publication system would make prior art available within eighteen months after patent applications are filed).

202 *See id.*

203 H.R. REP. No. 105-39, at 34 (1997) (statement of Rep. Coble introducing H.R. 400).

204 *See* Hearings of Patent Application Publication Act of 1995, *supra* note 81, at 139 (statement by Dana Rohrabacher) (stating that two-thirds of the so-called submarine patents were under "secrecy orders" pursuant to the Patent Act, and the applicants were not to be blamed for this). According to a study done by the Intellectual Property Owners ("IPO"), however, there was an epidemic of submarine patents since the mid-eighties. The IPO is a trade association that includes large and small companies and universities and individuals who own patents, trademarks, copyrights and trade secrets. *See id.* at 52 (testimony of Gary L. Griswold, President, IPO). The IPO conducted research in the summer of 1998 and found that 320 cases of patents that were granted between 1971 and 1996 met a list of criteria including: pending in the PTO for at least fifteen years, were under secrecy order, and were re-filed at least twice. *See id.* The bulk of these 320 applications were pending in the PTO for more than twenty years. *See* Symposium, *supra* note 2, at 620-21.

205 *See* MERGES, *supra* note 3, at 41-42.

206 *See* Symposium, *supra* note 2, at 620-21; *see also* Hudson, *supra* note 3, at 91-92, 102-03; Smith, *supra* note 24, at 596.

207 *See* Smith, *supra* note 24, at 596.

208 *See* Hudson, *supra* note 3, at 91.

209 *See* H.R. REP. 105-39, at 34 (1997).

210 *See id.*

211 *See id.*

212 *See id.*

213 *See id.*

214 *See* 143 CONG. REC. H1732 (daily ed. Apr. 23, 1997) (statement of Rep. Coble) (citing an example of a multimillionaire patent submariner, Mr. Lemelson); 143 CONG. REC. H1586, H1587 (daily ed. Apr. 16, 1997) (statement of Sen. Goodlatte) (citing information from Bernard Wysocki, Jr., *How Patent Lawsuits Make a Quiet Engineer Rich and Controversial,*

only file for a patent with the USPTO may request an exemption under §102(b)(2)(B)(i) and end up submarining American inventors.[215]

Because submarine patents are dependent on pre-grant secrecy, submariners that opt to avoid the publication requirement may continue to manipulate the system at great costs to other applicants that invest substantial resources in promoting technological innovation.[216] The U.S. patent system could achieve considerable improvement in eliminating these submariners by deleting the exception to the publication requirement of §102(b)(2)(B)(i).

WALL ST. J., Apr. 9, 1997). Mr. Bruce Lehman, USPTO Commissioner, expressed his outrage:

> these people who file patent applications and never . . . go to market with an invention. I thought what the patent system was all about was coming here and getting a patent and going to a . . . venture capitalist and get money, and then . . . start a company and put products out on the marketplace.

143 CONG. REC. H1732. According to the article, this waiting game had supplanted the underlying purpose of the patent system, and now it was the "patent itself" that had the economic value. Mr. Lemelson does not manufacture products and rarely even makes prototypes, but has filed nearly 500 U.S. patents by claiming his designs "on top of existing inventions for the purpose of creating infringement." *Id.* By 1994, he had amassed about $500 million in royalties from his patents. *See id.*

215 143 CONG. REC. H1733 (daily ed. Apr. 23, 1997) (statement of Rep. Lofgren) (arguing against the Kaptur amendment to H.R. 400 that exempted small business concerns from the publication requirement). Ms. Lofgren gave an example of the "most notorious submarine patentor [she] was able to find," a Swedish "alleged" inventor, Olaf Soderblom, who filed for a U.S. patent in 1968 and it was not issued until 1981, thirteen years later. *See id.* Mr. Soderblom waited just below the surface with his application of the "token ring technologies" that he claimed were his inventions. *See id.* When he finally did get his patent as a result of excellent American patent attorneys, he was paid over $100 million for his patent. *See id.* This money came from American companies, which contributed to the adverse trade balance. *See id.* She argued that the Kaptur amendment would allow this to happen again. *See id.*

216 145 CONG. REC. H6950 (daily ed. Aug. 3, 1999) (statement of Rep. Dooley) (stating that submariners may continue to manipulate the system "at great costs to others who are investing in research and innovation"). Representative Dooley raised the problem of submarine patents, stating that one of these submarine patents cost one company more than five hundred million dollars. *See id.* at H6949, H6950. Further, Representative Tom Campbell offered an amendment to H.R. 400 in the 105th Congress. He argued that disclosure should not be required by those "good-faith people" who do not engage in the submarine strategy. The Campbell amendment would allow publication of a patent application only after two PTO office rulings pertaining to the patentability of the invention. Representative Coble responded that the PTO would not be able to comply with this requirement of completing two substantive office actions in every application filed and still publish all applications in eighteen months. This change would lead to unfavorable consequences, such as fee increases, incomplete patent examinations, and publication delays of all applications until the second substantive office action. Further, because this exception applies to all applicants, the United States would not enjoy the benefit of having an early publication system. *See id.* at H1724 - H1728. The Campbell amendment was defeated by a vote of 185 to 224. *See id.* at H1739.

IV. WHY THE EXCEPTION UNDER § 102(b)(2)(B)(i) SHOULD BE DELETED

A. *Weighing the Arguments of Both Sides*

Implementing a pre-grant publication system was a drastic change for the U.S. patent system. This structural change seeks to provide numerous benefits. Early disclosure of cutting-edge technology prevents duplicative research and promotes scientific advancements by warning innovators of possible conflicts with their competitors' inventions, thereby allowing them to pursue other areas. Most importantly, this change allows the American public to have access to information of foreign-origin patent applications. An early publication system will also ensure a more accurate and efficient patent examination process and eliminate "secret prior art" to a significant degree. Furthermore, publication of patent applications eighteen months after filing will discourage applicants from engaging in the "submarine patent" strategy.

Applicants that had traditionally relied on the secrecy rule to protect their intellectual property interests protested the proposition of publicizing all patent applications. To address their main concern about revealing their valuable trade secrets before a patent issues, 35 U.S.C. § 154(d) provides ample protection, allowing applicants who successfully receive a patent on their invention to receive provisional royalty rights. Furthermore, to ensure non-disclosure of their patent applications and retain the confidentiality of their trade secrets, §122(b)(2)(B)(i) allows applicants to opt out of the publication requirement, provided they only file in the United States.

Unfortunately, adopting the §122(b)(2)(B)(i) exception may be problematic for several reasons. First, although §122(b)(2)(B)(i) received considerable support from small business entities and individual inventors, in practice this exception may prove especially harmful to these specific applicants. Because of their limited resources, they cannot undergo years of patent litigation to deal with "secret prior art" or to confront "submariners" if pre-grant secrecy is maintained under §122(b)(2)(B)(i). Second, allowing this exception would in effect create a bifurcated regime, overburdening the USPTO which must now take into account both published applications and applications that are exempt under §122(b)(2)(B)(i).[217] This bifurcation and added bureaucracy may ultimately

217 *See Bill to Restructure PTO, Reform Patent Law is Debated Before Judicial Panel*, 54 PAT. TRADEMARK & COPYRIGHT J. (BNA) No. 1326, at 22, 22 (1997).

result in slowing down the patent prosecution process. Instead of providing a more efficient patent system, the AIPA, by allowing pre-grant secrecy to certain applicants under §122(B)(2)(b)(i), has created a more confusing bifurcated system that may even hinder technological progress.

B. *Purpose of the Patent Act*

It is virtually impossible for Congress to structure a patent system that would be satisfactory to all of its participants. It is not impossible, however, for Congress to identify the underlying problems of the U.S. patent system and seek to resolve these issues, with the ultimate goal of establishing a patent system that ensures technological innovation and promotes the progress of science, as mandated by the Constitution.[218] Former PTO Commissioner Bruce Lehman stated that "the best kind of patent system is one that gets the patent application into and out of the Patent Office as quickly as possible, makes the technology available to the world, and moves that innovative process forward."[219] Congress should attempt, therefore, to develop the "best kind of patent system."

Promoting technological growth through early dissemination of new information should not, however, be Congress' sole concern. The U.S. patent system must also provide adequate incentives to inventors who play a fundamental role in making such cutting-edge technology available to the public.[220] Without creating an incentive for these inventors, they would be reluctant to disclose their inventions to the public, and the public will not benefit from using such technology. Indeed, the Patent Act prior to the AIPA rewarded these inventors who were ultimately issued a patent by granting exclusive rights to their inventions for limited times.[221] Yet the pre-AIPA system only addressed the protections afforded to inventors after a patent was actually "issued," due to its then underlying policy of protecting the confidentiality of patent applications. Prior to implementation of a pre-grant publication system, Congress had to adequately address the scope of protection afforded to

218 U.S. CONST. art. I, § 8, cl. 8. "The Congress shall have Power. . . to promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries." *Id.*

219 Hearings of Patent Application Publication Act of 1995, *supra* note 81, at 36.

220 *See* MARCUS B. FINNEGAN ET AL., A COMPARATIVE STUDY OF THE PATENT LAWS OF THE UNITED STATES AND JAPAN 4 (Teruo Doi & Warren L. Shattuck eds., 1977) (stating that granting exclusive rights for a limited time is a just reward and a necessary incentive for inventors so that they may spend time, effort, and money in creative endeavors for new discoveries that "inject a vital and continuous flow of technological innovations into the industrial mainstream").

221 *See supra* note 22.

trade secrets during the application and prosecution process, and possible rights or remedies afforded to applicants if the USPTO denies issuing a patent after publication.

The possibility of destroying any potential trade secret protection before a patent was issued led to the conflict of two interest groups. Individual inventors and small business entities protested the pre-grant publication system, wishing to preserve the secrecy rule under the pre-AIPA system. In contrast, larger corporate entities strongly endorsed the early publication system, proposing that such a system is inevitable in creating a more efficient patent system.

Perhaps one approach to resolve this conflict is to support the views of those who are awarded more patents, those endeavoring to serve the public interest by furthering technological and economic growth. Empirical studies reveal that as a percentage, the number of patents awarded to corporations has increased in recent years, whereas, the number of patents granted to individuals has gradually decreased during the same period.[222] Another approach may be to consider which interest group relies more heavily on the protection of the Patent Act. One can argue that patents are more valuable to small entities rather than larger corporate entities because larger entities have sufficient resources to rely on other means of protection, such as state trade secret law, and are able to submit to expensive litigation.[223] In the end, however, the answer perhaps lies in determining the underlying purpose behind enacting a patent system.

What is the purpose of the U.S. patent system? The Constitution authorizes Congress to reward exclusive rights for limited times to inventors for their discoveries "to promote the Progress of Science and useful Arts."[224] This language suggests that inventors would be financially rewarded with exclusive patent rights if, and

222 *See* Chris J. Katopis, *Patients v. Patents? Policy Implications of Recent Patent Legislation*, 71 ST. JOHN'S L. REV. 329, at 394 (1997) (stating that the number of patents awarded to individuals has steadily declined since the turn of the century while the number of patents going to corporations during the same period has increased); TAF Report, *Patents Granted as Distributed By Year of Patent Grant, at* http://www.uspto.gov (last visited Feb. 17, 2002) (providing the following percentage of patents granted to U.S. corporations in 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, and 2000 respectively: 41%, 40%, 40%, 40%, 40%, 41%, 42% 43%, 43%, 44%, 45%, 44%, 45%, and 45%; and the percentage of patents granted to U.S. individuals in those same years respectively, 14%, 14%, 15%, 15%, 15%, 15%, 15%, 15%, 15%, 14%, 13%, 13%, 12%, and 12%; all other patents were granted to the U.S. government and foreign applicants).

223 *See* Katopis, *supra* note 222, at 394.

224 *See* U.S. CONST. art. I, § 8, cl. 8.

only if, their inventions and discoveries promote technological innovation.

The main concern addressed by opponents of the publication system was laying open valuable trade secrets without any guarantee that a patent will be granted. This practice would be particularly devastating if the USPTO ultimately denies patentability for the invention. Implicit in the PTO's refusal to grant a valid patent, however, is the fact that the invention would not contribute to the constitutional goal of promoting "the Progress of Science and useful Arts." One academic succinctly stated that the public benefits by having only useful and practical patents placed on the market:[225]

> Patent laws are not designed as a charitable institution to insure the financing of aspirations, hopes and dreams of those who would like to be successful and who do not justify success by their own accomplishments. The opportunity for a small inventor is just as great for the large inventor. The public is just as anxious for an invention if it is useful and satisfactory, no matter who invents it or how much he has when he produces.[226]

The United States maintains a patent system to promote technological growth by granting exclusive rights for limited times to inventors for their discoveries. To ensure that the grant of such exclusive rights does in fact promote technological growth, the United States patent system must constantly, yet carefully, balance the individual inventor's interest in receiving adequate rewards for their inventions with the public interest in having only useful, valuable information disseminated. The United States patent system will better serve its purpose of promoting technological growth if we give deference to the USPTO's expertise in granting patent rights solely to those inventions that meet the constitutional requirement of being a "useful Art." A patent system that allows pre-grant secrecy to trade secrets that may eventually prove to be unpatentable is inefficient and contrary to the public interest. Therefore, the exception to the publication requirement under 35 U.S.C. §122(b)(2)(B)(i) should be deleted.

CONCLUSION

Implementing an automatic publication provision as provided for in the AIPA was long overdue. The last time the Patent Act

225 *See* H.A. TOULMIN, JR., PATENTS AND THE PUBLIC INTEREST 27 (1939).
226 *Id.* at 31.

underwent a significant update was in 1952.[227] Since then, the United States has experienced tremendous technological growth, and new demands necessitated a new patent system. The AIPA was a response to those new demands, and the enactment of an automatic publication system aimed to provide a more efficient and beneficial patent system.

Unfortunately, the exception to the publication requirement under §122(b)(2)(B)(i) allows pre-grant secrecy to certain applicants that prefer non-disclosure of their application, provided they do not file abroad. Because of this exception, problems premised on pre-grant secrecy, including "secret prior art" and "submarine patents," will continue to linger and will prove especially harmful to applicants with limited resources who must overcome these obstacles during patent prosecution. Furthermore, if applicants may opt out of the publication requirement under §122(b)(2)(B)(i), a bifurcated regime will result, creating an administrative burden for the PTO and slowing down the prosecution process. These barriers to an efficient patent system must be eliminated for the United States to achieve its constitutional goal of "promoting the Progress of Science and Useful Arts."

The new publication provision under §122(b)(1) of the AIPA is not entirely devoid of positive outcomes and does in fact move the United States patent system closer towards that of other major industrialized countries. The new pre-grant publication system gives timely insights of new inventions in the English language, thereby allowing all inventors to promptly assess the current state of the art. Furthermore, publicizing the content of patent applications assures the PTO a more accurate patent examination process and eliminates the problem of "secret prior art" to a significant degree. Also, implementing an early publication system would provide United States inventors a "level playing field" with foreign competitors who have enjoyed the benefit of such a system for years.[228] The new automatic publication system, however, would

227 *See* MERGES, *supra* note 3, at 11-12.
228 *See* Hearings of Patent System Hamonization Act of 1992, *supra* note 111, at 105 (statement of Robert B. Benson); *see also* 143 CONG. REC. H1729 (daily ed. Apr. 23, 1997) (statement of Rep. Lofgren). In a floor debate on H.R. 400, Ms. Zoe Lofgren supported the publication system, claiming that the U.S. is not attempting to conform its patent law to Japan's or the EU's, but attempting to protect inventors so they would not be disadvantaged. She submitted a study comparing U.S., Japanese, and European Community patent law, claiming that word for word patent applicants in Japan are required to do what patent applicants in the U.S. and E.U. are required to do:

> Japanese Law: (4) The detailed explanation of the invention under the preceding subsection (iii) shall state the invention, as provided for in an ordinance of the Ministry of International Trade and Industry, in a manner sufficiently clear

better serve its purpose if the exception under §122(b)(2)(B)(i) were deleted.

*Reiko Watase**

and complete for the invention to be carried out by a person having ordinary skill in the art to which the invention pertains.

U.S. Law §112 Specification: The specification 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.

European Community: Article 83, Disclosure of the Invention: The European patent application must disclose the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art.

Id. Strictly speaking, however, the statutory language of U.S. patent law is distinct from the Japanese and EC patent laws because it includes a best mode requirement. *See supra* note 45.

* J.D., 2002, Benjamin N. Cardozo School of Law. Special thanks to Professor Morris Cohen for his assistance in reviewing earlier drafts of this Note, Professor Peter Yu, and the editors and staff of the *Cardozo Arts & Entertainment Law Journal.*