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LENDING A HAND:
THE NEED FOR PUBLIC PARTICIPATION IN PATENT EXAMINATION AND BEYOND

Matthew John Duane*

“Discovery consists in seeing what everybody else has seen and thinking what nobody else has thought.” Albert Szent-Györgyi¹

Introduction

Since its inception, the notion of patents has been hounded by debate, a roiling tempest of discord born from a mere twenty-seven-word provision.² In a sense, this controversy strikes at the dichotomy of invention, with its heart driven by a desire to innovate and its head dominated by dreams of rewarding the effort and dedication of the inventor. As a result, the system is largely insular, shielded from outside influence with patents granted by a single examiner working within a limited sphere of knowledge. These examiners are systemically limited in their ability to access and study prior art that falls beyond the realm of patents and select publications resulting in an incomplete snapshot of the world that they must then rely on when determining if an invention warrants twenty years of protection.³ Throughout the years, both lawyers and inventors have been chastised for manipulating this system to produce patents of dubious character, which become far more valuable as bargaining chips and litigation tools than representations of “novel” inventions. In addition, third party experts whose expertise could serve as gap-fillers in the examiner’s knowledge have an extremely difficult time supplying their knowledge to examiners during key segments of the patenting process.⁴

In Part I, I outline the statutory and historical limitations that stifle third party submissions of prior art during the patent examination process, particularly after publication but before issuance. In Part II, I demonstrate the ill-effects this burden has on the examiner’s chance to obtain the most complete picture of the current state of the art, a deficiency that often results in the issuance of dubious patents and costly litigation that inevitably follows. Finally, in Part III, I discuss a proposed solution to this issue. Called the “Peer to Patent Project”, this voluntary system created by Beth Noveck would allow the public to provide prior art references to pending patent applications.⁵ While Noveck’s system certainly addresses many of the issues plaguing the examination process, I identify a number of key problems of the examination process in its current state and suggest methods to improve them.

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¹ Albert Szent-Györgyi Quotes,

http://thinkexist.com/quotation/discovery_consists_of_seeing_what_everybody_has/186385.html (last visited January 8, 2008). Szent-Györgyi was the winner of the 1937 Nobel Prize in Physiology or Medicine. *Id.*

² “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.” U.S. CONST. art. I, § 8, cl. 8.

³ *See infra* Part II.A.

⁴ *See infra* Part I.B.

⁵ *See infra* Part III.A. In fact, the United States Patent and Trademark Office (“USPTO”) has already begun a live trial of this system with Technology Center 2100, the category many software patents fall into. *Id.*

I. The Past – Current Limitations on Third party Submissions of Prior Art

A. Statutory Definition and Application of Prior Art

Before debating the relative merits of opening prior art searches to the masses, I will define what constitutes prior art and its relevance in the patenting process. As a general matter, the Manual of Patent Examination Procedure (MPEP) defines prior art as patents (pending, published, and issued) and printed publications.⁶ Within that broad construct, though, exists an intricate system of regulations that, in effect if not in law, characterizes prior art as any “document [that] has been disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art, exercising reasonable diligence, can locate it.”⁷ Clearly, what constitutes “public” availability remains a nebulous term, relying on factors such as the context of the work, the relative ease of accessing the work, and the composition of the expected audience.⁸

1. Prior Art and Novelty

Patents and publications lack relevance unless they are arranged within a statutory framework, in this case 35 U.S.C. §§ 102 and 103. Title 35 United States Code section 102, colloquially referred to as the “novelty” requirement, focuses on whether a single prior art reference anticipated the present invention within a proscribed time frame.⁹ Although seven distinct permutations of prior art exist that can invalidate a patent under § 102, most occur under 35 U.S.C. §§ 102(a),¹⁰ (b),¹¹ and (g).¹² Each of these statutory provisions uses prior art to define

⁶ See U.S. PATENT & TRADEMARK OFFICE, MANUAL OF PATENT EXAMINING PROCEDURES § 901 (8th ed. 2001) [hereinafter MPEP]. This includes Internet sources, although questions concerning their authenticity and timing may eliminate them as appropriate prior art. Note that in addition to existence of tangible works, patent invalidation can also arise from prior *acts* of the applicant under statutory prohibitions. See *infra* note 11.

⁷ *I. C. E. Corp. v. Armco Steel Corp.*, 250 F. Supp. 738, 743 (D.N.Y. 1966). See also *Kimberly-Clark Corp. v. Johnson & Johnson*, 745 F.2d 1437, 1453 (Fed. Cir. 1984) (“That is the real meaning of “prior art” in legal theory -- it is knowledge that is available, including what would be obvious from it, at a given time, to a person of ordinary skill in an art”). An example of this far-reaching definition can be found in MPEP § 901.02, which holds that any unpublished abandoned patent application “identified or whose benefit is claimed in a U.S. patent, a statutory invention registration, a U.S. patent application publication, or an international patent application publication . . . may be made available to the public.” (referencing 37 C.F.R. 1.14(a)(iv) (2006)).

⁸ Compare *National Tractor Pullers Ass'n. v. Watkins*, 1980 U.S. Dist. LEXIS 10613, at *66 (N.D. Ill. 1980) (holding that the standard for viable prior art “is not satisfied by knowledge of a single person, or a few persons working together,” with the prior art referring to a hand-drawn schematic of an improved sled used in tractor pulling on a tablecloth, the original tablecloth being lost prior to commencement of the lawsuit) with *In Re Hall*, 781 F.2d 897, 899 (Fed. Cir. 1986) (holding that a single printed dissertation in a school’s library, properly indexed, constitutes prior art).

⁹ *Verdegaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 631 (Fed. Cir. 1987) (“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.”).

¹⁰ 35 U.S.C. §102(a) (2000) (fairly characterized as a priority rule, invalidating a patent if, prior to the date of invention, it was publicly “known or used by others in this country, or patented or described in a printed publication in this or a foreign country.”).

¹¹ 35 U.S.C. §102(b) (focuses on the timeliness of a patentee disclosing her invention by invalidating an application if “the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States.”).

the invention's relevant universe at the time of invention and/or filing. This maintains the *quid pro quo* that in exchange for a twenty-year exclusive right to an invention, the inventor must disclose a truly novel invention that benefits society and promotes science and the useful arts.¹³ Also, novelty is not restricted to American soil. Not surprisingly, this inclusiveness has led to concerns about unnecessary burdens on patentability, as applicants must prove novelty not only against relatively local prior art but also against disclosures made in far-flung countries under dubious standards.¹⁴

2. Prior Art and Non-Obviousness

One of patent law's central tenets is that the invention must be "new";¹⁵ consequently, denial on the grounds of dubious novelty is intuitive. At the same time, insignificant improvements on an existing device, while perhaps novel under a § 102 examination, logically should not receive patent protection if they merely constitute an obvious maturation or addition to the art. In other words, a patentable invention needs to expand the current technology's boundaries, not merely rehash known uses or characteristics with trivial additions or nebulous purposes.¹⁶ Thus, in addition to the strict one-to-one comparison of prior art found in a § 102

¹² 35 U.S.C. §102(g) (protects the inventor who displays diligence in refining and producing her invention, invalidating a later-arising invention claim if "before such person's invention thereof, the invention was made in this country by another inventor who had not abandoned, suppressed, or concealed it."). Thus, provided the inventor makes a continuous effort to perfect her invention, she will not lose priority to a later party that beats her to the market. *Id.*

¹³ See *Eldred v. Ashcroft*, 537 U.S. 186 (2003). Though the case dealt with copyright law, the Court discussed the difference between the "quid pro quo" required for copyright or patent protection. The Court noted that the distinction between copyright and patent law is that while immediate public disclosure is "exacted from" the grant of a copyright, a patentee owes no such inherent duty when seeking a patent. *Id.* at 215. By its very nature, a copyrighted work must be fully released and made available in order for it to be protected (i.e. a copyright for a book is only valid for that portion of the book that has been printed or otherwise placed on a tangible medium). A person wanting to duplicate or somehow alter the copyrighted work need only possess the work in order to duplicate it, and usually does not need to know the process or method by which the original work was created. By comparison, a patent's creation process or composition is just as essential to its duplication and use as the invention itself (i.e. knowing the chemical composition of a product does not mean one can duplicate it in a lab, especially if a certain methodology must be followed). Thus, full disclosure of the process and the resulting product is "the price paid for the exclusivity secured." *Id.* See also U.S. CONST. art. I, § 8, cl. 8.

¹⁴ See, e.g., *Reeves Bros., Inc. v. U. S. Laminating Corp.*, 282 F. Supp. 118, 134-35 (E.D.N.Y. 1986). In this case, Reeves Bros. brought an infringement suit against U.S. Laminating Corp. for violating their patents related to lamination of polyurethane foam to fabric using flame heat and improvements. *Id.* at 122-23. In its defense, U.S. Laminating successfully argued that a German *Gebrauchsmuster* (commonly called "GM"), which is a German patent issued without a novelty examination, constituted valid prior art. *Id.* at 135. Even though Reeves likely did not have notice of the reference, the court followed the USPTO's ruling that "GMs may be considered as patents for anticipation purposes," noting that the GM had been published in the German Official Gazette upon issuance. *Id.* As for Reeves Bros.' argument that the GM was not a valid reference because it did not undergo a novelty search and was not a valid utility patent, the court noted that neither the USPTO nor Congress have ever placed such a limitation on foreign prior art before, and that "[i]f in effect the foreign document grants a patent right to exclude others from producing, using, or selling the invention, process, or article for a specified period of time, it clearly falls within the accepted definition of a patent." *Id.* at 136. Of course, some have argued that the foreign prior art regulations are under-inclusive, effectively ignoring a significant amount of prior art simply because it was not patented or published in an appropriate periodical. See Margo A. Bagley, *Patently Unconstitutional: The Geographical Limitation on Prior Art in a Small World*, 87 MINN. L. REV. 679 (2003).

¹⁵ 35 U.S.C. §101 (2000).

¹⁶ *United States v. Adams*, 383 U.S. 39, 50-51 (1966) ("holding that when a patent's claim is merely the substitution of one element with another in a known invention, the change must yield more than a predictable result); *Great*

novelty analysis, the United States Patent and Trademark Office (“USPTO”) and the Federal Circuit will also invalidate a patent:

if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.¹⁷

Under a non-obviousness analysis, the invention is not compared to a single tangible reference, but instead its relative “obviousness” is assessed through the eyes of an abstract person having ordinary skill in the art (“PHOSITA”) based on the available prior art at the time of the invention.¹⁸ Though somewhat counterintuitive, the PHOSITA is defined not in terms of “what was subjectively obvious to the inventor at the time of invention . . . [but] what would have been objectively obvious to one of ordinary skill in the art at such time.”¹⁹ This leads to questions about what characteristics and knowledge this skilled artisan has and how these apply to the prior art.²⁰ In addition, secondary factors such as commercial success, long-felt but unsolved public needs, and the failure of others in the field to produce these results must also be considered in determining whether the PHOSITA would have truly divined the present invention from the art before it.²¹ Therefore, in many instances, defining the PHOSITA is as important as defining the invention, and will likely gain greater significance as the technologies involved become more exact and complex.

B. Prior Art and Patent Examination

Having identified what constitutes prior art and how it is used to determine the novelty and obviousness of an invention, the focus shifts to who can introduce prior art and when. Applicants submit prior art for the consideration of a patent examiner or, in the case of a litigation, a trier of fact, during one of the three major time frames: (i) before publication of an

Atlantic & Pacific Tea Co. v. Supermarket Equipment Corp., 340 U. S. 147, 152 (1950) (“[a] patent for a combination which only unites old elements with no change in their respective functions . . . obviously withdraws what is already known into the field of its monopoly and diminishes the resources available to skillful men”). *But see* KSR Int’l Co. v. Teleflex Inc., 550 U.S. ___, 127 S. Ct. 1727 (2007) (holding that the application of the obviousness test included asking whether “a pedal designer of ordinary skill, facing the wide range of needs created by developments in the field of endeavor, would have seen a **benefit** to upgrading” the product with a new sensor) (emphasis added).

¹⁷ 35 U.S.C. §103(a) (2000).

¹⁸ *See* Graham v. John Deere Co., 383 U.S. 1 (1966). For a detailed discussion on the relative merits of applying a PHOSITA standard for obviousness, see Joseph Meara, Ph. D., *Just Who Is the Person Having Ordinary Skill in the Art? Patent Law’s Mysterious Personage*, 77 WASH. L. REV. 267 (2002); John O. Tresansky, *PHOSITA - The Ubiquitous and Enigmatic Person in Patent Law*, 73 J. PAT. & TRADEMARK OFF. SOC’Y 37 (1991).

¹⁹ Ryko Mfg. Co. v. Nu-Star, Inc., 950 F.2d 714, 718 (Fed. Cir. 1991) (citing Kloster Speedsteel AB v. Crucible Inc., 793 F.2d 1565, 1574 (Fed. Cir. 1986)).

²⁰ Although there remains no established rubric for defining a PHOSITA for a particular field, relevant factors include: “(1) the educational level of the inventor; (2) type of problems encountered in the art; (3) prior art solutions to those problems; (4) rapidity with which innovations are made; (5) sophistication of the technology; and (6) educational level of active workers in the field.” *Env’tl. Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 696 (Fed. Cir. 1983) (citations omitted). *See also* *Graham*, 383 U.S. at 17–18 (“Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved.”).

²¹ *Graham*, 383 U.S. at 17.

application, (ii) after publication of an application but before issuance, and (iii) after issuance of a patent. Each time frame is governed by its own restrictions under both the MPEP and applicable patent statutes. The general rule establishes that the further the application progresses through the examination process, the more opportunities interested third parties have to provide prior art references to supplement the references found by the examiner and provided by the applicant.

1. Before Publication of an Application

Confidentiality has been a central tenet of the patent process since its inception. Proceedings initially take place exclusively *ex parte* and only gradually progress to a limited public discourse. Under 35 U.S.C. § 122, “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 a congressional mandate or other special circumstance requires such disclosure.²² While this section has since been amended to allow for publication of a patent application eighteen months after its filing unless otherwise specified by the applicant, the application process remains largely a private affair between the examiner and the government.²³ This creates a unique dichotomy, in which a largely disinterested government agent acts unilaterally in determining the fate of a patent, while parties with real stakes in the examination process, such as competitors and potential licensees, likely do not even know of its existence.

With this proclivity toward confidentiality, it is not surprising that the initial identification and review of prior art involves the applicant and the examiner only.²⁴ Moreover, the applicant has no duty to perform a prior art search before applying for a patent; in fact, applicants have numerous incentives to purposely remain ignorant.²⁵ The applicant owes only a “duty of candor and good faith in dealing with the Office,” and the required disclosures are limited to the patentability of the existing claims in the invention.²⁶ The examiner can seek additional disclosures at any time during the examination, but in most instances, the examiner simply relies on the initial disclosure as the bulk of the relevant knowledge.²⁷ For this reason, a

²² 35 U.S.C. §122(a) (2000). What constitutes a “special circumstance” remains somewhat of a mystery, although a few cases have been adjudicated to provide a loose framework of this threshold. One, *Ex Parte Garner*, held that “[t]he erroneous notice of the issuance of a patent provided in the Official Gazette does not provide a special circumstance precluding an applicant’s right to maintain the application in confidence pursuant to 35 U.S.C. 122.” 225 U.S.P.Q. 746 (Commr. Pat. 1984). Another, *In re Crossman*, held that no special circumstance exists if potential infringers of a pending patent are informed of the owner’s intention to enforce the patent upon issuance. 187 U.S.P.Q. 367 (PTO Solicitor 1975). One circumstance when this veil of secrecy can be raised is during an interference. 37 C.F.R. § 1.612 (2006). *See also* MPEP, *supra* note 6, § 103 (providing a detailed analysis of the right of public inspection relating to patent applications and related files).

²³ 35 U.S.C. §122(b).

²⁴ For a discussion of the examiner’s search criteria, tools, and process, *see infra* Part II.A.

²⁵ *See* MPEP, *supra* note 6, § 2001.06. An applicant is only required to disclose references “they are aware of,” and that duty is imputed onto assignees and others related to the patent process. *Id.* Thus, it may be in an applicant’s best interests to not search the prior art for competing references, even if she may believe that invalidating references exist. *See also* Katherine Nolan-Stevaux, *Inequitable Conduct Claims in the 21st Century: Combating the Plague*, 20 BERKELEY TECH. L.J. 147, 158–59 (2005).

²⁶ 37 C.F.R. § 1.56.

²⁷ *See* 37 C.F.R. § 1.105(a)(1). Under this statute, an examiner “may require the submission, from individuals identified under § 1.56(c), or any assignee, of such information as may be reasonably necessary to properly examine

number of scholars have questioned the actual utility of an applicant's disclosure, concluding that "applicants' disclosures are unlikely to identify the universe of relevant prior art,"²⁸ since "the patentee has both the motive and the opportunity to behave strategically."²⁹ This leaves the initial prior art search to the examiner and, as will be shown in Part II, the examiner is unlikely to identify the relevant prior art universe for a given invention. No matter how diligently an examiner acts in reviewing the prior art, the part of that universe accessible to an examiner is so markedly incomplete that it is inevitable that she will never discover pertinent references and inventions without outside assistance.

Meanwhile, a third party, most likely a competitor, can provide a prior art reference prior to publication of the application. The third party can file a protest, as defined under 37 C.F.R. § 1.291, and allow a member of the public to submit references adverse to a pending patent application.³⁰ Although the protester can provide any reference with a brief explanation of its relevance to the pending application,³¹ the protester must provide these references prior to the publication or issuance of the application, whichever occurs first.³² Since the USPTO keeps applications in confidence until one of these two events occurs, it is difficult for interested third parties to identify these applications prior to publication, and protests remain impractical in most circumstances.

2. After Publication But Before Issuance

Until recently, a patent was not published until its issuance, effectively eliminating the potential for third party prior art submissions during the initial examination procedure.³³ However, on November 29, 1999, the enactment of the American Inventors Protection Act of 1999 partially eliminated this limitation.³⁴ This Act amended 35 U.S.C. § 122 to require publication of most applications "promptly after the expiration of a period of eighteen months from the earliest filing date."³⁵ Commonly referred to as a "pre-grant publication," third parties

or treat the matter." These requests can include inquiries about whether the invention is in use, if a prior art search was performed by the applicant, or even technical questions about the particular technology being patented. 37 C.F.R. § 1.105(a)(1)(i-viii). *See also* BHAVEN SAMPAT, EXAMINING PATENT EXAMINATION: AN ANALYSIS OF EXAMINER AND APPLICANT GENERATED PRIOR ART 9–11, <http://www.stiy.com/MeasuringInnovation/Sampat.pdf> (last visited Jan. 9, 2008) [hereinafter Sampat, Examiner] (providing empirical evidence that patent examiners' prior art citations overwhelmingly come from issued patents, with only 12% arising from non-patent prior art).

²⁸ BHAVEN SAMPAT, DETERMINANTS OF PATENT QUALITY: AN EMPIRICAL ANALYSIS 6, http://siepr.stanford.edu/programs/SST_Seminars/patentquality_new.pdf_1.pdf, (last visited Dec. 6, 2006) [hereinafter Sampat, Quality].

²⁹ R. Polk Wagner, *Reconsidering Estoppel: Patent Administration and the Failure of Festo*, 151 U. PA. L. REV. 159, 214–15 (2002).

³⁰ 37 C.F.R. § 1.291(a) *see also* MPEP, *supra* note 6, § 1901.

³¹ This relative freedom of information does not extend to prior art submissions of third parties after publication, as evidenced by 37 C.F.R. § 1.99.

³² 37 C.F.R. § 1.291(b).

³³ 37 C.F.R. § 1.99(e).

³⁴ KARIN TYSON, UNITED STATES PATENT AND TRADEMARK OFFICE, OVERVIEW OF EIGHTEEN-MONTH PUBLICATION, http://www.uspto.gov/web/offices/dcom/olia/aipa/overview_of_eighteen_month_publication21.htm (last visited January 9, 2008) (noting that "[b]efore November 29, 2000, utility and plant patent applications that were filed in the United States were required to be kept in confidence and a patent applicant had no enforceable patent rights before the issue date of a patent").

³⁵ 35 U.S.C. § 122(b); Intellectual Property and Communications Omnibus Reform Act of 1999, Title IV (American Inventors Protection Act of 1999), Pub. L. No. 106-113, 4001-4808, 113 Stat. 1501A-521, 1501A-552-591 (1999)

now have an opportunity to review an application before issuance and provide prior art references they feel will help determine the patentability of an invention.

Unfortunately, a number of pronounced limitations on this third party interaction exist, significantly mitigating its benefits. Under 37 C.F.R. § 1.99, a third party can provide patents or publications “relevant to a pending published application.”³⁶ This information “may be entered in the application file if the submission complies with the requirements of this section and the application is still pending when the submission and application file are brought before the examiner.”³⁷ These references must be written publications brought within two months following the publication of the application.³⁸ The submissions must include their dates of publication, English translations if necessary, and a \$180 fee.³⁹ Beyond these logistical restrictions, the statute also specifies that submissions of prior art references may not include any explanations or comments, thus robbing the submissions of any context and severely limiting their utility.⁴⁰

In light of these restrictions, particularly the one on explanations or comments attached to a reference, it should not be surprising that this option has yet to gain much traction in patent examination.⁴¹ In addition to these statutory annoyances, many third parties may hesitate to provide prior art at this stage out of fear that these requirements will neutralize the effectiveness of the references. When a patent issues, “[it] shall be presumed valid,” and it falls on the party seeking invalidation to prove otherwise.⁴² In particular, a patent is presumed to have overcome any references introduced during its examination, making them practically worthless when the patent is challenged.⁴³ Thus, if a third party supplies prior art references while the patent is pending and it still issues, they have effectively sacrificed those references in future litigation relating to the invalidity of that patent. Since 37 C.F.R. § 1.99 does not allow one to attach explanations to the prior art, a third party must be extremely confident that the reference is illustrative enough that the examiner will identify its relevance and invalidate the application without additional assistance, a risk few are willing to take.⁴⁴

(this Act was subsequently amended by the Intellectual Property and High Technology Technical Amendments Act of 2002 (107 P.L. 272)). There exist a number of exceptions to this general publication requirement, including for design patents, provisional applications, and those patents under secrecy orders by the government. 35 U.S.C. §122(b)(2)(A)(ii-iv). In addition, an applicant can request that the application not be published until issuance provided that she waives her right to file for a patent in a foreign country. 35 U.S.C. §122(b)(2)(B).

³⁶ 37 C.F.R. § 1.99(a) (2006). *See also* MPEP, *supra* note 6, § 1134.01.

³⁷ 37 C.F.R. § 1.99(a). *See also* MPEP, *supra* note 6, § 1134.01.

³⁸ 37 C.F.R. § 1.99(e).

³⁹ 37 C.F.R. § 1.99(b)(1-4).

⁴⁰ 37 C.F.R. § 1.99(d).

⁴¹ *See* Kevin Mack, *Reforming Inequitable Conduct to Improve Patent Quality: Cleansing Unclean Hands*, 21 BERKELEY TECH. L.J. 147, 170 (“[T]he quality of information submitted under the third party submission procedure is relatively low.”).

⁴² 35 U.S.C. § 282.

⁴³ *See* *Gould v. General Photonics Corp.*, 534 F. Supp. 399, 400 (D.C. Cal. 1982) (“Where the Patent Office has considered the most pertinent prior art before issuing the patent, the presumption of validity becomes even stronger.”).

⁴⁴ Prior art can also be introduced in this intermediary stage in interferences between two pending applications. Interferences occur when the examiner believes that two or more applications would result in patents that would interfere with the holders’ ability to enforce their rights against each other. 35 U.S.C. §135(a). When an interference is initiated, the affected applicants are able to provide evidence of priority of their invention as well as evidence that the competitor’s application is invalid. *Id.* Since the Board of Patent Appeals and Interferences—which hears interferences—makes final decisions concerning the patentability of applications, applicants have an incentive to

3. After Issuance

Once a patent issues, its disclosure is complete and becomes part of the public knowledge. At the same time, the patent becomes enforceable against other parties and, conversely, its validity can be challenged either in a court of law via litigation, or in the USPTO during a reexamination process. Litigation usually arises when the patent owner attempts to enforce her exclusionary right against another party for infringement or a related offense. Since the matter then becomes one for civil courts, parties are generally free to provide whatever evidence they think relevant to the case, including valid prior art under a 35 U.S.C. §§ 102 or 103 analysis.⁴⁵ At that time, third parties have two main options for supplying their prior art. Under 35 U.S.C. § 301, “[a]ny person at any time may cite to the Office in writing prior art consisting of patents or printed publications which that person believes to have a bearing on the patentability of any claim of a particular patent.”⁴⁶ At this time, the party can also include explanations concerning the relevancy of the prior art, and all of this information will become part of the patent’s file history.⁴⁷ Third parties may also contact one of the affected parties and provide any prior art references they consider relevant, and in certain circumstances, third parties can join the litigation.⁴⁸ Of course, litigation is an extremely expensive method for invalidating a patent, with total costs commonly reaching the millions of dollars for complex or commercially-viable patents.⁴⁹ As a result, litigation usually is a prohibitively expensive tool for individual inventors or small companies to combat potentially invalid patents.

The other common method utilized by third parties to invalidate an issued patent is reexamination. Either the patent holder or the general public may bring a reexamination,⁵⁰ with the moving party required to show “a substantial new question of patentability” as defined in 35 U.S.C. § 303(a), and make a payment of \$2,520 for an *ex parte* examination.⁵¹ Because the patent has issued and is publicly available, all proceedings related to the reexamination are also publicly available.⁵² Because the proceedings are *ex parte*, the moving party’s interaction with

provide any relevant prior art. For a detailed procedural outline of an interference action, *see* MPEP, *supra* note 6, § 2300.

⁴⁵ *See* C.R. Bard, Inc. v. U.S. Surgical Corp., 388 F.3d 858, 862 (Fed. Cir. 2004).

⁴⁶ 35 U.S.C. § 301 (2000). The citation may be brought “[a]t any time during the period of enforceability of a patent,” which under the MPEP includes the patent term plus the six year statute of limitations for infringement suits. 37 C.F.R. § 1.501 (2006); MPEP, *supra* note 6, § 2204.

⁴⁷ MPEP, *supra* note 6, § 2204.

⁴⁸ Under the Federal Rules of Civil Procedure, parties may join ongoing litigation “if they assert any right to relief jointly, severally, or in the alternative in respect of or arising out of the same transaction, occurrence, or series of transactions or occurrences and if any question of law or fact common to all these persons will arise in the action.” Fed. R. Civ. P. 20.

⁴⁹ *See* Mark A. Lemley, *Rational Ignorance at the Patent Office*, 95 NW. U. L. REV. 1495, 1502 n.28 (2001) [hereinafter Lemley, *Rational Ignorance*] (noting a 1999 study that showed the average cost for full litigation of a patent is over \$1.5 million, with just discovery constituting almost \$800,000 in costs).

⁵⁰ 37 C.F.R. § 1.510 (2006).

⁵¹ MPEP, *supra* note 6, § 2209. *See also* 37 C.F.R. § 1.20(c)(1) (outlining the fees required for a reexamination). This cost does not include the fees typically paid to a patent attorney when she prosecutes a reexamination. Though exact data on attorney fees varies based on a variety of factors (geographical location, technology field, complexity, etc.), the average rate for a patent attorney is \$250/hr. Gene Quinn, *Cost of Obtaining a Patent*, <http://www.ipwatchdog.com/patent/patent-cost/> (last visited January 9, 2008).

⁵² MPEP, *supra* note 6, § 2209.

the proceedings usually terminates when the official reexamination request is made, except when responding to statements made by the patent holder.⁵³ By comparison, the patent holder “has many opportunities to reframe the issue, rebut the evidence, and otherwise put its own spin on the information,”⁵⁴ a disparity that prompted the creation of *inter partes* reexamination.⁵⁵

Inter partes reexamination departs from *ex parte* on a number of key elements. As the name connotes, *inter partes* involves both the patent holder and the requester. The examiner will constantly inform the requester of any actions or responses made by the patent holder and, more importantly, the requester may provide written responses within thirty days.⁵⁶ Furthermore, provided that the moving party complies with 35 U.S.C. § 301, an unlimited number of third parties can file additional prior art during the reexamination process, making this an attractive option for multi-party attacks on a patent. This new freedom, though, is tempered with a complete estoppel against any issues raised during the reexamination, “creat[ing] huge risks for challengers, who must trust that the USPTO will not make any mistakes in handling the reexamination. There is no opportunity to litigate the issue again in court. The broad consensus among patent experts is that these risks are too great.”⁵⁷ Moreover, because the patent has issued at the time of reexamination, the requesters must overcome the presumption of validity that patents enjoy, a hefty burden that may prove insurmountable if the technology was murky or in its infancy at the time the application was filed.⁵⁸ Finally, an *inter partes* reexamination costs nearly four times as much as *ex parte*, requiring the requester to pay \$8,800.⁵⁹ Thus, much like litigation, the cost of a reexamination, particularly *inter partes*, may simply be too great for a third party.

II. The Present – Causes and Effects of Examiners’ Limited Prior Art Searches

A. The Examiner’s Search and Patent Application Statistics

As one can gather from the limited prior art requirements placed on the applicant and the

⁵³ 37 C.F.R. § 1.550(g) (“The active participation of the *ex parte* reexamination requester ends with the reply pursuant to § 1.535, and no further submissions on behalf of the reexamination requester will be acknowledged or considered”).

⁵⁴ Joseph Farrell & Robert Merges, *Incentives to Challenge and Defend Patents: Why Litigation Won’t Reliably Fix Patent Office Errors and Why Administrative Patent Review Might Help*, 19 BERKELEY TECH. L.J. 943, 965 (2004). See also 37 C.F.R. § 1.535 (2006) (“If the patent owner does not file a statement under § 1.530, no reply or other submission from the *ex parte* reexamination requester will be considered”).

⁵⁵ 35 U.S.C. § 311. See generally MPEP, *supra* note 6, § 2600.

⁵⁶ 35 U.S.C. § 314(b). See also Kenneth Cage & Lawrence Cullen, *An Overview of Inter Partes Reexamination Procedures*, 85 J. PAT. & TRADEMARK OFF. SOC’Y 931 (2003).

⁵⁷ Farrell & Merges, *supra* note 54, at 967 (citing 35 U.S.C. § 317). See Katharine Zandy, *Too Much, Too Little, Or Just Right? A Goldilocks Approach to Patent Reexamination Reform*, 61 N.Y.U. ANN. SURV. AM. L. 865, 878-879 (2006).

⁵⁸ 35 U.S.C. § 282. For example, assume the prior art supplied by the requester is somewhat nebulous but could be combined to form a colorable non-obviousness argument during examination. Unfortunately, because the technology was in its infancy at the time the references and the application were filed, they lack the concreteness and specificity that currently defines the market. For that reason, the references may not be robust enough to create a colorable non-obviousness argument on reexamination, when the presumed validity of the patent raises the bar. Thus, prior art that would have been viable during examination simply lacks the present-day force on reexamination, an unfair result if the goal of the patent system is to issue only valid patents.

⁵⁹ 37 C.F.R. § 1.20(c)(2) (2006).

numerous restrictions on third party prior art submissions during examination, the results of the examiner's search will usually comprise the bulk of the prior art used for determining patentability.⁶⁰ For this reason, the USPTO has defined the procedures an examiner must follow during a search in MPEP § 904.⁶¹ “[A]fter having obtained a thorough understanding of the invention disclosed and claimed in the nonprovisional application,”⁶² the examiner will generally turn to three major databases for searching patents and printed publications: the Examiner's Automated Search Tool (“EAST”), the Web-Based Examiner Search Tool (“WEST”), and the Foreign Patent Access System (“FPAS”).⁶³ All these tools provide full-text searches of printed applications since 2001, issued patents since 1970, optically-scanned patents from 1920-1970, and images of certain foreign patent documents and English abstracts.⁶⁴ Unfortunately, the examiner's search is usually limited to the results generated by these tools, as she will have limited access to Internet searches and similar devices.⁶⁵ Examiners are also expected to perform “[t]he first search . . . such that the examiner need not ordinarily make a second search of prior art,” a stipulation that places immense pressure to “get it right the first time.”⁶⁶ All the while, an ever-increasing caseload places an even greater premium on the examiner's time, further limiting the amount of time that can be spent on any given search. As a result, the examiner usually has an incomplete snapshot of the prior art universe during the examination process.⁶⁷

As if the limited search tools, sparse disclosures by applicants, and the emphasis on a single examination were not enough, the examiner must deal with a number of structural and logistical impediments to performing a complete search.⁶⁸ For starters, there simply are not enough patent examiners, especially in some of the high-tech technology classes such as biotechnology and computers.⁶⁹ Although the USPTO has pushed recently to increase the total number of examiners,⁷⁰ there will be only 6,000 patent examiners working within the 450

⁶⁰ The examiner can always request additional information from the applicant during examination under 37 C.F.R. § 1.105 (2006). *See supra* note 27.

⁶¹ Although the focus of this section will simply be on the search requirements for the examiner, see Levine et al., *Ex Parte Patent Practice and the Rights of Third Parties*, 45 AM. U.L. REV. 1987, 1993-1995 (1996) for a detailed outlining of the entire examination procedure.

⁶² MPEP, *supra* note 6, § 904.

⁶³ MPEP, *supra* note 6, § 902.03(e).

⁶⁴ *Id.* These tools also contain references to certain printed publications, but this selection is not robust.

⁶⁵ MPEP § 904.02(c). If the examiner is using the Internet in relation to a non-published application other than in a reissue or reexamination proceeding, she “**MUST** restrict search queries to the general state of the art unless the Office has established a secure link over the Internet with a specific vendor to maintain the confidentiality of the unpublished patent application.” *Id.* (emphasis in original). In fact, in over half the offices, Internet access is prohibited. *See* BETH NOVECK, “PEER TO PATENT”: COLLECTIVE INTELLIGENCE, OPEN REVIEW AND PATENT REFORM 27, http://dotank.nyls.edu/communitypatent/docs/openreview_sep_02.pdf, (last visited December 6, 2006).

⁶⁶ MPEP, *supra* note 6, § 904.

⁶⁷ Sampat Quality, *supra* note 28, at 13 (“If an applicant does not search for prior art and thereby does not report a piece of relevant prior art on his/her information disclosure statement, the examiner is less likely to discover it if it is codified in the non-patent literature or a foreign patent than if it is codified in a U.S. patent.”); *see also* Noveck, *supra* note 65, at 28-29.

⁶⁸ *See infra* discussion accompanying notes 77, 79–85.

⁶⁹ The paucity of examiners in certain fields has driven the USPTO to provide a “signing bonus” of up to \$9,000 for examiner applicants with certain skill sets, particularly Computer and Electrical Engineering. Benefits, <http://usptocareers.gov/Pages/PEPositions/Benefits.aspx> (last visited January 8, 2008).

⁷⁰ Strategic Plan 2007-2012, http://www.uspto.gov/web/offices/com/strat2007/stratplan2007-2012_06.htm (last visited December 7, 2006) (outlining the USPTO's goal of hiring 1,200 new examiners by the end of 2007, and a continued hiring of 1,000 examiners per year for the next seven years).

technology classes at the end of the year.⁷¹ While the number of examiners continues to remain relatively small, the number of patent applications being filed each year has skyrocketed, reaching 443,652 new applications and 186,593 new patents being issued in 2006,⁷² and preliminary results from 2007 noting 467,243 applications and 195,530 patents being issued during the fiscal year.⁷³ Furthermore, applications focusing on sparse examiner categories such as computer software have risen, placing further stress on examiners in those fields.⁷⁴ All the while, the backlog of patent applications continues to rise, expecting to top 600,000 in 2006.⁷⁵ Not only that, but the examiner is expected to spend no more than eighteen to twenty hours per application, with a throughput of eighty-seven applications per year.⁷⁶ For all of these reasons, the patent office has been chastised for not spending adequate time and effort reviewing applications, resulting in “bad” patents being issued, which in turn leads to increased and costly litigation, a burden on invention because of fear of potential infringement,⁷⁷ and the rise of “patent trolls.”⁷⁸

⁷¹ Noveck, *supra* note 65, at 28.

⁷² USPTO, PERFORMANCE AND ACCOUNTABILITY REPORT, FISCAL YEAR 2006 122 (2006), <http://www.uspto.gov/web/offices/com/annual/2006/2006annualreport.pdf>.

⁷³ USPTO, PERFORMANCE AND ACCOUNTABILITY REPORT, FISCAL YEAR 2007 111 (2007), <http://www.uspto.gov/web/offices/com/annual/2007/2007annualreport.pdf>.

⁷⁴ For example, the USPTO was on pace to issue 40,000 patents for software-related inventions in 2006, which would be a record and constitute the highest percentage of issued patents for the year. *Antner [sic] 805 Software Patents Issued by USPTO Today; Yearly Total Now 31,722*, <http://www.pubpat.org/softwarepatentwatch/index.php?d=22&m=11&y=06&category=1> (last visited December 7, 2006); see also Tom Sanders, *Software Patents Set New Record*, ITNEWS, Sept. 26, 2006, <http://www.itnews.com.au/newsstory.aspx?CIaNID=37203>.

⁷⁵ See Kevin Maney, *Examiners Can't Keep up with Patent Applications*, USA TODAY, Sept. 20, 2005, http://www.usatoday.com/tech/columnist/kevinmaney/2005-09-20-patent-office_x.htm.

⁷⁶ See BUDGET REPORT FOR USPTO, available at <http://www.whitehouse.gov/omb/budget/fy2004/pma/patents.pdf> (Noting that in 2001, “patent examiners spent an average of only eighteen cumulative hours per patent application disposed.”); see also John R. Allison & Mark A. Lemley, *The Growing Complexity of the United States Patent System*, 82 B.U. L. REV. 77, 135 (2002) (“PTO examiners spend startlingly little time on a patent - an average total of only eighteen hours over three years.”) [hereinafter Lemley, *Growing Complexity*]; Mark A. Lemley, *Rational Ignorance at the Patent Office*, 95 NW. U. L. REV. 1495, 1500 n.19 (2001) [hereinafter Lemley, *Rational Ignorance*]; Noveck, *supra* note 65, at 8 n.16 (noting many examiners are expected to complete eighty-seven applications per year).

⁷⁷ John R. Thomas, *The Responsibility of The Rule Maker: Comparative Approaches to Patent Administration Reform*, 17 BERKELEY TECH L.J. 727, 731 (2002) (“Large numbers of improvidently granted patents may create *in terrorem* effects on entrepreneurship,” creating a disincentive to invent out of fear of future litigation; and “[t]he net results appear to be reduced rates of innovation, decreased patent-based transactions, and higher prices for goods and services.”); see also USPTO FAQ, <http://www.uspto.gov/main/faq/p220026.htm> (last visited December 7, 2006) (On average, patent application pendency is 24.6 months).

⁷⁸ See Michelle Kessler, *Patent Lawsuits Hit Tech Titans*, USA TODAY, Feb. 12, 2006, http://www.usatoday.com/tech/news/2006-02-12-patent-lawsuits_x.htm?POE=TECISVA; Joe Beyers, *Rise of the Patent Trolls*, CNET NEWS, Oct. 12, 2005, http://www.news.com/Rise-of-the-patent-trolls/2010-1071_3-5892996.html. An argument can also be made that delays between the filing of an application and its examination—which can be as long as four or five years for certain disciplines—limits the number of “good” patents that are issued because examiners may scrutinize applications for technologies that have since become ubiquitous. In effect, they may impute their own personal knowledge onto the prior art and the application, subconsciously noting connections in the prior art that may not truly exist. For a detailed analysis of this “hindsight bias”, see Gregory N. Mandel, *Patently Non-Obvious: Empirical Demonstration that the Hindsight Bias Renders Patent Decisions Irrational*, 67 OHIO ST. L.J. 1391, 1418-19 (2006).

B. The Problem with “Bad” Patents

With so little time dedicated to a given patent application, complaints about the quality of issued patents have risen in recent years. Perhaps the most visible example of this dilemma is the rise in high-profile, costly litigation.⁷⁹ In addition to an increase in the total number of lawsuits filed,⁸⁰ the cost of litigation has also increased, averaging over \$1 million.⁸¹ For example, the five-year-long litigation between NTP (the patent holder) and Research in Motion (the owners of the popular BlackBerry handheld device and potential infringer) was recently settled for an astounding \$612.5 million, although reexamination of NTP’s patents had shown at least one to be invalid.⁸² In all likelihood, RIM refrained from continuing litigation, at least in part, because the costs had become so great that settlement was more economical than another adverse court decision, despite the fact that the USPTO and popular sentiment considered the NTP patents to have marginal validity.⁸³

With such massive settlements acting as the carrot, it is not surprising that number of “patent trolls” has risen.⁸⁴ “Patent troll” is a derisive term levied against parties who obtain patents for certain technologies but, rather than producing end products from them, instead use the patents to obtain licensing agreements and court settlements from other companies in that arena.⁸⁵ While many debate the overall utility of patent trolls and their role in the innovation of a technology,⁸⁶ history is full of parties that profit from a timely patent that is utilized in an emerging field.⁸⁷ Often viewed as one of the “grandfathers” of this practice, Jerome Lemelson was a prolific inventor who used his patents to extract billions of dollars from companies, particularly in the case of his patent for a component used in modern-day bar code readers.⁸⁸

⁷⁹ INTELLECTUAL PROPERTY OWNERS SOCIETY, DETAILED PATENT CASELOAD DATA, MARCH 2001 - DEC. 2005, Apr. 19, 2006, www.ipo.org (searching “patent caseload data” and selecting March 2001 – Dec. 2005 data) (last visited December 7, 2006) (showing a gradual increase in the number of patent lawsuits filed from 2001 until 2005).

⁸⁰ *Id.*

⁸¹ See Lemley, *Rational Ignorance*, *supra* note 76, at 1502 n.28 (noting a 1999 study that showed the average cost for full litigation of a patent is over \$1.5 million, with discovery alone constituting almost \$800,000 in costs).

⁸² *NTP, Inc. v. Research in Motion, Ltd.*, 418 F.3d 1282 (Fed. Cir. 2005), cert. denied, 126 S. Ct. 1174 (2006); see Yuki Noguchi, *BlackBerry Patent Dispute Is Settled*, WASH. POST. A01 (Mar. 4, 2006). For a detailed analysis of the litigation, see Jennifer Lane, *NTP, Inc. v. Research in Motion, Ltd.: Inventions Are Global, But Politics Are Still Local – An Examination of the BlackBerry Case*, 21 BERKELEY TECH. L.J. 59, 64-68 (2006).

⁸³ See Noguchi, *supra* note 82; see also Ian Austin, *U.S. Patent Office Likely To Back BlackBerry Maker*, N.Y. TIMES C5 (Dec. 20, 2005).

⁸⁴ Due to the subjective component of designating a party a “patent troll”, the exact number of trivial/“trolling” lawsuits filed each year is difficult to ascertain. Still, for an analysis of Fortune 100 companies and the number of “frivolous” patent lawsuits they have been involved in, see Patent Troll Tracker, *Patent Litigation Run Amok*, <http://trolltracker.blogspot.com/2007/12/patent-litigation-run-amok.html> (last visited January 9, 2008).

⁸⁵ Ronald Mann, *Do Patents Facilitate Financing in the Software Industry*, 83 TEX. L. REV. 961, 1023 (2005); see also Wikipedia, *Patent Troll*, http://en.wikipedia.org/wiki/Patent_troll (last visited December 7, 2006).

⁸⁶ See Mann, *supra* note 85, at 1025–26; Nicholas Varchaver, *Who's Afraid of Nathan Myhrvold?*, FORTUNE, June 26, 2006, http://money.cnn.com/magazines/fortune/fortune_archive/2006/07/10/8380798/index.htm (profiling Intellectual Ventures, a company whose goal is to amass a large patent portfolio and then license the patents to affected companies).

⁸⁷ See *infra* text accompanying notes 94, 96-97.

⁸⁸ *Ford Motor Co. v. Lemelson*, 40 U.S.P.Q.2d (BNA) 1349, 1351 (D. Nev. 1996) (outlining the technology patented by Lemelson).

Although he sometimes lost his battles in court,⁸⁹ his ability to extract licensing fees from companies based on nebulous patents made him notorious in the inventive community.⁹⁰ Recently, companies like Eolas⁹¹ and MercExchange⁹² have come under fire for their troll-ish behavior, and it is safe to assume that the problem will only increase as more patents, particularly in the highly commercial fields such as software, are issued.⁹³

III. The Future – Community Prior Art Submissions

Although the severity of the problem could be debated, patents are undoubtedly being issued on speculative and nebulous claims and those “bad” patents are increasingly becoming involved in legal disputes. Once we have acknowledged the problem, the next issue is how to repair it. Some have suggested implementing a “bounty” system for prior art references that invalidate a patent,⁹⁴ and the USPTO has turned to simply hiring more examiners to assuage the

⁸⁹ See, e.g., *Symbol Techs. Inc. v. Lemelson Med. Educ. & Research Found.*, 277 F.3d 1361, 1362 (Fed. Cir. 2002) & 422 F.3d 1378 (Fed. Cir. 2005). Lemelson, filed numerous continuations on patent applications originally filed in the 1950's, and was able to delay issuance until the 1980's, when bar code technology had taken hold and he was able to transform a rather nebulous claim to a fledgling technology into a succinct claim on an essential technological element that he arguably never envisioned when he first filed. 277 F.3d at 1362. Lemelson's conscientious delays in obtaining his patent, though, proved to be his undoing, as the Federal Circuit applied the equitable doctrine of laches to bar his claims due to the unreasonable and unexplained delay in the prosecution of his patent. *Id.* at 1361. Lemelson, by filing continuations on patent applications originally filed in the 1950s, was able to delay issuance until the 1980s, when bar code technology had taken hold. 277 F.3d at 1363. Thus, he was able to transform a rather nebulous claim to a fledgling technology into a succinct claim on an essential element of the technology he arguably never envisioned when he first filed.

⁹⁰ See Nicholas Varchaver, *The Patent King*, FORTUNE, May 14, 2001, http://money.cnn.com/magazines/fortune/fortune_archive/2001/05/14/302986/index.htm.

⁹¹ *Eolas Tech., Inc. v. Microsoft Corp.*, 2004 U.S. Dist. LEXIS 534 (N.D. Ill. 2004), *vacated in part*, 399 F.3d 1325 (Fed. Cir. Ill. 2005), *cert. denied*, 126 S. Ct. 568 (2005). Eolas obtained a \$521 million judgment against Microsoft, claiming the software giant was illegally using its patent in the Microsoft Internet Explorer web browser, where the patent concerned an application that parses and then automatically loads external programs to display content on a website. *Id.* at 534. Critics of Eolas condemn it as a patent troll because it failed to market or produce a consumer product with its patented technology, while others counter that because of the company's exclusive license with the University of California, such commercial avenues were limited. See Martin Lueck et al., “Patent Troll:” *A Self-Serving Label that Should be Abandoned*, Sept. 28, 2005, http://www.rkmc.com/Patent_Troll_A_Self-Serving_Label_that_Should_be_Abandoned.htm; Kessler, *supra* note **Error! Bookmark not defined.**

⁹² *eBay Inc. v. MercExchange, L.L.C.*, 126 S. Ct. 1837, 1841 (2006). The Court ruled that an injunction against eBay relating to its accused violation of MercExchange's online-auction patents was invalid, and remanded the matter for more deliberation. The Court stated that the automatic allowance of a permanent injunction whenever a patent was deemed valid and infringed did not fulfill the “principles of equity” such injunctions were intended to protect, and did not feel that the four-factor test required for such an injunction had been met. *Id.* at 1741. For the injunction to be valid, appellee must demonstrate: (1) irreparable harm, (2) remedies available at law, such as monetary compensation, are inadequate, (3) based on a balance of hardships, a decision in equity is warranted, and (4) the public interest would not be harmed by an injunction. *Id.* See also Jessica Holzer, *Supreme Court Buries Patent Trolls*, FORBES, May 16, 2006, http://www.forbes.com/home/businessinthebeltway/2006/05/15/eBay-scotus-patent-ruling-cx_jh_0516scotus.html.

⁹³ In recent years, organizations such as the Electronic Frontier Foundation (“EFF”) have taken preemptive actions against potential patent trolls, calling for inventors and companies to provide prior art that could be used to seek a reexamination of, and ultimately an invalidation, of speculative patents. Electronic Frontier Foundation, *EFF: Patent Busting Project*, <http://www.eff.org/patent/> (last visited December 7, 2006).

⁹⁴ See John R. Thomas, *Collusion and Collective Action in the Patent System: A Proposal for Patent Bounties*, 2001 U. ILL. L. REV. 305 (2001); Joseph Scott Miller, *Building a Better Bounty: Litigation-Stage Rewards for Defeating Patents*, 19 BERKELEY. TECH L.J. 667 (2004).

backlog and dedicate more time to a given application.⁹⁵ While these solutions may have some effect, the fact remains that a world of prior art exists, systemically cordoned off from the examiner, and this isolation ultimately leads to the approval of erroneous patents. Connecting those sources of information and supplying it to the examiner has become a major tenet of patent reform, in particular of the Peer to Patent Project.⁹⁶

A. Peer to Patent Project

The Peer to Patent Project is based on Beth Noveck's 2002 paper "*Peer to Patent*": *Collective Intelligence, Open Review and Patent Reform*.⁹⁷ In response to the difficulties third parties face in providing relevant prior art to an examiner during patent examination, she calls for the creation of a wiki-based⁹⁸ "peer review" system that will allow the expert community to provide relevant prior art for pending applications that will supplement those results found by the examiner and provided by the applicant.⁹⁹ In her eyes, the current problems with the patent process, coupled with the availability of collaborative technology, make this an optimal time to bring about this change:

We have arrived at a unique moment in history when five factors converge to make this kind of reform proposal possible: first, the state of patenting has become so problematic as to meet with almost universal opprobrium; second patent applications are published after eighteen months independent of grant, making it possible to consider open peer review; third, peer review is widely practiced in the public sector (e.g. EPA, NIH, NSF); fourth, we have the social reputation and social networking technology to make open review on this scale possible; and, fifth, we have the expertise with such endeavors as Wikipedia, Slashdot, Yahoo Answers, Linux, Apache and many more such collaborative decision-making systems, both online and off, to be able to design and construct a new legal institution.¹⁰⁰

The USPTO appears to agree with this sentiment, as they recently adopted a pilot program utilizing this proposed system for reviewing applications for Technology Center 2100, the chief group for software patents.¹⁰¹ This program went live on June 15, 2007,¹⁰² and has

⁹⁵ Strategic Plan 2007-2012, *supra* note 70.

⁹⁶ The Peer to Patent Project – Community Patent Review, <http://dotank.nyls.edu/communitypatent/> (last visited December 7, 2006).

⁹⁷ Noveck, *supra* note 65.

⁹⁸ "Wikis" are user-driven websites that allow visitors to add, remove, and edit information found on the site with few restrictions. Wikipedia, Wiki, <http://en.wikipedia.org/wiki/Wiki> (last visited December 7, 2006); *see also* Marshall Brain, *How Wikis Work*, Howstuffworks, <http://computer.howstuffworks.com/wiki.htm> (last visited December 7, 2006). Most wikis also feature discussion boards, rating systems, and administrative "lockdown" for maintaining order on the site. *Id* Large-scale wikis, such as Wikipedia, also require users to post from a neutral POV and to provide sources for their statements. *Id*.

⁹⁹ Noveck, *supra* note 65, at 3.

¹⁰⁰ Noveck, *supra* note 65, at 12.

¹⁰¹ Strategic Plan 2007-2012, *supra* note 70 ; *see also* Press Release, The Peer to Patent Project, United States Patent and Trademark Office to Implement Patent Reform Project Developed by New York Law School's Institute for Information Law & Policy (Aug. 29, 2006), *available at* http://dotank.nyls.edu/communitypatent/pressrelease_082906.html.

¹⁰² RedHat, *Peer-to-Patent Pilot Launches*, June 18, 2007, <http://www.press.redhat.com/2007/06/18/peer-to-patent-pilot-launches>.

already led to communal prior art submissions against the likes of Yahoo,¹⁰³ General Electric,¹⁰⁴ and Sub Microsystems.¹⁰⁵

Under Noveck's system, once the patent application is published after eighteen months, it will be made available for public review for two months, an interval that tracks the allowable time frame for current 37 C.F.R. § 1.99 submissions.¹⁰⁶ At this point, any third party will be able to submit prior art references to a publicly-viewable page where others will be able to view it, edit it, and identify the most relevant references for the examiner to consider.¹⁰⁷ "A peer reviewer logs onto the system in order, as we shall discuss, to: 1) rate claims, 2) submit prior art examples, 3) comment on the patent or on specific prior art submissions, 4) rate prior art submissions, 5) rate prior art, 6) rate peer reviewers."¹⁰⁸ Like a number of wikis, users must register with the site prior to accessing it, but little else seems to be required for membership besides providing a first and last name.¹⁰⁹ As a result, this level of anonymity and subsequent lack of accountability permeate the entire submission process, potentially limiting the breadth of valuable submissions. As prior art gets submitted, other users will review its relevancy to the given claim and rate both it and the submitter.¹¹⁰ The goal here is to bring some accountability to the submission process, weeding out ineffective or wasteful submissions as well as identifying and trumpeting useful references and experts. In addition, this type of "grass-roots" review will help minimize the possibility of an elite peer review group forming, with those of greater education or bombast receiving de-facto status as superior experts.¹¹¹ Over the months, the winnowing process initiated by the users will result in "a rank ordered list of prior art, identifying the top ten submissions as judged by the community."¹¹² At the end of the two months, the examiner will receive a report listing the top ten prior art references as well as any comments attached to them by the community, which she can use to supplement her own search.¹¹³

¹⁰³ Peer-to-Patent, Community Patent Review, *Smart drag-and-drop*, <http://www.peertopatent.org/patent/20070234226/activity> (last visited January 10, 2008).

¹⁰⁴ Peer-to-Patent, Community Patent Review, *Method for configuring a windfarm network*, <http://www.peertopatent.org/patent/20070255832/activity> (last visited January 10, 2008).

¹⁰⁵ Peer-to-Patent, Community Patent Review, *Method and apparatus for selectively executing different executable code versions which are optimized in different ways*, <http://www.peertopatent.org/patent/20070226722/activity> (last visited January 10, 2008).

¹⁰⁶ Noveck, *supra* note 65, at 52–53.

¹⁰⁷ Noveck, *supra* note 65, at 51–52, 53–55. If an applicant agrees to take part in the pilot program, her application is moved to the front of the queue and will be published immediately. *Id.* In addition, the pilot program will waive the usual \$180 filing fee for third party submissions. *Id.* at 53.

¹⁰⁸ Noveck, *supra* note 65, at 53. In addition to visiting the site on their own, users will be able to set up e-mail and RSS feed reminders that will notify them when new applications arrive that fit their preferences and expertise. *Id.* at 49. The site may also institute an Amazon-style suggestion system that would direct users to other patents that match certain criteria found in patents they have already reviewed. *Id.* at 50–51.

¹⁰⁹ Peer-to-Patent, Community Patent Review, *Peer to Patent Registration*, <http://www.peertopatent.org/signup> (last visited September 12, 2007); Noveck, *supra* note 65, at 54.

¹¹⁰ Noveck, *supra* note 65, at 55–56.

¹¹¹ Of course, the counter argument is that, much like message boards and other communal environments, a class system will naturally form, with a few elite members garnering much of the attention and deference, while "newbies" will be intimidated about entering.

¹¹² Noveck, *supra* note 65, at 56. For examples of this process in action, see *supra* notes 102–104.

¹¹³ Noveck, *supra* note 65, at 56.

B. Advantages and Disadvantages

To its proponents, peer review provides a number of advantages over the current search restrictions on prior art.¹¹⁴ For both the inventor and the examiner, the chief benefit of the system is a more robust and complete view of the prior art universe.¹¹⁵ For the inventor, this helps her to identify potential infringers prior to litigation, locate competitors who may have a colorable claim against her product, and compile a clear analysis of the relevant prior art at the time of invention, which may be necessary during litigation to prove the validity of a patent.¹¹⁶

For the examiner, peer review provides a useful supplement to her search results, which will lead to more definitive patent issuance or rejection.¹¹⁷ Instead of wasting hundreds of thousands of dollars in litigation, “bad” patents will be ferreted out expeditiously and with minimal costs. Of course, the danger may arise that any patent issued after this review will effectively be a Super Patent, having survived a prior art search by both the examiner and the public. At that point, any attempts to invalidate it would place an almost insurmountable burden of proof upon the moving party, with the patent holder claiming victory before two firing squads. Not only that, but this proposal would have no effect on the appreciable amount of time the examiner will spend on the application; if anything, this may lengthen the effective review time because the examiner will have to incorporate these new references into her own findings, weeding out inapplicable art or duplicate references. Because this eighteen- to twenty-hour window is often cited as a major flaw of the current patent practice,¹¹⁸ creating additional work for the examiner in this manner may be more burdensome than beneficial.

Another advantage trumpeted for this system lies in its ability to harness the body of knowledge that exists in the general public, while at the same time making the entire patent process more transparent and interactive.¹¹⁹ “Often, the best wisdom comes, not from the center, but from the periphery among the enthusiasts and hobbyists or from graduate students who are immersed in but not yet well known for their knowledge of the discipline.”¹²⁰ By providing a conduit for those voices to be heard, the general store of knowledge will improve and be put to a good cause. Of course, the counter is that for every truly knowledgeable voice, there will be those who either promote incorrect information or worse, misinformation. While the fact that the peer review system is self-policing in the sense that other users will rate the quality and relevance of the prior art, there remains a strong possibility that some competitors will try to

¹¹⁴ Although I address only a few of the key advantages here, a complete list of advantages, as well as a number of answers to other pressing questions, can be found at the Peer to Patent Project’s FAQ. Peer-to-Patent, Community Patent Review, Frequently Asked Questions, <http://dotank.nyls.edu/communitypatent/faq.html>.

¹¹⁵ See Noveck, *supra* note 65, at 58–60.

¹¹⁶ Noveck, *supra* note 65, at 58–59. “One of the great difficulties in patent litigation, particularly with software, is reconstructing prior art methods that were known to exist at the time of the invention, but cannot be resurrected in sufficient detail to constitute clear and convincing evidence.” *Id.* at 59 (quoting Email from Peter Canelias, Adjunct Professor, New York Law School, to author (Mar. 17 2006, at 06:26 EST) (on file with author)).

¹¹⁷ Noveck, *supra* note 65, at 59–60.

¹¹⁸ See *supra* note 76.

¹¹⁹ Noveck, *supra* note 65, at 61–62, 67. Since its launch, the program has attracted over 32,000 unique visitors to the site, with over 1,700 of them signing up to review applications. Peer to Patent, *Peer to Patent Update* (Dec. 24, 2007), <http://cairns.typepad.com/peertopatent/2007/12/peer-to-paten-1.html>. These reviewers have produced 106 prior art references for 22 distinct applications, and more applications are being reviewed on a daily basis. *Id.*

¹²⁰ Noveck, *supra* note 65, at 62.

deluge the system with faulty prior art so that truly relevant references are lost in the crush.¹²¹ Furthermore, to claim that this is truly “public” knowledge is a misnomer, as most references will likely be provided by (1) computer-savvy individuals, (2) capable of reading English, (3) with sufficient time and inclination to peruse the applications and introduce relevant prior art. While society as a whole is certainly becoming more technologically savvy and English has become a more universal language, there remain major barriers to a truly “global” public knowledge, and until then, the true benefits of the system may not be realized.¹²²

At the same time, with more prior art references reported every day, the USPTO will amass a war chest of references that could be used in determining the patentability of future applications.¹²³ The danger, of course, is that with enough references, notions of non-obviousness will become even more specious, with examiners being able to claim an obvious combination of references even for clearly patentable inventions.¹²⁴ In effect, this knowledge base transforms the mythical inventor from one skilled in the art to a proverbial “Google with feet,” an all-knowing architect expected to be proficient in the use and combination of virtually unlimited components. The counterargument, though, is that this simply returns the “person” to the PHOSITA, providing a tangible marker of the expert’s knowledge at the time of the invention. While this is an admirable goal, it remains to be seen if the PHOSITA should remain on the sideline, more an ideal than a known commodity.¹²⁵

A final concern would simply be that by bringing “democracy to knowledge,” the USPTO runs the risk of exposing itself to mass rule, where majority does not always equate to truth. It is faintly difficult to imagine a scenario where a vocal submitter is so adamant and persuasive about the relevance of her prior art that the masses come to agree, even if her references ultimately prove to be false. Furthermore, once the novelty of this project subsides, one should be concerned about the sustainable participation rate by both inventors and submitters. While proponents claim that a system for ranking submitters and public appeal will be incentive enough for people to remain interested in the project,¹²⁶ it remains to be seen whether that will be true and whether the people who participate will be the most desirable for the system’s continued existence.¹²⁷

¹²¹ Noveck, *supra* note 65, at 69.

¹²² In my view, the current prior art issues are not related so much to U.S. prior art, but to references found in other countries. Until foreign countries become as easy to search as the United States, global knowledge is nothing more than a talking point.

¹²³ Noveck, *supra* note 65, at 55.

¹²⁴ The danger is that the “Winslow Tableau,” the notion that the mythical PHOSITA has all relevant references before her when determining obviousness, would be expanded considerably by this process. *See* *In Re Winslow*, 43 C.C.P.A. 1027 (1955). While the notion of an all-knowing expert may exist in understanding obviousness, there is serious doubt that it was intended to impute such a harsh requirement upon inventors to prove non-obviousness and novelty before all known inventions.

¹²⁵ Noveck, *supra* note 65, at 32–33 (“Today, PHOSITA sits on the sidelines of obviousness analysis. Courts consult PHOSITA on the scope, content and meaning of prior art references but not on the ultimate question of whether the invention would have been obvious at the time it was made in light of the prior art”) (quoting Rebecca Eisenberg, *Ideas Into Action: Implementing Reform of the Patent System: Obvious to Whom? Evaluating Inventions from the Perspective of PHOSITA*, 19 BERKELEY TECH. L.J. 885, 888 (2004)).

¹²⁶ Noveck, *supra* note 65, at 75–77.

¹²⁷ One can only imagine a community full of self-professed experts fighting over who is the best at identifying prior art.

Conclusion

Whether or not one agrees with a peer review system for patent applications, the fact remains that current examination practice is missing an immense universe of prior art that exists right outside the USPTO's doors. Third party peer review sounds like a promising option to consider, as any opportunity to bridge this gap would be in the best interests of both the patent office and the public at large. On the other hand, the USPTO claims to be an expert on distinguishing true invention from common knowledge; if it does start harnessing the knowledge of the masses, it may no longer know which is which.