

Tom Randall

George Mason University School of Law, J.D. May 2013

Patent Harmonization in the 21st Century: Narrowing the Issues

I. INTRODUCTION

In the 1990s, globalization graduated from an obscure economic theory to a familiar household term.¹ As technological advances and global supply chains merged in the 1980s, it is unsurprising that discussion of the benefits and challenges of global commerce followed in short order. Middle class families, who in previous generations may have discussed local politics around the dinner table, discussed the effect that international issues like the passage of the North American Free Trade Agreement might have on local employment.

Alongside globalization, patent harmonization took off in the 1990s as a theory and a policy goal.² Patent harmonization is the general idea that national patent law regimes can or should be “harmonized,” or made more similar. Harmonization’s rise alongside globalization is not a coincidence. As the world’s largest companies globalized and began operating across borders, barriers to trade dropped and commerce moved toward a global and borderless activity. Patent law remained Balkanized, however, and

¹ Google Books shows the dramatic increase in the usage of this term in the 1990s. GOOGLE NGRAM VIEWER, http://books.google.com/ngrams/graph?content=globalization%2C+Globalization&year_start=1800&year_end=2008 (last visited Apr. 22, 2013).

² Google Books shows a similar dramatic increase for the term “patent harmonization,” although the actual frequency of usage is, of course, much smaller than for “globalization.” GOOGLE NGRAM VIEWER, http://books.google.com/ngrams/graph?content=patent+harmonization&year_start=1800&year_end=2008 (last visited Apr. 22, 2013).

multinational corporations thinking globally were forced to think locally when it came to patent protection.³

This Balkanization is the inevitable result of different patent law regimes evolving under different legal systems for centuries. As globalization has increased, the challenges this Balkanization presents for both large and small companies have likewise proliferated. In order to benefit from patent protection that mirrors the global marketplace, a modern company must apply for, obtain, and enforce separate patents in each country or region in which the company operates. Each patent will likely have a different scope, grant different methods for enforcement, and must overcome different barriers to patentability before issuance.

These challenges can result in enormous costs for a company operating in the global marketplace. While in the 1990s the world's largest companies shouldered these costs, it is increasingly true that small companies operate globally, using the Internet to connect with customers and to scale quickly.⁴ Small companies (or even individuals) who may be able to afford patent protection in the United States may have to forego protection in other markets due to the fragmentation of patent law. This lack of protection may slow or prevent companies from expanding into new markets as fast as they otherwise might.

³ See Vito J. DeBari, *International Harmonization of Patent Law: A Proposed Solution to the United States' First-to-File Debate*, 16 *FORDHAM INT'L L.J.* 687 (1993).

⁴ "By 2018, half of U.S. small businesses will be involved in international trade, according to a report by the California think tank Institute for the Future and the software company Intuit." Matthew Bandyk, *Small Businesses Go Global*, *USNEWS.COM* (Feb. 22, 2008), <http://money.usnews.com/money/business-economy/small-business/articles/2008/02/22/small-businesses-go-global>.

Patent harmonization efforts began with the Paris Convention in 1883, when the first eleven signatory countries agreed to reciprocal priority dates for patent applications.⁵ Since then, harmonization has plodded along, with little impetus for progress until the late 1970s. At that time, the United States Patent and Trademark Office (“USPTO”), European Patent Office (“EPO”), and Japanese Patent Office (“JPO”) began looking for opportunities to coordinate among each other in the wake of the then-recently passed Patent Cooperation Treaty (“PCT”).⁶

Difficulties in implementing the European Patent Convention’s 1973 treaty (particularly over the treaty’s requirement of “absolute novelty” rather than a “grace period”) led to the formation of the World Intellectual Property Organization (“WIPO”) committee that would negotiate the Patent Harmonization Treaty.⁷ The committee quickly determined that there were a number of other substantive and procedural differences that harmonization could address.⁸

WIPO terminated the original “grace period” committee and formed another with a scope that included a large collection of substantive and procedural harmonization issues.⁹ By November of 1990, this committee had published a Draft Proposal of the Patent Harmonization Treaty (“Draft Treaty”).¹⁰ The Draft Treaty consisted of thirty-

⁵ The Paris Convention has 174 signatories as of 2013. *See* Contracting Parties > Paris Convention, WIPO, http://www.wipo.int/treaties/en/ShowResults.jsp?lang=en&treaty_id=2 (last visited Apr. 22, 2013).

⁶ R. Carl Moy, *The History of the Patent Harmonization Treaty: Economic Self-Interest As an Influence*, 26 J. Marshall L. Rev. 457, 463-64 (1993).

⁷ *Id.* at 464-65.

⁸ *Id.* at 465.

⁹ *Id.* at 466.

¹⁰ World Intellectual Property Organization, *Draft Treaty Supplementing the Paris Convention for the Protection of Industrial Property As Far As Patents Are Concerned*

nine articles. Twenty-four of them addressed substantive patent law, with a wide and ambitious scope.¹¹ The 1990 Draft Treaty would prove to be too ambitious at the time, however.

In 1991, WIPO convened a diplomatic conference to discuss the Draft Treaty.¹² The Draft Treaty process moved too quickly for the member countries, and the efforts ran into immediate trouble. The United States was unwilling to abandon its “first-to-invent” system, and the looming 1992 Presidential election complicated matters further. By the end of 1993, finalization of the Draft Treaty had been postponed indefinitely.¹³

In 1995, WIPO determined that the sweeping scope of the Draft Treaty was prohibitive, and limited the scope of its main harmonization initiative to procedural, rather than substantive, issues.¹⁴ While less ambitious, this strategy proved more fruitful, and the Patent Law Treaty (“PLT”) resulted from the narrower negotiations.¹⁵ Eventually, a similar committee negotiated the substantive provisions previously covered by the Draft Treaty.¹⁶ Those substantive negotiations have since stalled, at least in part because of pushback from developing nations who are somewhat reluctant to abandon

(*Patent Law Treaty*), WIPO Doc. No. PLT/DC/3 (Dec. 21, 1990), available at http://www.wipo.int/edocs/mdocs/scp/en/scp_4/scp_4_3.pdf.

¹¹ Moy, *supra* note 6, at 466-67.

¹² *Id.* at 468.

¹³ *Id.* at 470.

¹⁴ See Patent Law Treaty (PLT), WIPO, <http://www.wipo.int/patent-law/en/plt.htm> (last visited Apr. 22, 2013).

¹⁵ *Id.*

¹⁶ Draft Substantive Patent Law Treaty, WIPO, <http://www.wipo.int/patent-law/en/harmonization.htm> (last visited Apr. 22, 2013).

their ability to use national patent law as a means of promoting national interests.¹⁷ The procedure-focused PLT, meanwhile, was signed in 2000 and is now partly in effect in the United States¹⁸; President Barack Obama signed the PLT Implementation Act into law in December of 2012.¹⁹

Twenty years from 1993

On March 16, 2013, the United States became the last country to transition to a first-to-file system, abandoning the first-to-invent system in place since the 1790s.²⁰ This change came with the passage of the America Invents Act (“AIA”),²¹ which represents possibly the most substantial change in United States patent law since the Patent Act of 1952.²² Twenty years before the AIA went into effect, the United States’ unwillingness to agree to a first-to-file system helped sink the WIPO Draft Treaty.

While in 1993 the most glaring difference between United States patent law and the laws proposed by the Draft Treaty was the first-to-file issue, there were a number of other issues as well. That year, the John Marshall Law Review published an article by Richard C. Wilder that analyzed the differences between U.S. patent law in 1993 and the

¹⁷ See William New, *Rich and poor countries divided on patent treaty*, 84 Bulletin of the World Health Organization 344 (2006), available at <http://www.who.int/bulletin/volumes/84/5/news.pdf>.

¹⁸ Patent Law Treaty (PLT), WIPO, <http://www.wipo.int/patent-law/en/plt.htm> (last visited Apr. 22, 2013).

¹⁹ Patent Law Treaties Implementation Act of 2012, Pub. L. No. 112-211 (2012).

²⁰ Michael F. Martin, *The End of the First-to-Invent Rule: A Concise History of Its Origin*, 49 IDEA 435, 446 (2009).

²¹ Leahy-Smith America Invents Act of 2011, Pub. L. No. 112-29 (2011).

²² Patent Act of 1952, Pub. L. No. 82-593 (1952).

provisions of the Draft Treaty.²³ In particular, Wilder identified and discussed the specific doctrines of American statutory and common law that would have to change or be abandoned in order to bring the country in line with the Draft Treaty.

Wilder analyzed a number of specific changes that the United States would have had to make in 1993 in order to comply with the Draft Treaty in its original form.²⁴ He also identified some potential changes that might have been necessary depending on whether certain provisions, still under negotiation, would have been adopted.²⁵

The patent law regime in the United States that Wilder analyzed was very different from the provisions in the Draft Treaty. It was also different from the regime on the books in 2013. Patent law in the United States has changed a number of times in the twenty years since Wilder's article, in some ways bringing U.S. law more in line with the Draft Treaty. As a result, and especially after the implementation of the AIA, Wilder's earlier analysis is worth revisiting in order to determine where United States patent law is currently in relation to the Draft Treaty that was on the table in 1993.

After the AIA, it is also worth analyzing the issues that remain distinct across borders. In 2013, the issue of absolute novelty versus a grace period, the original impetus for convening the WIPO harmonization committee in the 1980s, is the largest substantive difference among patent law regimes internationally. As the international community and countries working unilaterally have narrowed the issues to be harmonized, the strategy for the remaining issues (especially grace periods) can shift to a more focused approach.

²³ Richard C. Wilder, *An Overview of Changes to the Patent Law of the United States After the Patent Law Treaty*, 26 J. Marshall L. Rev. 497 (1993).

²⁴ *Id.* at 540.

²⁵ *Id.* at 541.

II. HARMONIZATION OF PROCEDURAL LAW

The Wilder article from 1993 separates the provisions of the Draft Treaty into “procedural” and “substantive” provisions. This grouping is convenient due to WIPO’s subsequent separation of procedural issues in the PLT and the substantive issues under the purview of the Standing Committee on the Law of Patents. Accordingly, this paper will address the issues in approximately the same order as the Wilder article.

A. *Filing date requirements*

The Draft Treaty set out a number of requirements for obtaining a filing date, as well as some characteristics that that date should have. In 1993, United States law required that an applicant, in order to receive a filing date, must file an application with at least a specification, one claim, and any necessary drawings.²⁶ To receive a filing date, an application must also include an oath from the applicant.²⁷

In contrast, the Draft Treaty required a “description of the invention” similar to the specification (and any necessary drawings).²⁸ Rather than an oath, the Draft Treaty required “an express or implicit indication that the granting of a patent is sought.”²⁹ The Wilder article noted that U.S. patent law in 1993 would have to change by removing the requirements of at least one claim and the applicant’s oath in order to receive a filing date, and instead requiring only a specification as well as an “indication” that a patent is sought.³⁰

²⁶ 35 U.S.C. §§ 111-12 (1988).

²⁷ 35 U.S.C. § 111 (1988).

²⁸ Draft Treaty, *supra* note 10, art. 8(1).

²⁹ *Id.*

³⁰ Wilder, *supra* note 23, at 502-03.

The United States and other countries eventually agreed to these procedural requirements in the PLT.³¹ While the U.S. has signed the PLT, only some of its provisions were enacted with the PLT Implementation Act of 2012.³² The PLT Implementation Act removes the requirement of at least one claim, rewriting 35 U.S.C. § 111 to state that “[t]he filing date of an application shall be the date on which a specification, *with or without claims*, is received” by the patent office.³³ This provision takes effect on December 19, 2013, and any applications filed on or after that date no longer require at least one claim before receiving a filing date.³⁴

While U.S. law still requires an inventor’s oath,³⁵ the oath is not required in order to receive a filing date. This was true in 1993 as well.³⁶ The inventor’s oath is therefore an extra requirement that is not at odds with the PLT, and could presumably be retained. The United States, in order to comply with the PLT (which mirrors the Draft Treaty’s language from 1993), will have to add the additional requirement of an “express or implicit indication” that a patent is sought. This should not be a contentious issue.

B. Reference to previously filed applications

The Draft Treaty contained a provision with two alternatives (one mandatory and one permissive) that required or allowed countries to accept applications that contained a

³¹ Patent Law Treaty art. 5(1), June 1, 2000, *available at* http://www.wipo.int/treaties/en/ip/plt/trtdocs_wo038.html.

³² PLT Implementation Act, *supra* note 19.

³³ PLT Implementation Act, *supra* note 19, at § 201(a)(1).

³⁴ *See* Dennis Crouch, *A Mark-Up and Commentary on the Patent Law Treaties Implementation Act of 2012*, PATENTLY-O, 2012, at 6, *available at* <http://www.patentlyo.com/PLT.pdf>.

³⁵ 35 U.S.C. §§ 111, 115 (2013).

³⁶ 35 U.S.C. § 111(a)(3) (2012); 35 U.S.C. § 111 (1988).

reference to an earlier filed application rather than including a duplicate description and drawings.³⁷ This provision was included in the PLT as well, in the mandatory form.³⁸ In 1993, United States patent law did not provide for this sort of filing by reference.³⁹

The PLT Implementation Act included a revision to 35 U.S.C. § 111 that allows the Director to provide for the procedures by which this sort of filing by reference can be accomplished at the USPTO.⁴⁰ This provision of the Draft Treaty, therefore, has also already been addressed by the United States.

C. Claiming priority

The Draft Treaty included a provision that required countries to set a time limit on when an applicant may claim priority to an earlier-filed application.⁴¹ Under the provision, an applicant would be barred from adding a priority claim to an application any later than sixteen months after the filing date of the earlier-filed application.⁴² In 1993, U.S. law allowed an applicant to add a priority claim to an application at any time during the pendency of the application.⁴³

The PLT addressed this procedural issue as well, tying the time limit for adding a priority claim to the time limit for an international application under the Patent

³⁷ Draft Treaty, *supra* note 10, art. 8(4).

³⁸ PLT, *supra* note 31, art. 5(7).

³⁹ *See* Wilder, *supra* note 23, at 503.

⁴⁰ PLT Implementation Act, *supra* note 19, at § 201(a)(3).

⁴¹ Draft Treaty, *supra* note 10, art. 7(1).

⁴² *Id.*

⁴³ 35 U.S.C. § 119 (1988).

Cooperation Treaty.⁴⁴ The PCT requires essentially the same time limit as the Draft Treaty for international applications.⁴⁵ The United States has not yet enacted a provision bringing its law in line with this requirement, however, and priority claims can still be added to domestic applications at any time during their pendency.⁴⁶ As the USPTO already applies this requirement with respect to international applications, enacting this provision of the PLT should not require much effort.

D. Unity of invention

The “unity of invention” requirement in the Draft Treaty⁴⁷ was modeled after the same requirement in the Patent Cooperation Treaty.⁴⁸ In 1993, the United States required instead that domestic applicants claim only a single “independent and distinct” invention, a slightly different standard.⁴⁹ This same standard applies in 2013 for domestic applications.⁵⁰

The unity of invention requirement was not included in the PLT. The PLT explicitly allows member countries to declare that the treaty does not affect their systems

⁴⁴ PLT, *supra* note 31, art. 13(1)(ii); Patent Law Treaty, Regulations Under the Patent Law Treaty, Rule 14(3), June 1, 2000, *available at* http://www.wipo.int/treaties/en/ip/plt/trtdocs_wo039.html.

⁴⁵ The time limit for international applications under the PCT is either four months from the filing of the international application, or sixteen months from the filing of the earlier priority application, whichever is first. This is technically in compliance with the Draft Treaty’s time limit, as international applications could not add a priority claim later than sixteen months from the earlier-filed application in any case. Patent Cooperation Treaty, Regulations Under the Patent Cooperation Treaty, R. 26bis.1(a), June 19, 1970, 28 U.S.T. 7645, *available at* <http://www.wipo.int/pct/en/texts/pdf/pct.pdf>.

⁴⁶ 35 U.S.C. § 119 (2012).

⁴⁷ Draft Treaty, *supra* note 10, art. 5.

⁴⁸ Wilder, *supra* note 23, at 505-06.

⁴⁹ 35 U.S.C. § 121 (1988).

⁵⁰ 35 U.S.C. § 121 (2012).

for unity of invention.⁵¹ Then-Senator Joe Biden, in discussing this provision of the PLT in a report to a Senate committee, also pointed out that this provision allows the United States to retain its system while allowing for debate over the benefits of switching to a “unity of invention” standard.⁵²

Like the procedure for adding a priority claim (discussed above), the “unity of invention” standard is already applied by the USPTO when examining international applications under the PCT. While the patent office may wish explore the drawbacks of adopting that standard for all domestic utility applications, it is already equipped to do so. The U.S. should seriously consider adopting this standard.

E. Publication of pending applications

In 1993, the United States did not publish pending patent applications.⁵³ The Draft Treaty, however, contained a provision requiring member countries to print pending patent applications eighteen months after the filing date.⁵⁴ This was a major issue in 1993, as publication of pending applications has implications for notice and willful infringement, and increases costs at the USPTO.

The American Inventors Protection Act (“AIPA”) was enacted in 1999, adding section 122 to Title 35.⁵⁵ This section provides for the publication of pending patent applications eighteen months after filing, and brings United States law largely in line with

⁵¹ PLT, supra note 31, art. 23(1).

⁵² S. EXEC. REP. NO. 110-6, at 4 (2007).

⁵³ See 35 U.S.C. § 11 (1988) (authorizing printing of patents, but not pending patent applications).

⁵⁴ Draft Treaty, supra note 10, art. 15(1).

⁵⁵ American Inventors Protection Act of 1999, Pub. L. No. 106-113 (1999); 35 U.S.C. § 122 (2012).

the Draft Treaty's publication provision. In this respect and others, the AIPA represented a significant step toward harmonization.

F. Identification of inventor

The Draft Treaty also contained a provision that allowed inventors to redact their names from any published applications.⁵⁶ While this provision is procedural, it was not included in the PLT. As Richard Wilder explained, there was some question in 1993 as to whether there was enough support for this provision of the Draft Treaty even at that time.⁵⁷

While U.S. law now provides for publication, it does not give inventors the option of redacting any information that would identify them. Inventors can opt out of publication under certain conditions, but cannot redact identification information.⁵⁸ To the extent that this option represents a move toward harmonization, the United States might need to change its laws in order to allow this redaction. As Wilder points out, however, the European Patent Office in particular had issues with this provision of the Draft Treaty, and it may not provide significant harmonization benefits.⁵⁹

G. Time limits for search and examination

The Draft Treaty included a provision requiring the examination of an application to begin no later than three years from filing, and to conclude no later than two years after

⁵⁶ Draft Treaty, *supra* note 10, art. 6(2).

⁵⁷ Wilder, *supra* note 23, at 508.

⁵⁸ 35 U.S.C. § 122(b)(2)(A) (2012).

⁵⁹ Wilder, *supra* note 23, at 508 n. 70.

the start of the examination.⁶⁰ The Draft Treaty provided for time limits for prior art searches as well, to the extent that member countries bifurcated the search and examination process.⁶¹

These requirements were not included in the PLT. U.S. law in 1993 (and 2013) did not contain a time limit for examination (and does not bifurcate search and examination). PCT procedures, however, require time limits for search and examination reports similar to those included in the Draft Treaty.⁶² If firm time limits for search and examination still represent international norms, the United States would have to establish them in order to harmonize with respect to this concept. The USPTO, however, currently starts and finishes examination well within the Draft Treaty's time limits, on average.⁶³

III. HARMONIZATION OF SUBSTANTIVE LAW

A. *First-to-file*

The Draft Treaty unambiguously requires a “first-to-file” system, where the first inventor to file (or the inventor with the earliest priority date) has the right to patent the invention.⁶⁴ This was one of the most significant differences between the Draft Treaty

⁶⁰ Draft Treaty, *supra* note 10, art. 16(2).

⁶¹ *Id.* art. 16(1).

⁶² See World Intellectual Property Organization, *Patent Cooperation Treaty (PCT), PCT International Search and Preliminary Examination Guidelines*, WIPO Doc. No. PCT/GL/ISPE/2 ¶¶ 2.13, 3.23 (Oct. 3, 2011), available at <http://www.wipo.int/export/sites/www/pct/en/texts/pdf/ispe.pdf>.

⁶³ See Dennis Crouch, *Timing of the first office action on the merits*, PATENTLY-O (Nov. 7, 2012), <http://www.patentlyo.com/patent/2012/11/timing-of-the-first-office-action-on-the-merits.html> (showing that almost all U.S. patent applications receive an office action on the merits in less than three years, and stating that the average patent issues in three and one half years).

⁶⁴ Draft Treaty, *supra* note 10, art. 9(2)(ii). It should be noted that the Draft Treaty (and U.S. law after the AIA) more accurately requires a “first inventor to file” system, rather

and U.S. law in 1993. Since the 1790s, the United States had operated under a “first-to-invent” regime that granted patents to inventors who invented earlier, but filed later, rather than those who filed first.⁶⁵

The America Invents Act of 2011 replaced the United States’ first-to-invent system with a first-to-file system – a long-overdue change.⁶⁶ By 2011, the United States had become the only country in the world still using a first-to-invent system.⁶⁷ This change thus represented a significant step toward harmonizing U.S. law with the rest of the world. The first-to-file provisions were phased in at the USPTO on March 16, 2013. Any patent applications filed on or after that date will be treated under what is essentially the same first-to-file regime contained in the Draft Treaty.

B. Interference practice

As Richard Wilder notes, the shift from a first-to-invent system to a first-to-file system requires additional changes in U.S. patent law.⁶⁸ These changes have the benefit of also increasing the harmonization of U.S. law. One example is the now-obsolete “interference” practice that was used to determine which applicant was in fact the first to invent where two or more people file applications claiming the same invention.

than a pure “first-to-file” system – a distinction that some commentators have identified. See Dennis Crouch, *First-to-File versus First-Inventor-to-File*, PATENTLY-O (Dec. 11, 2009), <http://www.patentlyo.com/patent/2009/12/first-to-file-versus-first-inventor-to-file.html>.

⁶⁵ See generally Ryan K. Dickey, Note, *The First-to-Invent Patent Priority System: An Embarrassment to the International Community*, 24 B.U. INT’L L.J. 283, 289-92 (2006) (discussing the history of the first-to-invent system).

⁶⁶ AIA, supra note 21, at § 3(b); 35 U.S.C. § 102 (2012).

⁶⁷ See Dickey, supra note 65, at 285.

⁶⁸ Wilder, supra note 23, at 514.

The AIA removed any references to interference practice from U.S. patent law when it created the first-to-file system.⁶⁹ As Wilder suggested, the AIA “grandfathers out” interference practice, since applications filed prior to March 16, 2013 are still subject to the first-to-invent system, and can therefore be challenged through interference practice.⁷⁰ Accordingly, interference practice will continue to theoretically exist in the United States, but will be completely phased out no later than March 16, 2033. Like first-to-file, this change is a welcome step toward harmonization.

C. Claim requirements

The Draft Treaty required that patent claims “define the matter for which protection is sought.”⁷¹ United States law in 1993 (and in 2013) required that claims “particularly point out and distinctly claim the subject matter” which the applicant “regards as his invention.”⁷²

As Richard Wilder discusses, the provision in United States law involves a subjective determination of what the applicant (or, in the 2013 version of the law, the “inventor or joint inventor”) “regards as his invention.”⁷³ This subjective element affects the scope and patentability of the claims. If the applicant fails to claim what he regards

⁶⁹ See AIA, supra note 21, at § 3(d) (repealing 35 U.S.C. § 104, which described interference practice).

⁷⁰ Wilder, supra note 23, at 515.

⁷¹ Draft Treaty, supra note 10, art. 4(2).

⁷² 35 U.S.C. § 112, ¶ 2 (1988); 35 U.S.C. § 112(b) (2012).

⁷³ Wilder, supra note 23, at 512.

as his invention (as shown by another document describing what the inventor regards as his invention, for example), the claims may be rejected under this provision.⁷⁴

In order to further harmonize its substantive patent law, the United States would need to address this point by removing the subjective element from claim drafting. A statutory change to this effect would abrogate the significant case law that has grown around this point. It would also remove the possibility of invalidating claims due to an extrinsic document or statement from the inventor. Removing this subjective element would therefore also remove some costly uncertainty from the patent system as a whole.

D. Non-obviousness versus inventive step

Article 11 of the Draft Treaty set out the basic conditions for an invention to be considered patentable, including novelty, “inventive step,” and either utility or industrial applicability.⁷⁵ United States law in 1993 required novelty, utility, and non-obviousness.⁷⁶ The difference between an “inventive step” requirement and non-obviousness, then, is the most significant difference here.

U.S. law in 2013 remains largely unchanged in this regard, still requiring novelty, utility, and non-obviousness.⁷⁷ Further, the USPTO and U.S. courts draw from a large body of case law when analyzing these requirements. Determining obviousness in particular requires careful (and often complicated) analysis of the prior art, the level of

⁷⁴ See *In re Conley*, 490 F.2d 972, 976 (C.C.P.A. 1974) (stating that “[t]his portion of the statutory language has been relied upon in cases where some material submitted by applicant, other than his specification, shows that a claim does not correspond in scope with what he regards as his invention”).

⁷⁵ Draft Treaty, *supra* note 10, art. 11(1).

⁷⁶ 35 U.S.C. §§ 101-03 (1988).

⁷⁷ 35 U.S.C. §§ 101-03 (2012).

ordinary skill in the art,⁷⁸ whether there is a “teaching, suggestion, or motivation,”⁷⁹ and so-called “secondary indicia of non-obviousness.”⁸⁰ This body of case law is necessarily still evolving.

It would be unwise to dismiss this unwieldy but ultimately functional body of case law in favor of an “inventive step” requirement without careful analysis. Fundamentally, however, an inventive step requirement arises out of the same concerns (and requires roughly the same analysis) as a non-obviousness requirement. The Draft Treaty in fact uses the terms almost interchangeably in Article 11, requiring that the invention “would not have been *obvious* to a person skilled in the art” to satisfy the requirement.⁸¹ While adoption of an “inventive step” requirement might be a nominal step toward harmonization, retaining the non-obviousness requirement and its significant body of case law seems preferable given the difficulty of divining the effects of such a change.

E. Timing of non-obviousness

The Draft Treaty specifies that the non-obviousness or inventive step analysis must pertain to what was known in the art at the time of *filing*.⁸² U.S. law in 1993 instead required the USPTO to determine what was obvious at the time of the *invention*.⁸³ As

⁷⁸ 35 U.S.C. § 103 (2012).

⁷⁹ See *KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398 (2007) (holding that the “TSM test” is an important, but not the exclusive, test for obviousness).

⁸⁰ *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17-18 (1966).

⁸¹ Draft Treaty, *supra* note 10, art. 11(3) (emphasis added).

⁸² *Id.*

⁸³ 35 U.S.C. § 103 (1988).

Richard Wilder noted, this would have to change in order to comply with the Draft Treaty and international norms generally.⁸⁴

The AIA changed this provision of the law, requiring the USPTO to determine obviousness from the date of filing rather than the date of invention.⁸⁵ This change took effect on March 16, 2013 and applies to all patent applications that are filed on or after that date.⁸⁶ This change not only makes sense in a first-to-file system, it also brings U.S. law more in line with the rest of the world.

F. Prior art definition

Article 11 of the Draft Treaty also addresses the definition of “prior art,” including “everything which, before the filing date or... the priority date of the application claiming the invention, has been made available to the public anywhere in the world.”⁸⁷ As of 1993, there was also a proposed subsection to the Draft Treaty allowing member countries to exclude from this definition any “matter made available to the public, by oral communication, by display or through use, in a place or space which is not under its sovereignty.”⁸⁸

U.S. law in 1993 was somewhat more restricted in its definition of prior art than the Draft Treaty’s expansive provision. As Richard Wilder notes,⁸⁹ information that has been made available to the public only to a limited extent, but is not catalogued or

⁸⁴ Wilder, *supra* note 23, at 522.

⁸⁵ AIA, *supra* note 21, at § 3(c); 35 U.S.C. § 103 (2012).

⁸⁶ *Id.* at § 3(e)(3).

⁸⁷ Draft Treaty, *supra* note 10, art. 11(2)(b).

⁸⁸ *Id.* art. 11(2)(c).

⁸⁹ Wilder, *supra* note 23, at 517-18.

indexed, might not be considered prior art under United States law.⁹⁰ This is still the case in 2013. There are varying standards internationally in this area. The Draft Treaty recognized this by including the proposed subsection that allows countries to exclude certain publications from the prior art. This is still a source of uncertainty for applicants and inventors, however, and harmonization of the definition of “made available to the public” would likely benefit the public.

A similar issue is the effect of a “secret sale” as prior art against an inventor. U.S. courts have held that a secret sale, even from a party unrelated to the applicant, can qualify as prior art and affect the patentability of the invention.⁹¹ This doesn’t necessarily violate the provisions of the Draft Treaty,⁹² but it is a source of uncertainty that would benefit from further harmonization.

This section of the Draft Treaty treats prior art the same no matter where it originates, “anywhere in the world.”⁹³ United States law in 1993, however, distinguished between certain activities that counted as prior art if in the U.S., and other activities that counted as prior art regardless of where they occurred.⁹⁴ By 2013, pursuant to the AIA, these geographical distinctions have been removed from U.S. law.⁹⁵ This change, while

⁹⁰ See *In re Cronyn*, 890 F.2d 1158, 1161 (Fed. Cir. 1989) (surveying the case law and determining that the key factors as to whether a publication has been made available to the public are whether it has been catalogued or indexed).

⁹¹ See *Wilder*, supra note 23, at 518 (citing *In re Caveney*, 761 F.2d 671 (Fed. Cir. 1985); *General Elec. Co. v. United States*, 654 F.2d 55 (Ct. Cl. 1981)).

⁹² See *Wilder*, supra note 23, at 519-20.

⁹³ Draft Treaty, supra note 10, art. 11(2)(b).

⁹⁴ See 35 U.S.C. § 102(a) (1988) (stating that the inventor is not entitled to a patent if his invention was “known or used by others *in this country*, or patented or described in a printed publication *in this or a foreign country*.”) (emphasis added).

⁹⁵ 35 U.S.C. § 102 (2012); AIA, supra note 21, at § 3(b)(1).

somewhat minor, does bring U.S. law more in line with the Draft Treaty and international norms.

Experimental use is another topic of concern identified by Richard Wilder.⁹⁶ In U.S. case law (in 1993 and in 2013), the public use of an invention might not bar the inventor from obtaining a patent if the use is deemed “experimental.”⁹⁷ This determination is highly dependent on the individual circumstances, and it therefore gives rise to some uncertainty. It is not reflected in the Draft Treaty but, as Wilder notes, it was a topic of discussion at the time.⁹⁸ This public use exception should receive further consideration in the future and might be considered in play during harmonization efforts.

G. Applications as prior art

Article 13 of the Draft Treaty provides that an application that is previously filed is considered prior art against other applications from its filing date, so long as the previously filed application is eventually published.⁹⁹ In 1993, the United States did not publish pending applications, and so did not abide by this provision either.

Further, a domestic application counted as prior art against other applications as of the domestic application’s U.S. filing date. Under the “Hilmer Doctrine,” however, a foreign application could not count as prior art as of its foreign filing date.¹⁰⁰ This complicated scheme was at odds with international norms even after the U.S. began publishing pending applications after the AIPA in 1999.

⁹⁶ Wilder, *supra* note 23, at 520-21.

⁹⁷ *City of Elizabeth v. American Nicholson Pavement Co.*, 97 U.S. 126, 134-35 (1877).

⁹⁸ Wilder, *supra* note 23, at 520-21.

⁹⁹ Draft Treaty, *supra* note 10, art. 13(1).

¹⁰⁰ *In re Hilmer*, 424 F.2d 1108 (C.C.P.A. 1970); *In re Hilmer*, 359 F.2d 859 (C.C.P.A. 1966).

The AIA abolished the Hilmer Doctrine, effective as of March 16, 2013.¹⁰¹ Subsequently, all U.S. patent applications are given prior art effect as of their foreign filing dates, rather than their domestic filing dates. The AIA and the AIPA, therefore, have brought U.S. law fully in line with the Draft Treaty in this respect.

H. Inter partes reexamination

In 1993, United States law provided for *ex parte* reexamination, which allowed members of the public to challenge a U.S. patent after issuance.¹⁰² Article 18 of the Draft Treaty required member countries to provide for a very similar procedure.¹⁰³ The Draft Treaty, however, also required countries to allow members of the public to participate throughout the proceedings, which *ex parte* reexamination did not allow.¹⁰⁴

The American Inventors Protection Act of 1999 established the *inter partes* reexamination procedure, which was available for patents arising from applications filed after 1999.¹⁰⁵ This procedure allowed for members of the public to have the type of continued participation in the reexamination process that was contemplated by the provisions of the Draft Treaty.

This procedure represents another step in the direction of harmonization in line with the Draft Treaty. *Inter partes* reexamination was phased out in September of 2012, however, due to the AIA.¹⁰⁶ Two procedures (post-grant review and *inter partes* review)

¹⁰¹ AIA, supra note 21, § 3(b)(1); 35 U.S.C. § 102(a)(2) (2012).

¹⁰² 35 U.S.C. § 304 (1988).

¹⁰³ Draft Treaty, supra note 10, art. 18(1)(a)-(c).

¹⁰⁴ *Id.* art. 18(1)(d).

¹⁰⁵ 35 U.S.C. § 311 (2000).

¹⁰⁶ AIA, supra note 21, at § 6; 35 U.S.C. § 311 (2012).

replaced *inter partes* reexamination, and U.S. patent law still achieves the same requirements of the Draft Treaty.

I. Starting point for patent term

The Draft Treaty required member countries to calculate a patent's term starting from the filing date.¹⁰⁷ In contrast, under 1993 U.S. law, the patent term for U.S. patents was seventeen years calculated from the issuance of the patent.¹⁰⁸ In 1995, however, the United States transitioned to a patent term of twenty years from the filing date as a result of the Uruguay Round Agreements Act.¹⁰⁹ This brought U.S. law in line with the Draft Treaty as well as the common international practice.

J. Provisional right to obtain damages

The Draft Treaty allowed for “provisional rights”: monetary damages for applicants (even prior to the patent's issuance) when any person makes, uses, or sells the subject of the patent application once the application has been published.¹¹⁰ The Draft Treaty requires that the infringing party have actual notice before the applicant can enforce his provisional rights.

In 1993, U.S. law did not provide for the publication of pending applications. Accordingly, there were also no provisional rights based on published applications. When the American Inventors Protection Act was enacted in 1999, providing for the

¹⁰⁷ Draft Treaty, *supra* note 10, art. 22(2)(a).

¹⁰⁸ 35 U.S.C. § 154 (1988).

¹⁰⁹ Uruguay Round Agreements Act of 1994, Pub. L. No. 103-465 § 532(a)(1) (Dec. 8, 1994); 35 U.S.C. § 154 (2012).

¹¹⁰ Draft Treaty, *supra* note 10, art. 23(2).

publication of pending applications after eighteen months, provisional rights were added as well.¹¹¹ Provisional rights under U.S. law also require actual notice of the pending application and possible infringement. U.S. law, however, contains a time limit where a patentee can no longer seek damages for activity while the patent was pending once six years have passed since the patent's issuance.¹¹² Regardless, the establishment of provisional rights was another step toward U.S. patent harmonization.

K. Prior user rights

Article 20 of the Draft Treaty provides for prior user rights.¹¹³ Under these provisions, any user who in good faith used or was preparing to use the invention before the filing date will be able to continue using the invention even after issuance of the patent. Under the Draft Treaty prior users would not be able to transfer their rights to other individuals or companies except under very limited circumstances.¹¹⁴

United States law in 1993 did not provide for prior user rights.¹¹⁵ The AIA established a very limited set of prior user rights, which apply to any patent issued on or after September 16, 2011.¹¹⁶ These rights are not as broad as those set out in the Draft Treaty, however, as the AIA only allows a prior use defense if the user was using the invention at least one year before filing (or one year before the inventor's disclosure within the grace period). The AIA also required the USPTO to issue a report on prior user

¹¹¹ AIPA, supra note 55, § 4504; 35 U.S.C. § 154(d) (2012).

¹¹² 35 U.S.C. § 154(d)(3) (2012).

¹¹³ Draft Treaty, supra note 10, art. 20(1).

¹¹⁴ *Id.* at art. 20(2).

¹¹⁵ *See Wilder*, supra note 23, at 533-34.

¹¹⁶ AIA, supra note 21, at § 5(a); 35 U.S.C. § 273 (2012).

rights internationally,¹¹⁷ and that report was generally positive toward the idea of expanding these rights in the future.¹¹⁸

L. *Grace period provisions*¹¹⁹

The Draft Treaty provides for a grace period of twelve months, rather than requiring absolute novelty.¹²⁰ This grace period is somewhat broad by international standards, allowing inventors (or assignees) to disclose their inventions in any manner without destroying novelty for up to twelve months.

The grace period in the United States was more complicated in 1993 than the Draft Treaty, and remains so today. While the twelve-month period is the same, U.S. law allows for third party disclosures without destroying novelty, while the Draft Treaty does not.¹²¹ As Wilder notes, the U.S. grace period is at the same time more restrictive than the Draft Treaty for foreign applicants, as the grace period is calculated from the date of the U.S. filing, rather than the priority date.¹²² An applicant claiming priority to a foreign application filed ten months previous, and having publicly disclosed his invention three months prior to that foreign filing date, would thus fall outside the U.S. grace period, but not that of the Draft Treaty. To more closely conform to the Draft Treaty, then, the United States would have to disallow third party disclosures during the grace period

¹¹⁷ AIA, supra note 21, at § 3(m)(1).

¹¹⁸ U.S. PATENT & TRADEMARK OFFICE, REPORT ON THE PRIOR USER RIGHTS DEFENSE (2012), available at http://www.uspto.gov/aia_implementation/20120113-pur_report.pdf.

¹¹⁹ Grace periods and absolute novelty are discussed in more detail later in this paper, at infra § IV.

¹²⁰ Draft Treaty, supra note 10, art. 12(1).

¹²¹ See *J.A. LaPorte, Inc. v. Norfolk Dredging Co.*, 787 F.2d 1577, 1581 (Fed. Cir. 1986) (stating that the on sale bar is not limited to sales by the inventor, but may result from activities of a third party).

¹²² Wilder, supra note 23, at 523-24.

while also changing the grace period to calculate from the priority date, rather than the national filing date.

IV. FURTHER HARMONIZATION

A. *Progress since 1993*

In the twenty years since 1993, U.S. patent law has changed significantly. In many ways, these changes have brought U.S. law more in line with WIPO's Draft Treaty and the rest of the world. When Richard Wilder wrote his article examining the Draft Treaty, the differences between its provisions and U.S. law were substantial. These differences likely played a key role in WIPO's decision to eventually scale back the ambitious Draft Treaty and the subsequent stalling of efforts to harmonize substantive patent law.

Scholars and lawmakers in the U.S., however, did not abandon efforts to change U.S. law in the direction of harmonization. Through a number of bills, most significantly the AIPA in 1999 and the AIA in 2011, Congress has shifted U.S. patent law toward a regime more recognizable in the international community. Much of this harmonization has happened unilaterally. While there are still significant differences, the harmonization that has occurred lowers costs for companies who wish to file patent applications in multiple countries.

Richard Wilder's article was not written under the assumption that the Draft Treaty would be successfully negotiated or that U.S. law would change overnight. The article instead helpfully catalogues the state of U.S. law at the height of the negotiations,

and gives some perspective on the reasons why the negotiations ultimately failed (or, more optimistically, were scaled back and postponed).

Wilder could not have known in 1993 that many of the differences he examined would be harmonized two decades later. Specifically, of the differences Wilder identified that might have had to change with the adoption of the Draft Treaty,¹²³ the following have changed since then:

1. Shifted to a first-to-file regime (AIA).
2. Eliminated interference practice (AIA).
3. Content of a previously filed and subsequently published application now counts as prior art (AIPA).
4. Repealed 35 U.S.C. § 104 (AIA).
5. Obviousness now determined as of filing date, rather than invention date (AIA).
6. Pending applications now published after eighteen months (AIPA).
7. Applications no longer require at least one claim in order to receive a filing date, as of December 2013 (PLT Implementation Act).
8. Eliminated the Hilmer Doctrine (AIA).
9. *Inter partes* review and post grant review established (AIPA and AIA).
10. Patent term now calculated as twenty years from filing, rather than seventeen years from issuance (Uruguay Round Agreements Act).
11. Applicants now have provisional rights to obtain damages for infringement after publication of a pending application (AIPA).

¹²³ Wilder, *supra* note 23, at 539-41.

12. Applicants can now file applications “by reference” to another previously filed application (PLT Implementation Act).
13. Prior users have some rights to use inventions that are later claimed in a patent application (AIA).
14. Definition of prior art has been simplified to no longer include geographic distinctions (AIA).

These changes include some of the most contentious provisions of the Draft Treaty. There are still a number of differences that Wilder identified, however, that have not been harmonized since 1993. Some of these possible changes include:

1. Restrict the twelve-month grace period to not cover third party disclosures except under very limited circumstances, and calculate the grace period from the earliest priority date, rather than the national filing date.
2. Change 35 U.S.C. § 111 to no longer require an oath from the inventor, and instead require an indication that patent protection is sought.
3. Establish time limits for examination.
4. Remove the subjective element that requires that claims shall define subject matter that the applicant “regards as his invention.”
5. Adopt a “unity of invention” approach to replace the requirement of non-obviousness.
6. Establish a time limit for adding a claim of priority, in line with the PLT.
7. Allow inventors to redact information from published applications that identifies the inventors as such.

8. Expand the definition of prior art to include disclosures anywhere in the world, including experimental uses and publications that are not catalogued or indexed.

B. Grace period is largest remaining hurdle

Of these eight differences remaining between U.S. law and the Draft Treaty, the grace period provisions are the most important for the sake of international harmonization in 2013. The debate over grace periods was the original trigger for the harmonization efforts that led to the Draft Treaty in the 1980s and 1990s. While other topics for harmonization, such as first-to-file versus first-to-invent, have progressed significantly in the last twenty years, the debate over grace periods has only become more contentious in that time.

In 2013, many countries require absolute novelty rather than allowing for a grace period. Most notably, members of the European Patent Office generally do not allow for a grace period except where a third party discloses information in clear violation of the applicants' rights. On the opposite end of the spectrum, the United States offers a fairly robust grace period of twelve months. Many countries have staked out compromise positions in between the European and U.S. approaches, including shorter grace periods or grace periods that cover only some of the activities that the U.S. covers.

While the United States, to its credit, has undergone considerable unilateral harmonization in the last twenty years by changing its laws to more closely resemble that of other countries, its approach to grace periods is mostly sensible and should be retained. In the debates leading up to both the AIPA and the AIA, a great deal of focus was given to the effect of both reforms on both large and small companies. Notably, small

companies generally opposed both bills while large companies generally supported them. This is because some of the reforms, such as the shift to a first-to-file system, have been considered somewhat more favorable to large companies with the resources to quickly file patent applications soon after invention.

A strong grace period, however, helps balance these reforms by benefiting smaller entities and individual inventors. Small entities and individual inventors may not be able to afford increasingly expensive patent application fees and the costs of hiring a patent attorney to prosecute an application through a national patent office. In some cases, these small entities may need to raise funds from commercial investors before filing patent applications.

In countries where absolute novelty is required, any disclosure of the invention in order to raise funds could destroy the patentability of the invention. A grace period instead allows for these disclosures, as well as others, in a way that is fair to inventors and to the public. There are compromise approaches that seek to capture the same benefits. For example, some countries, such as China, provide a very limited grace period for disclosures made at a government-sponsored technology fair or exposition. This approach, however, allows for too much political gamesmanship in selecting which technologies are worthy of the extra protection a grace period provides.

The United States approach is generally preferable to most of the other options available. This does not mean that the specifics of U.S. law with respect to grace periods should not be modified in any way. In the name of harmonization, U.S. lawmakers and negotiators should consider modifying the definition of prior art, the types of disclosures that are protected by a grace period, and even whether the grace period should be

calculated from the national filing date (as is the case in 2013) or the earliest priority date (as is the case in many countries).

C. Strategies for harmonization of grace periods

One drawback to the United States' unilateral harmonization over the last two decades is that there are now fewer issues on the table that the U.S. can use as bargaining chips in order to convince other countries to further harmonize. For example, if the U.S. wished to convince Germany to adopt a robust twelve-month grace period, after the AIA the U.S. would not be able to offer to switch to a first-to-file system in return. Narrowing the issues has benefits for applicants and society in the short and long term, but it might make further harmonization more difficult in the medium term.

There are still a significant number of issues left on the table with which the U.S. can bargain, however. The most notable of these are the definition of prior art, prior user rights, and the administration of a grace period. In any case, traditional harmonization efforts have stalled, and WIPO's committee approach may no longer be the most effective method.

A more effective approach might be to take advantage of the fact that the issues have narrowed over the last twenty years. The United States might consider focusing on the most important remaining issue, the grace period, and seek international harmonization of the details of that issue's administration. The U.S. should consider gathering together those countries that have very similar grace periods and harmonizing the details between those countries first. This list of countries includes Australia, Canada, South Korea, Mexico, Saudi Arabia, and others.

Once that group of countries has been able to harmonize the details of administering a grace period, the U.S. should focus on encouraging countries like Brazil and Japan, who have grace periods that are slightly different in scope or time period, to come aboard and adopt the approach of the first set of countries. Only then should the U.S. and similar grace period countries pressure absolute novelty countries to adopt a grace period. When harmonization for European countries on this issue only entails adopting a well-established system that is already in use around the world, it may be easier for European countries to make this change. This issue-based approach may be preferable in 2013 to the more traditional regional approach that focuses on harmonizing the U.S. and Western Europe.

V. CONCLUSION

Patent law in the U.S. has undergone dramatic changes in the period between 1993 and 2013. Globalization has driven both large and small companies to pressure lawmakers to bring U.S. law more in line with international norms. While international efforts have stalled in recent years, there are still tangible benefits to further harmonizing patent law across borders.

Most significantly, U.S. companies and patent applicants would benefit from increased harmonization in the areas of prior user rights, the definition of prior art, and most importantly in encouraging a robust grace period. Unilateral harmonization on the part of U.S. lawmakers has limited the bargaining options available to U.S. negotiators. An approach focused on the most important remaining issues may be preferable, as it takes advantage of the gains that have already been made in harmonization efforts.