Mandatory Publication of Patent Applications Prior to Issuance of Patents: A Desirable Change in U.S. Policy

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MANDATORY PUBLICATION OF PATENT APPLICATIONS PRIOR TO ISSUANCE OF PATENTS: A DESIRABLE CHANGE IN U.S. POLICY?

I. INTRODUCTION

Under current U.S. law, the Patent and Trademark Office keeps a patent application in confidence.\(^1\) In 1952, Congress, in enacting 35 U.S.C. § 122, codified the rule of secrecy of patent applications, which had existed in the Patent Office for generations.\(^2\) This veil of secrecy exists until the Patent Office grants a patent.\(^3\) Congress, however, presently is considering abandoning this practice in favor of a system that mandates publication of each patent application eighteen months after the first filing date.\(^4\) The United States is the only major country in the world that does not publish pending patent applications within eighteen months of the first filing date.\(^5\)

The United States originally sought to change 35 U.S.C. § 122 as part of the effort to harmonize world intellectual property laws.\(^6\) In 1994, after the United States signed a bilateral accord

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1. Current U.S. patent law provides that: Applications for patents shall be kept in confidence by the Patent and Trademark Office and no information concerning the same given without authority of the applicant or owner unless necessary to carry out the provisions of any Act of Congress or in such special circumstances as may be determined by the Commissioner. 35 U.S.C. § 122 (1994).


3. Id.

4. The eighteen-month “clock” would start with the earliest filing date and is not reset by filing a subsequent continuation to the original application. See H.R. 1733, 104th Cong., 1st Sess. § 2 (1995).


with Japan, Congress proposed, but did not enact, eighteen-month mandatory publication. In the bilateral agreement, the United States agreed to begin eighteen-month publication by January 1, 1996. The current proposal for eighteen-month mandatory publication is in H.R. 1733. The U.S. Patent and Trademark Office has proposed changes to the Rules of Practice in Patent Cases to implement the eighteen-month publication of patent applications pursuant to H.R. 1733.

Part II of this Comment addresses the rationale behind confidential applications by examining policy concerns. Part III examines the arguments in opposition to and in support of mandatory publication. Finally, Part IV concludes that the United States should not implement eighteen-month mandatory disclosure and suggests instead that the United States provide translations of published foreign applications to inventors. This approach would avoid mandatory publication of inventions belonging to exclusively domestic filers while allowing all U.S. inventors access to internationally filed applications after eighteen months.

II. POLICY BEHIND THE PRESENT SYSTEM OF CONFIDENTIAL APPLICATIONS

The U.S. patent system provides patentees with protection within the United States. Growth of global markets has led many companies to sell their products abroad. Some legislators


are urging a change in the U.S. patent system in an effort to gain greater patent protection for U.S. inventors abroad. Although the United States should diligently seek greater patent protection abroad, it should not abandon underlying policy concerns and compromise its patent system.

The Constitution grants Congress the power "[t]o 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 . . . ." This clause confers power to Congress for the purpose of promoting progress. To this end, the patent clause allows a "balance between the need to encourage innovation and the avoidance of monopolies which stifle competition without any concomitant advance in the Progress of Science and useful Arts." The government grants a monopoly as consideration for disclosure and to induce creative effort.


15. Ellsworth H. Mosher, W(h)ither Away the U.S. Patent Office?, 74 J. PAT. & TRADEMARK OFF. SOC'Y 335, 336 (1992) (arguing clause 8 is a limited grant of power as compared to other clauses).


17. This is referred to as an "exchange-for-secret." See Fritz Machlup, An Economic Review of the Patent System, Study of the Subcommittee on Patents, Trademarks, and Copyrights of the Senate Committee on the Judiciary, Study No. 15, 85th Cong., 2d Sess. 21 (1958). "[Inventions] would be kept secret and . . . society can obtain the substantial benefit of disclosure only by offering patent protection in exchange for publication." Id. at 24.

18. This is referred to as the "monopoly-profit-incentive." Id. at 21. According to this theory, [t]he profit expectations connected with the hope for a patent monopoly may induce inventive talents to exert their efforts, and venturous capitalists to risk their money, in research, experimentation, development, and pioneer plants; in order to be effective, the hoped-for gains from the hoped-for monopoly may have to be a multiple of the expenses incurred since few would want to risk the loss of their entire stakes unless they had a good chance of getting back much more than they put up . . . . Id. at 23-24. "The thesis that the patent system may produce effective profit incentives for inventive activity and thereby promote progress in the technical arts is widely accepted."

Id. at 33. One noted English inventor remarked in 1850, "[t]here is not a working boy of average ability in the New England States . . . who has not an idea of some mechanical invention or improvement . . . by which he hopes to better his position, or rise to fortune."
The underlying philosophy of the U.S. system is that the best way to promote invention is to protect the property rights of the inventor, thereby creating the economic incentive to invent. The U.S. system creates a contract, according to which an inventor discloses his invention if the government gives substantive rights in the form of a patent. This system has the benefit of providing an incentive to design around patented inventions, which results in the creation of new innovations. The United States designed the patent monopoly as "a reward, an inducement, to bring forth new knowledge."

III. THE DEBATE OVER EIGHTEEN-MONTH MANDATORY PUBLICATION OF PATENT APPLICATIONS

A. Arguments Against Eighteen-Month Mandatory Publication

There are several arguments against mandatory disclosure eighteen months after filing. Critics argue that eighteen-month mandatory disclosure would: (1) discourage use of the patent system due to inadequate trade secret protection; (2) benefit big
industry at the expense of small inventors, and (3) implicitly change the philosophy of the patent policy.

1. Inadequate Trade Secret Protection

Under current U.S. law, "publication does not occur until the patent is actually granted." The U.S. Patent Office holds pending or abandoned applications in secrecy. The primary purpose of maintaining secrecy is to protect the applicant's trade secret should the Patent Office not grant a patent. According to the Restatement of Torts, "[a] trade secret may consist of any formula, pattern, device or compilation of information which is used in one's business, and which gives him an opportunity to obtain an advantage over competitors who do not know or use it." An inventor is faced with a choice of receiving a patent or maintaining a trade secret. As a trade secret, an inventor can "keep his invention secret and reap its fruits indefinitely." Critics of eighteen-month publication contend "[inventors] will have to disclose their secrets to competitors without any assurance that they will ultimately be granted a patent." Additionally, "[m]any inventors are concerned that publication of their patent applications will jeopardize their trade secret protection on inventions that turn out not to be patentable." Under an eighteen-month mandatory publication system, inventors who might otherwise use the patent system might now favor trade

26. "Multinational corporations filing applications around the world have a greater self-interest in harmonization than the small entity or individual applicants . . . ." First to File and Inequitable Conduct Dominate ABA-PTC Meeting in Atlanta, Pat., Trademark & Copyright L. Daily (BNA), Sept. 9, 1991, available in LEXIS, Patent Library, BNAPTD File [hereinafter First to File].

27. Independent inventors argue they will be hurt by an eighteen-month publication rule. Riordan, supra note 8, at D1.

32. RESTATEMENT OF TORTS § 757 cmt. b (1939).
34. Riordan, supra note 8, at D1.
secret protection rather than risk the possible disclosure of a trade secret through the application process.强制发表可能会以不同程度保护商业秘密。如果专利局最终决定在申请提交后延期超过十八个月不授予专利，申请人将失去商业秘密，并且未获得专利制度的保护。

虽然其他国家可能不保护商业秘密，但美国认为商业秘密有价值，并寻求更广泛国际认可这种知识产权形式。损失一个商业秘密而得不到任何回报将不是一种吸引人的交易，也不是一种有效的诱导。

在当前提出的立法下，一个发明家必须作出一个困难的选择。他可以选择继续申请希望获得专利，或者撤回申请以保证商业秘密的保护。因此，如果一个发明家的申请已经延期接近十八个月的期限，发明家必须作出困难的选择。他可以保持申请人的身份希望可能会获得专利，或者撤回申请以确保商业秘密的保护。

36. Proponents of eighteen-month publication argue that few applicants would be able to effectively utilize trade secret protection in lieu of patent protection. Although this may be true, a trade secret property right, however transient, exists in every invention. See HARMON, supra note 12, at 3. A trade secret may be valuable to an inventor even if it cannot extend to the length of a patent. The arguments presented in this section assume that trade secrets have a value to an inventor and that the loss of a trade secret is a loss of property.

37. In 1990, Japan enacted a law protecting trade secrets. Jobs Through Anti-Piracy, supra note 6, at 38 (prepared statement of Ira S. Shapiro, General Counsel to the U.S. Trade Representative). Prior to that, although “[t]he Japanese ... [did] have trade secret protection available on a contractual basis, ... [they did] not, to our knowledge, have any effective protection against third parties who wrongfully acquire or use trade secrets.” Japanese Patent Policy Hearing, supra note 6, at 15 (statement of Michael K. Kirk, Assistant Commissioner for External Affairs, Patent and Trademark Office).


39. See supra notes 17-18 and accompanying text.


41. Eighteen-month mandatory publication as proposed in H.R. 1733 provides that an independent inventor's application, upon filing a request and fee, would not be published until three months after the first office action by the PTO, even if that occurs later than eighteen months after filing. Rules Issued, supra note 9. Ninety-two percent of applicants already receive a first office action within fourteen months. Patents, Patent Office Holds Hearing on Rules for 18-Month Publication of Applications, Daily Rep. for Executives (BNA), at A182 (Sept. 20, 1995) [hereinafter Patents, Patent Office].
If the applicant chooses not to withdraw and the Patent Office ultimately grants a patent some time after eighteen months, the inventor temporarily loses his trade secret. The temporary loss of a trade secret can lead to improper third-party exploitation and loss of a competitive advantage. Current U.S. patent law protects an inventor from third-party exploitation of his invention by maintaining confidentiality. To allay concerns about third-party exploitation, H.R. 1733 provides a reasonable royalty provision. A reasonable royalty allows patentees to recover for use of their patented inventions during the pre-grant period subsequent to publication.42 This provision is open to severe criticism, however, because it requires actual notice or knowledge of the published patent application43 and that the "invention claimed in the patent . . . [be] identical to the invention as claimed in the published patent application."44 Because the entire process of patent examination requires sculpting and molding of patent claims, this situation almost never occurs.45

If the secret is out and the Patent Office has not yet granted the patent, the applicant loses a competitive advantage. Because the applicant does not know what will be the ultimate scope of the patent, he may not be able to proceed. This uncertainty causes, in part, a loss of advantage.46 Pending applications are not as valuable as patents.47 Venture capitalists are unlikely to give money on rights which may never mature.48 Uncertainty as to the scope of a patent also weakens a prospective patentee’s negotiating position during licensing.49 In the interim, the invention is public. Now aware of the invention, competitors are free to begin designing around it. Competitors are able to compete

43. Id.
44. Id.
48. See id.
more effectively than they would absent the Patent Office’s disclosure of the inventor’s idea.

Competitors are more likely than ever to be able to exploit this information. The ease of retrieving information in today’s society is unprecedented. In today’s world, mandatory publication is virtually certain to put this information in the hands of competitors. Currently, full text and drawings of published patents are available on the Internet. 

Under rules that the U.S. Patent and Trademark Office has proposed, “[t]he current planning approach to the implementation of early publication is to create an electronic data base which captures the technical content, i.e., the specification, abstract, claims and drawings, of the application-as-filed. This electronic data base will be used to provide electronic searching and retrieval of applications.”

The loss of a competitive edge due to eighteen-month mandatory publication, along with the possibility of receiving nothing in return for the disclosure of an invention, is a less attractive exchange and discourages disclosure. Mandatory publication, instead, would erode the purpose of a patent law by inadequately protecting the property rights of inventors. As the courts have noted, “the filing of an application for a patent is [not] the dedication of a secret to the public. If the secret is valuable, the discoverer, conceiving it to be patentable, would by making application hazard both secret and patent. This would defeat the very purpose of the patent law.”

2. Gains for Large Corporations at the Expense of Small Entities

Independent inventors and small companies fear a system that gives benefits to big industry at their expense. “A [patent] system clearly favors major companies that have established marketing strength whenever [it] ... negates an advantage for the

52. See supra note 17 and accompanying text.
53. See supra note 18 and accompanying text.
55. First to File, supra note 26.
Increased protection abroad at the expense of weakening domestic protection would not further long range U.S. competitiveness. Independent inventors and small companies also fear the loss of a needed competitive advantage. In addition, eighteen-month mandatory publication could discourage filing and potentially serve as a tool to slow patent prosecution.57

One of the arguments for changing the patent system has been the need to compete in a global economy.58 Achieving stronger patent protection abroad will help increase U.S. exports,59 most of which large companies produce.60 Hence, larger, multinational corporations stand to receive the greatest benefit from worldwide patent protection.61 While stronger patent protection abroad62 is something the United States should diligently seek, gaining such protection should not be at the expense of independent inventors and small companies. Small and medium size businesses produce seventy-five percent of the U.S. gross national product.63 Furthermore, "less than 30% of... United States based industrial capacity [from large companies] goes into foreign trade."64 According to these statistics, perceived gains by large U.S. multinational corporations can not justify changing patent procedure if achieving these gains is at a significant expense to domestic industry.

In addition, "it is well-recognized that the American competitive edge is technology and the Japanese competitive edge is production."65 Thus, even if U.S. patent laws provide early access

57. Patent prosecution is a term of art used to describe the application process.
62. See infra part III.B.3.
64. Id.
to new technology, actual gains by U.S. multinational corporations could be less than the perceived gains. Benefits to large companies, at the expense of independent inventors and small companies, arguably would not increase the long range competitiveness of the United States.

Independent inventors and small companies also fear that a loss of competitive advantage, resulting from publication prior to issuance, will allow larger corporations with more capital to move more quickly into the field. Allowing others to rapidly develop applications that the published application suggests could be calamitous for the independent inventor. Domestic and foreign corporations alike could begin developing products in areas previously known only to the inventor and the Patent Office until the Patent Office issues the patent.

Critics oppose early publication because large corporations could exploit the process to slow patent prosecution. Some believe that large companies could file overly broad claims in order to create phony prior art as a means to discourage small inventors from pursuing their own patent applications.

In addition, some critics have suggested that third parties could use prior art to delay prosecution. Under Rule 56, an applicant has an ongoing duty of candor that requires disclosure of prior art to the examiner while the application is pending. If an applicant does not disclose prior art, the Patent Office could find the applicant to have engaged in inequitable conduct. After learning of the content of an application, a third party could flood

66. For a discussion of the benefits of earlier access to new technology, see infra part III.B.1.a.
67. See supra notes 46-51 and accompanying text.
69. Id.
70. Patents, Patent Office, supra note 41.
72. "Each individual associated with the filing an prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability ...." Rules of Practice in Patent Cases, 37 C.F.R. § 1.56 (1995).
73. PTO Holds Hearing, supra note 71.
the applicant with prior art. If the applicant does not disclose that art to the Patent Office, the Patent Office could later invalidate a patent. Disclosure of the irrelevant prior art delays the examiner. Also, it could ultimately force the applicant to overcome objections based on irrelevant prior art. This would delay prosecution and increase the cost of the application.

3. Implicit Change in Patent Policy

The essential purpose of a patent in the United States is to protect the inventor. Other countries "do not consider the rights of the individual the way we do in [the] United States of America." As a result, "most of the innovation happens in the United States of America." Some now believe that the right of the public to information outweighs the right of an inventor to keep their information confidential until the U.S. government grants a patent. But, focusing on the inventor does benefit the public. As one U.S. Senator noted, "[t]here never was a true invention from which the public did not reap infinitely greater pecuniary reward than the inventor."

In comparison, different fundamental policy considerations guide Japan in its approach to promoting economic development. Japan's philosophy is to promote economic development through a maximum diffusion of technology. Mandatory publication of an application for all to see is a natural result of this type of policy. Focusing on maximum diffusion as a means to promote economic development, rather than the protection of property rights, favors mandatory eighteen-month publication over publication after securing a property right. Some claim that this policy is a result of the "strong relationship between the government and the major corporate entities . . . [causing] that patent system . . .

78. International Trade Hearing, supra note 20, at 34.
[to be] entirely dominated by the viewpoint that they represent."\(^7\) Conforming the U.S. patent system would implicitly adopt the maximum diffusion model to replace the property rights model.\(^8\)

**B. Arguments in Support of Mandatory Publication**

Arguments supporting eighteen-month mandatory publication include: (1) providing earlier access to new inventions; (2) giving U.S. inventors access to information that, although secret in the United States, is public information in foreign countries; (3) using such publication as a bargaining chip to attain more meaningful protection of patents in other countries; (4) establishing conformity with the rest of the world; and (5) having limited impact on U.S. applicants.

1. Earlier Access to New Inventions

   **a. Stimulation of New Ideas**

   Proponents of mandatory publication believe that earlier disclosure of all inventions would provide U.S. inventors with leading technology\(^9\) and would enable them to save resources.\(^10\) Mandatory disclosure would save resources by preventing duplication of research and signaling promising areas of research.\(^11\) Some commentators argue that providing U.S. inventors with leading technology through early disclosure would enhance U.S. industrial development.\(^12\) They believe that eighteen-month publication is the proper balance between the needs of the inventor and the desire for rapid dissemination of information. These commentators base this conclusion on the

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80. Though this model is successful in countries such as Japan, it may not be sufficient to achieve the underlying goals and purposes of U.S. patent laws. For a discussion comparing the results of the different policies, see *infra* notes 90-94 and accompanying text.


82. *Id.*

83. *Id.*

overwhelming use of eighteen-month publication in other countries. They believe that the United States should adopt the eighteen-month mandatory publication system because, in other countries, it neither punishes inventors nor perceivably dilutes the incentive value of a patent.85

One of the purposes of the U.S. patent system is to encourage dissemination of information concerning discoveries and inventions86 in order to stimulate further creative ideas.87 To be sure, new ideas stimulate others to invent; however, early disclosure is not the only means to stimulate innovation and encourage industrial development. As one court noted, “the obligation to disclose is not the principal reason for a patent system . . . . The reason for the patent system is to encourage innovation and its fruits . . . .”88 It would be erroneous to state that early public disclosure is the “linchpin” of the patent system.89

Focusing solely on the stimulation of ideas as the purpose behind the patent system would lead to the conclusion that publishing patent applications *immediately* after the Patent Office receives the application would achieve maximum industrial development.90 Immediate publication undoubtedly would cause prospective patentees to consider what they stand to receive as consideration for revealing their secret to the public. Similarly, mandatory publication at eighteen months would reduce a patentee’s prospects of reaping the fruits of innovation, and would have a negative effect on the decision to seek patent protection. Protecting the economic expectations that accompany property rights creates the economic incentive to invent.

Although focusing on early disclosure has provided successful means of producing economic prosperity in other countries, it may not necessarily produce the same result domestically. This is due

85. *Patent System Harmonization Act of 1992 Hearing*, *supra* note 13, at 67 (statement of Robert F. Merges, Associate Professor of Law, Boston University School of Law). The “needs of the inventor[] include[] the availability of a reasonable time after filing to assess the prospects for patentability and perfect the details of the invention.” *Id.*
89. See *id.* at 1282 (describing the public policy inherent in 35 U.S.C. § 102(g)).
90. The only support that earlier publication of ideas might hasten technological advance is by analogy to basic research. Pure scientists are urged to publish as early as possible. Machlup, *supra* note 17, at 25.
to different policy concerns and differences in economic needs. Japan’s economy relies heavily on export, whereas the United States relies heavily on its internal market. This has led to marked differences in the type of inventions produced.

In the past fifty-five years, U.S. citizens have won over fifty percent of the awards and Nobel prizes in science and engineering, medicine, and microbiology. Japanese citizens have not won any. The commissioner of Japan’s Patent Office underscored these differences in the type of inventions produced on a recent visit to the United States. He stated that “most of their work is a result of improvement patents building on technologies invented in the United States . . . .” So, despite its success abroad, mandatory publication may not produce identical results because of these underlying fundamental policy differences.

b. Submarine Patents

Yet another complaint stemming from the unavailability of early access to applications is that it allows “submarine patents” to emerge and disrupt entire industries. A submarine patent is a patent that is granted, or “emerges,” after a long pendency period in the U.S. Patent Office, during which time others may have unknowingly infringed on the patent. Under existing law, patent examiners cannot consider an earlier-filed patent application when determining the patentability of a later-filed application. Examiners can only consider an earlier-filed application after the patent is issuance. Issuance of a patent can take from one year to more than a decade. If the grant covers a previously granted but later-filed application, a submarine patent

91. See supra note 78-79 and accompanying text.
92. Damadian Testimony, supra note 65.
93. Id.
95. Id.
99. Id.
100. Id.
has emerged. The submarine patent then challenges the validity of the previously granted, later-filed application.

The threat of submarine patents causes uncertainty in the marketplace. Publication at eighteen months would provide certainty as to patentability determinations that the Patent Office makes. Arguably, "[u]nder existing law, inventors sometimes commit substantial resources to development of an invention based on an incomplete, erroneous assessment of patentability of the applications they file." Reducing the possibility of submarine patents would be a benefit to these inventors. Eighteen-month mandatory publication is an effort to address the problem of submarine patents.

Submarine patents can occur in several ways. One way is when an applicant prolongs the period of pendency by filing a continuing application under 35 U.S.C. § 120. A continuing application provides a mechanism for the patent applicant to more accurately or correctly claim the invention that an earlier application disclosed while still retaining the benefit of his original filing date. Some suggest that patent applicants may use this mechanism intentionally to delay the patent grant to gain an advantage in the marketplace. Possible improper motives for delaying patent prosecution include delaying publication, shifting the patent term forward in time, and prolonging the effective

101. See id.
102. Id.
103. Recent Developments, supra note 97.
104. IRVING KAYTON, 2 PATENT PRACTICE 6-1 (PRI 1993). Commentators note that patent applications on breakthrough inventions often are filed with an incomplete understanding of the significance of the invention. The patent office does a search of the prior art and, in light of the search, invariably rejects the application. The applicant is given a chance to speak with the examiner and to amend the application. If the applicant is unable to amend it satisfactorily, there is a final rejection. The applicant then can: respond to the final rejection by placing the application in a condition for allowance in accordance with the examiner's suggestions (not as a matter of right); appeal the examiner's decision to the board of appeals; decide not to seek patent protection; or file a continuation. A continuation application gives the applicant another opportunity to present claims to the same invention and to have dialog with an examiner. With breakthrough inventions, three or four continuation applications are sometimes needed. See Intellectual Prop. Subcommittee Hearing, supra note 45, at 50 (statement of Robert Rines, Franklin Pierce Law Center). For a more detailed description of the U.S. Patent Office examining procedure, see U.S. DEP'T OF COMMERCE, MANUAL OF PAT. EXAMINING PROC. (5th ed. rev. 15, 1993).
period of exclusivity. Others also allege that applicants intentionally “delay decisions so that the patent can surface years later in infringement claims against the unwary.” Though these allegations exist, “the data show this practice to be rare.”

During a GATT fast-track hearing last summer, U.S. Patent Commissioner Bruce Lehman warned of submarines, testifying that between 1971 and 1993 there were 627 cases in which patent pendency exceeded 20 years, with one taking 36 years.

According to former U.S. Patent Commissioner Donald Banner, 257 of those patents were owned by the U.S. government and kept secret for security reasons, and 75 private patents were also subject to secrecy orders, including [the] one that took 36 years. “Even assuming 300 subs in those 23 years,” says Banner, “that’s one for every 7,700, or 13/1,000s of 1 percent.” Probably an even smaller number remained commercially significant, with few, if any, the result of deliberate manipulation by applicants.

Due to their rarity, patent officials could deal with commercially significant, improperly motivated submarine patents could be dealt with on a case-by-case basis. Although of questionable effectiveness, principles of laches, forfeiture, or inequitable conduct could provide avenues of redress for particularly egregious cases.

Improperly motivated submarine patents may become even less significant in the future, without the need for eighteen-month mandatory publication, due to recent revisions in U.S. patent laws. As a result of GATT negotiations, patent protection now commences after the patent grant, and lasts for twenty years.

106. Id. at 732-33.
108. Id.
110. See Miller, supra note 105, at 737-49 (citing the difficulty of proof and the courts’ reluctance to find invalidity or unenforceability when the applicant is using accepted practice or procedural mechanisms that are legal). The author suggests that shifting the burden of proceeding to the patentee after some defined period, to show that the delays the patentee caused were reasonable, would help meet the burden of showing improper intent by clear and convincing evidence. Id. at 746.
111. Id. at 749 (stating that fixing the term from the priority date could prove an effective solution to intentionally delayed patents).
from the filing date of the original application.\textsuperscript{112} This is true whether or not there is a continuing application. This recent change in patent law removes any incentive to delay the granting of the patent. Applicants can neither shift the patent forward in time nor prolong the effective exclusivity of the patent. Because applicants can no longer achieve these objectives, the amount of improperly motivated submarine patents should decrease to virtually nothing.

As an alternative to mandatory publication at eighteen months, Congress has introduced a bill to address submarine patents.\textsuperscript{113} It provides for automatic publication of patent applications where continuing applications claim the benefit of a filing date of a prior application filed more than five years earlier.\textsuperscript{114} Publication five years after the filing date would limit

\begin{footnotesize}
\begin{enumerate}
\item Uruguay Round Agreements Act, Pub. L. No. 103-465, § 532, 108 Stat. 4809 (1994). Congress enacted Pub. L. No. 103-465 on December 8, 1994. The twenty-year term took effect June 8, 1995. \textit{Id.} § 534. The term of a patent that is in force on, or that results from an application filed before, the date that is 6 months after the date of enactment, shall be the greater of the twenty-year term or seventeen years from the grant of patent. \textit{Id.} § 532.
\item \textit{Bill Would Amend GATT Legislation to Provide 17 or 20 Year Patent Term, Pat. Trademark & Copyright L. Daily (BNA) (Jan. 20, 1995), available in LEXIS. Patent Library, BNAIPTD File.}
\item H.R. 359 provides:
\begin{enumerate}
\item Section 1. Patent Terms.
\begin{enumerate}
\item Amendment.-Effective on the date of the enactment of this Act, Section 154 of Title 5, United States Code, as amended by the Uruguay Round Agreements Act, is amended-
\begin{enumerate}
\item In paragraph (2) of subsection (A), by striking "and ending" and all that follows in that paragraph and inserting "and ending-
\begin{enumerate}
\item 17 years from the date of the grant of the patent, or
\item 20 years from the date on which the application for the patent was filed in the United States, except that if the application contains a specific reference to an earlier filed application or applications under Section 120, 121, or 365(C) of this Title, 20 years from the date on which the earliest such patent application was filed, whichever is later.";
\end{enumerate}
\end{enumerate}
\item by amending subsection (B) to read as follows:
\begin{quote}
(B) Patent Disclosure. - In the event that a continuing patent application is filed that claims the benefit of the filing date of a prior application that was filed more than 60 months earlier, notices of the original patent application and of the continuing patent application shall be published and the public shall be permitted to inspect and copy the original patent application and the continuing patent application.; and
\end{quote}
\item in subsection (C)(1), by striking "shall be the greater of the 20-year term as provided in subsection (A), or 17 years from grant" and inserting "shall be the term provided in subsection (A)";
\end{enumerate}
\end{enumerate}
\item Technical Amendment. - Section 534(B) of the Uruguay Round Agreements Act is amended by striking paragraph (3).
\end{enumerate}
\end{footnotesize}
the period of pendency and therefore by definition eliminate submarine patents before the potential to disrupt entire industries develops. Like eighteen-month mandatory publication, five-year mandatory publication not only will limit the duration of secrecy on intentionally delayed applications, but also will affect those that are delayed through no fault of the applicant. Although it is iniquitous to penalize an inventor who is making a genuine effort to perfect a patent, this longer time period is not as severe a disincentive to use the patent system.

Nevertheless, none of these solutions, including eighteen-month publication, will remove the bulk of the submarine patents. The bulk of the submarine patents remain secret due to national security interests; the Patent Office would not publish these applications under the Proposed Rules.115

2. Giving U.S. Inventors Access to Information Made Public in Foreign Countries

Publishing applications at eighteen months would benefit U.S. inventors by disclosing the applications of international filers. Internationally filed applications are public information in foreign countries but not in the United States. Under the present system, foreign inventors have access to these new inventions before U.S. inventors, providing them with a clear advantage.116

Publishing applications at eighteen months would provide U.S. inventors with access to a "comprehensive technological database that foreign inventors receive in their own language from their own Patent Offices."117 Although U.S. inventors have access to foreign Patent Offices and translators, small businesses with limited resources are unlikely to be able to capitalize on this information.118 This affects a significant amount of businesses because "50% of all new inventions, and patents [developed in the United States] are developed [by] ... small ... business."119

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118. Ragusa, supra note 84, at 166.
Furthermore, inventions by independent inventors and small companies are not trivial. Over half of the sixty-one most important innovations of the 20th century came from independent inventors or small firms. Congress should seriously consider providing these inventors the same access to information that foreign inventors and select U.S. inventors enjoy. In addition to benefitting small inventors by providing access to this information, select U.S. inventors would benefit by eliminating the expense of retrieving this information from abroad.

This argument presents a compelling reason for mandatory disclosure of all applications. Other alternatives, however, are available to achieve this same objective. One alternative to mandatory publication would be for the U.S. government to provide translations of public information from foreign Patent Offices to inventors in the United States. In addition to giving U.S. inventors access to information that, although secret in the United States, is public information in foreign countries, these translations would provide examiners with a more comprehensive database with which to make patentability determinations.

This "sharing of information" was one aspect of the harmonization talks. The U.S., Japanese, and European Patent Offices have agreed to exchange information by compact disc read-only memory, updating information monthly.

Another reason to institute government sponsored translations rather than disclosure is that, with mandatory publication, the United States would be doing more than simply giving U.S. inventors access to information that their foreign counterparts already enjoy. Due to the U.S. best mode requirement, a U.S.

available in LEXIS, News Library, CURNWS File.


124. The specification in an application for patent shall "set forth the best mode contemplated by the inventor of carrying out his invention." 35 U.S.C. § 112 (1994). "The purpose of the best mode requirement is to restrain inventors from applying for patents while at the same time concealing from the public preferred embodiments of their inventions." Harmon, supra note 12, at 151.
application discloses more information than applications in some other countries. In Japan and Germany, patent laws do not require the inventor to disclose the best mode to carry out his invention.  

By publishing at eighteen months, the United States actually could be disclosing additional information that is not already public in other countries. Thus, providing translations would allow applicants filing in countries that do not require best mode disclosure to keep their best mode secret until the United States grants a patent.

Yet another alternative exists if the United States is prepared to change the underlying policy guideposts of its current patent system and make a concession using eighteen-month mandatory publication as a bargaining chip. The United States could institute a two-track system of applications. This system would allow domestic and international filers to file different applications. The Patent Office would hold the application of an applicant filing only a domestic application in secrecy until it issues a patent. The Patent Office would mandatorily disclose after eighteen months the U.S. applications of those who also file for a foreign patent. By instituting this two-track system, the U.S. Patent Office could provide information to U.S. inventors that is public information in foreign countries but not in the United States.

Unlike government provided translations, the two-track system does not have the advantage of giving U.S. inventors access to all applications filed in foreign countries. In addition, due to the best mode requirement in the United States, a U.S. applicant still may be revealing more information than will become public as a result of foreign application publication. Nevertheless, it would give U.S. inventors access to information that has become public information in foreign countries due to foreign mandatory disclosure policies.

3. Mandatory Publication as a Bargaining Chip

The United States could use mandatory publication as a bargaining chip to attain more meaningful changes in patent

126. See supra notes 20-23 and accompanying text (discussing the underlying philosophy of the U.S. patent system).
127. See infra part III.B.4.
These changes include: (1) faster patent approval; (2) increased scope of patents and their interpretation by courts; (3) elimination of pre-grant approval; (4) elimination of compulsory licensing; and (5) the ability to file in English and correct translation errors by referencing the original document.

The most serious problem for U.S. inventors filing in foreign countries is the time required for an application to mature into a patent. A foreign inventor filing in the United States receives his patent much sooner than a U.S. inventor filing abroad. Delays create uncertainty as to what the ultimate scope of the patent will be, thus affecting a potential patentee's ability to plan for production and to bargain effectively in licensing agreements.

Eliminating pre-grant opposition is one way to help reduce the pendency period of patent applications abroad. Pre-grant opposition "delays the patent grant and slows down informal or formal enforcement since the application still lacks the official government stamp of approval." In addition, pre-grant opposition "places a burden on the applicant because the opposer can prepare his opposition over several years while the applicant has only a few months to respond." Furthermore, "[p]atent applications on major innovations ... are often vigorously challenged by large companies, which can afford a battery of attorneys to pour over documents looking for weakness[es]." Further criticism of pre-grant opposition under the Japanese system points to its inherent bias against patent application approval. In Japan, a patent examiner may receive many letters

128. See Japanese Patent Policy Hearing, supra note 6, at 32 (statement of Michael K. Kirk, Assistant Commissioner for External Affairs, Patent and Trademark Office) (stating that changes in Japanese patent laws will not occur without some changes also taking place in U.S. patent laws.)
129. See, e.g., id. at 6 (statement of Michael K. Kirk, Assistant Commissioner for External Affairs, Patent and Trademark Office).
130. Id. at 54 (statement of Pacific Industrial Property Association).
133. Id. at 55.
134. Id. at 60 (statement of the Pacific Industrial Property Association).
of opposition to an application. He then has the choice of either responding to each and every letter after granting the patent, or denying the patent application. This creates a bias because the latter choice requires much less work. Clearly, eliminating pre-grant opposition would remove this bias and help reduce pendencies in the Japanese Patent Office.

The strength of protection a patent affords depends largely on its scope. The broader the scope, the larger the number of competing products and processes that will infringe the patent. The United States especially desires increasing the scope of patents and their interpretations in Japan. It is difficult to obtain a broad, commercially viable patent in Japan. The Japanese system instead encourages filing large numbers of applications on inventions of limited scope. In addition, Japanese courts interpret patents very narrowly, essentially allowing companies to copy inventions.

Compulsory licensing is another problem U.S. inventors often face abroad. As a condition of patent protection, some countries require that the inventor license his invention to local industry or even to other foreign enterprises at royalty rates that country has determined. This requirement puts inventors in a position of having to compete with their licensee in the foreign market. This affects market share and profits in the foreign country.

The ability to file in English and correct translation errors by referencing the original application also would benefit U.S. inventors. Problems with translation can affect the scope of the

142. Jobs Through Anti-Piracy, supra note 6, at 20 (statement of Bruce A. Lehman, Assistant Secretary and Commissioner of Patents, Patent and Trademark Office, Department of Commerce).
patent. The European Patent Office\textsuperscript{143} and, recently, the Japanese Patent Office have instituted this revision procedure. The Japanese Patent Office previously only allowed insertion of foreign words, which could create translational ambiguities, into the text of an application.\textsuperscript{144} One difficulty with this procedure is that it required the applicant or translator to foresee where possible ambiguities might exist before filing the application.\textsuperscript{145} In addition, time constraints aggravated this task.\textsuperscript{146}

These problems create obstacles for U.S. inventors seeking patents abroad. The United States, however, is not without means to persuade other countries to change the unfair practices of their patent systems. The United States can institute sanctions under section 301 of the Omnibus Trade and Competitiveness Act of 1988.\textsuperscript{147} A patent system that fails to provide adequate protection creates non-tariff barriers to free trade.\textsuperscript{148} Section 301 "is designed to 'eliminate the acts, practices or policies of foreign governments which adversely affect United States' exports.'"\textsuperscript{149} Section 301 operates as a unilateral mechanism to enforce the legal rights of the United States.\textsuperscript{150} It enables the United States to "increase tariffs to induce a country to improve its patent protection . . . ."\textsuperscript{151} Although Congress has considered using this provision,\textsuperscript{152} critics of this mechanism argue it is undesirable either because of the high risk of retaliation or because of a belief that


\textsuperscript{144} Id.

\textsuperscript{145} Id.

\textsuperscript{146} The Paris convention gives patent applicants a whole year to translate applications. If applicants change their minds and decides to file in Japan with only a few months remaining before a statutory bar, the time to prepare a translation is much shorter. Id.


\textsuperscript{150} See id.

\textsuperscript{151} Jobs Through Anti-Piracy, supra note 6, at 47 (prepared statement of Ira S. Shapiro, General Counsel to the U.S. Trade Representative).

\textsuperscript{152} See International Trade Hearing, supra note 20, at 20 (statement of Sen. Rockefeller).
the dispute settlement mechanism adopted in the Uruguay Round Agreement precludes its use.\textsuperscript{153}

The Uruguay Round Agreement, however, does not preclude the use of section 301.\textsuperscript{154} In addition, “[t]his action can be undertaken without threat of counter-retaliation” because the Uruguay Round Agreement provides for the possibility of dispute settlement and cross-retaliation for failure to meet obligations under that Agreement.\textsuperscript{155} “The Special 301 provision of the Omnibus Trade and Competitiveness Act of 1988, which calls for identifying and seeking improvements for inadequate protection by our trading partners, is an important addition to the tools available for achieving the goal of improved intellectual property protection.”\textsuperscript{156}

H.R. 1733 is the result of an agreement, concluded under the framework of Special 301,\textsuperscript{157} between U.S. Commerce Secretary Ron Brown and Japanese Ambassador Takakazu Kuriyama. It is the second of two agreements.\textsuperscript{158} With this second agreement, “[w]e’re getting provisions we’ve been seeking a long time.”\textsuperscript{159} According to some, “[t]his will have a big market-opening effect.”\textsuperscript{160}

The first agreement called for Japan to permit filing of patent applications in English by July 1, 1995, and to allow for correction of translation errors during examination and after grant. In return, the United States agreed to introduce legislation to provide a twenty-year U.S. patent term, measured from the earliest non-

\textsuperscript{153} Jobs Through Anti-Piracy, supra note 6, at 46-47 (prepared statement of Ira S. Shapiro, General Counsel to the U.S. Trade Representative).

\textsuperscript{154} Id. at 47.

\textsuperscript{155} Id. at 46-47.

\textsuperscript{156} Id. at 61-62 (statement of Bruce A. Lehman, Assistant Secretary of Commerce and Commissioner of Patents and Trademarks).


\textsuperscript{158} Patents, House Panel Hears Debate on Whether Reforms will Help or Hurt Patent Holders, Daily Rep. for Executives (BNA), at A214 (Nov. 6, 1995)[hereinafter House Panel Hears Debate].

\textsuperscript{159} Riordan, supra note 8, at D1 (statement of Bruce Lehman, Commissioner of Patents and Trademarks).

\textsuperscript{160} Id.
provisional U.S. filing date.\textsuperscript{161} Congress introduced this legislation in May 1994 and enacted it in December 1994.\textsuperscript{162} As of July 1995, Japanese law permits English at the Japanese Patent Office.\textsuperscript{163}

Under the second agreement, Japan agreed to end third party pre-grant opposition by April 1, 1995, and to establish an optional thirty-six month accelerated examination procedure by January 1996.\textsuperscript{164} In return, the U.S. Patent Office agreed to publish applications within eighteen months from the earliest filing date, and to allow expanded opportunities for third party objections in re-examination proceedings.\textsuperscript{165} Japan also agreed to stop awarding “dependent patent compulsory licenses,” beginning July 1, 1995.\textsuperscript{166}

This year, the United States again placed Japan on a “priority watch list” under the provisions of Special 301 for its narrow scope and interpretations of claims.\textsuperscript{167} Nevertheless, the United States and Japan have not reached any conclusive agreements over this issue.\textsuperscript{168} “This practice has severely limited the ability of U.S. patent holders . . . to acquire exclusive rights comparable to those available to Japanese patent holders in the United States.”\textsuperscript{169}

Although changes in the Japanese Patent Office would bring gains to U.S. applicants filing there, the United States should not obtain these changes by debasing U.S. patent law. “Patents are, and have been the engine of our technological leadership.”\textsuperscript{170} The United States is a world leader in the number of influential patents it has issued.\textsuperscript{171} In 1993, it issued almost twice as many

\begin{itemize}
\item \textsuperscript{161} House Panel Hears Debate, supra note 158.
\item \textsuperscript{162} Uruguay Round Agreements Act, supra note 112.
\item \textsuperscript{163} Intellectual Prop. Subcommittee Hearing, supra note 45 (statement of Rep. Moorhead).
\item \textsuperscript{165} Id.; see also Riordan, supra note 8, at D1.
\item \textsuperscript{166} Laurent Belsie, US, Japan Patent Laws Move Closer, Easing Filing Challenges, CHRISTIAN SCI. MONITOR, Aug. 18, 1994, at 8. “Though rarely used today, in the past these measures have forced US inventors to license their technology to a Japanese competitor for a set amount of compensation.” Id.
\item \textsuperscript{167} USTR Announcement, supra note 157.
\item \textsuperscript{168} Mark Magnier, US, Japan End Patent Talks with Progress, But No Pacts, J. COM., June 8, 1995, at A3.
\item \textsuperscript{169} USTR Announcement, supra note 157.
\item \textsuperscript{171} Id. at H7371.
\end{itemize}
as Japan, Italy, the United Kingdom, France, and Germany. Based on this fact, the United States should not rush to give up its system in favor of a system that is producing far fewer influential patents. The United States should not, in an effort to remedy unfair trade practices, stray from the underlying policy that brings it prosperity.

4. Limited Impact to United States Applicants

Another argument that supports eighteen-month mandatory publication is that it would have a limited impact on U.S. applicants because the average pendency of a U.S. patent is nineteen-months. This figure, however, can be misleading because it understates reality by including “follow-on” applications. It may not take into account the filing date of the original application.

For example, consider a patent application that was originally filed in 1980. Continuing applications are filed in 1982, and 1984, and then the patent issues in 1986. The Patent Office counts the 1982 and 1984 refilings as two different applications. Thus a process that took effectively six years is counted as three applications averaging two years each.

This can lead to higher pendencies on the more significant patents not being included in the statistics. Patents involved in litigation, which are arguably more significant, have a higher total pendency. The total pendency, as measured from the earliest U.S.


175. Banner & Kaltenheuser, supra note 107.


177. Id.
filing date, is thirty-six months. Furthermore, certain industries could be disproportionately affected. For example, longer pendencies typically occur in genetics. In this and other areas where inventors are breaking new ground, the Patent Office requires extra time to review a patent application.

Where inventors are breaking new ground, "the inventor must file broad claims in order to stake out what he has achieved." Because the applicant must find an examiner who can understand a technology that she or he has not previously seen, "such broad claims are frequently contested at length before allowance is given."

Although publication at eighteen months would not affect some applicants, the potential to affect all applicants exists. Therefore, even though publication at eighteen months statistically gives the impression of limited impact, every applicant must consider the risk that his or her individual application may take longer than eighteen months. Each applicant also must consider the risk of ultimately having to withdraw their application, in order to preserve a trade secret, in light of the cost of securing a

178. Miller, supra note 105, at 730. Those patents the U.S. district courts reported to the Patent and Trademark Office during the six weeks prior to October 1991 served as the measurement for the average gross pendency. Id.


So far, the gene patents have moved much more slowly than applications for other types of inventions. While the average application now takes 18 months to reach a final decision, the three mice patents that were issued Dec. 29[. 1992] had all been pending for about four years.

Patent Office officials said they did not impose a formal moratorium on transgenic animals. "These things just take a long time to work through," Oscar Mastin, a spokesman for the agency, said. "They have been working on these applications the whole time."

Id.

180. See generally Patent and Trademark Office Issues First Animal Patent, 35 Pat. Trademark & Copyright J. (BNA) No.: 876, at 508 (April 14, 1988) (Donald J. Quigg, Commissioner of Patents and Trademarks, acknowledging the long pendency period of three to four years for non-naturally occurring non-human multicellular living organisms subject matter, noting that the PTO has had difficulty recruiting examiners in this new area of science).

181. Hill Testimony, supra note 68.

182. Id.

183. See supra part III.A.1.
patent.184 This uncertainty could diminish the incentive to seek patent protection.

In addition, small businesses strongly oppose the move toward mandatory publication.185 Small inventors fear that this change will affect them negatively.186 If the change truly would have a limited impact on U.S. inventors, small businesses and other similarly situated sectors would not be strenuously opposed to mandatory publication.187

5. Conformity with the Rest of the World

Proponents for eighteen-month mandatory publication argue the need for conformity with the rest of the world as a reason for change.188 Almost all major countries publish applications at eighteen months. In those countries, however, mandatory publication at eighteen months may be a necessary mechanism to provide inventors with stimulating ideas.

Delays are more the rule than the exception around the globe.189 For example, in the European Patent Office, obtaining an electronics patent takes five to six years and a biotechnology patent takes four years.190 In Switzerland, obtaining a patent can take six years191 and in Japan the average pendency for a patent is six to seven years.192 Under these circumstances, publication

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186. See supra part III.A.2.


188. See, e.g., Ragusa, supra note 84, at 167-68.


190. Id.

191. Id.

of the application at eighteen months might be the only way to disclose information to the public in a timely fashion. Because the United States has lower pendency periods, the requirement for publication is not imperative.

Additionally, other countries may have other procedural or policy reasons for the mandatory eighteen-month publication. Japan is one such example. Long pendency periods due to deferred examination, coupled with mandatory disclosure, allow the Japanese Patent Office to reduce its workload by eliminating applications to which it should not grant a patent. This was accomplished by allowing pre-grant opposition in conjunction with publication. The Japanese Patent Office has a growing backlog of applications. Although the Japanese Patent Office has added more patent examiners in the past years, the small increase in the number of examiners has been insufficient to lower the average pendency. Therefore, mandatory disclosure may be necessary in a system with insufficient staff to help “flush out” applications to which it should not grant a patent. In contrast, the United States has an adequate number of examiners to perform this function.

194. See Japanese Patent Policy Hearing, supra note 6, at 65 (statement of Alan D. Lourie, Vice President, Corporate Patents & Trademarks, SmithKline Beckman Corporation).
195. Id.
196. Id. at 23 (statement of Michael K. Kirk, Assistant Commissioner for External Affairs, Patent and Trademark Office).
198. Id.
IV. CONCLUSION

The United States should not implement eighteen-month mandatory disclosure. The U.S. patent system has made the United States a great country and is critical to maintaining U.S. industrial strength.199 The United States should not abandon the underlying policy values that facilitated its economic growth. Mandatory publication at eighteen months will discourage use of the patent system. Protection of trade secrets and the incentive to use the U.S. patent system should continue as they exist under current law.

Rather than an eighteen-month mandatory publication policy, the United States should give inventors access to information that is public in foreign countries. To achieve this, the U.S. government should provide translations of foreign patent applications to inventors. If the United States needs a change in policy to serve as a bargaining chip in international negotiations, it should instead implement a two-track patent application method and publish only those U.S. applications that inventors also file abroad. This method would allow all U.S. inventors access to information contained in internationally filed applications while maintaining trade secrets for solely domestic applications. Using mandatory publication as a bargaining chip, however, is unwise in light of the cost to independent inventors, small companies, and the long range competitiveness of the United States.

The recent changes in patent terms have mitigated the threat of improperly motivated submarine patents, which already was insignificant. The United States should not seek international conformity at the expense of reducing the strength of the U.S. patent system. Although mandatory publication would not affect


In the early 1900's the government of Japan wanted to determine what made the United States such an industrial power. A team of investigators was dispatched to determine why America was so successful and the team concluded it was the patent system.

The official report stated:

"We looked about us to see what nations are the greatest, so that we can be like them . . . . We said, what is it that makes the United States such a great Nation?" We investigated and found that it was patents, and we will have patents."

In the early 1980's Japan again determined the patent system was critical to America's industrial strength.

Id.
inventors who receive their patents prior to eighteen months, its potential to affect each applicant creates an uncertainty that reduces the incentive to seek patent protection.

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