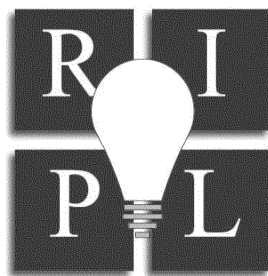


THE JOHN MARSHALL REVIEW OF INTELLECTUAL PROPERTY LAW



COMPARISON OF CHINESE AND U.S. PATENT REFORM LEGISLATION: WHICH, IF EITHER,
GOT IT RIGHT?

WAYNE C. JAESCHKE, ZHUN LU & PAUL CRAWFORD

ABSTRACT

Chinese patent law has a short history whereas the United States (“U.S.”) system has a more robust history. This article chronicles important remaining differences between Chinese and U.S. patent laws including the utility model successfully employed at State Intellectual Property Office of the People’s Republic of China (“SIPO”) and in the Chinese courts, but not available under U.S. law. Some differences are discussed in regard of patent appeals, reexaminations for invalidity, China’s lack of a reissue process to correct major errors, China’s inventors remuneration process and compulsory licensing of patents, and China’s unique requirement of post termination compensation to support a covenant not to compete. This article further discusses recent changes in U.S. Patent law, as a result of the American Invents Act, that have no counterpart in China. This includes a discussion on changes in the rules governing when prior art applies against applications, new misjoinder rules and elimination of *qui tam* patent suits rules. This article discusses the new procedure in the United States Patent and Trademark Office (“USPTO”) called post grant review and a companion process for review of validity of granted patents called *inter partes* review. These new proceedings have the potential for invalidation of patents in a manner far less expensive than in court. However, the devil will be in the details of the regulations and fees yet to be promulgated by the USPTO or reviewed by the public. Whether China or the United States got it right is too early to tell and is anyone’s guess.

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Cite as Wayne C. Jaeschke, Zhun Lu & Paul Crawford, *Comparison of Chinese and U.S. Patent Reform Legislation: Which, If Either, Got it Right?*,
11 J. MARSHALL REV. INTELL. PROP. L. 567 (2012).

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COMPARISON OF CHINESE AND U.S. PATENT REFORM LEGISLATION:
WHICH, IF EITHER, GOT IT RIGHT?

WAYNE C. JAESCHKE, ZHUN LU & PAUL CRAWFORD*

INTRODUCTION

While business bumps along in the United States (“U.S.”), the sleeping giant of the twentieth century is now wide awake and threatens to outpace the U.S. in innovation and patenting in the twenty-first century. The People’s Republic of China (“China”) has announced goals that would allow it to overtake the U.S. in numbers of patents by 2015 or earlier.¹ China has invested heavily in new technology centers to foster patentable innovations.² Renewable energy, including wind and solar, energy storage batteries, semiconductors, wireless devices and biotechnology are at the head of China’s list.³

In this article, the authors hope to illuminate some of the major historical differences between the patent systems of the U.S. and China and explain how the systems are evolving under recent patent reform legislation in each country. Part I presents the relevant background of the Chinese and U.S. intellectual property (“IP”) laws. Part II discusses key differences, in theory and practice, between the two systems. Finally, Part III looks to the future and what the recent patent law reform will actually mean for those seeking patents in the U.S. and China.

* © Wayne C. Jaeschke, Zhun Lu & Paul Crawford 2012. The authors extend special thanks to Geoff Zelly for his assistance with the Qui Tam section of this article and to Julia Figurelli-Masucci for her project supervision and assistance with editing.

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¹ Rachel Griffith & Helen Miller, *Innovation in China: The Rise of Chinese Inventors in the Production of Knowledge* 3 (Institute for Fiscal Studies, Working Paper No. W11/15, 2011).

² See Ester H. Lim, *Adding IP Fuel to China’s Fire of Innovation*, FINNEGAN (Apr. 16, 2010), <http://www.finnegan.com/resources/articles/articlesdetail.aspx?news=f74e857c-76fb-410a-978a-c19107546cbe>.

³ Steve Lohr, *When Innovation, Too, Is Made in China*, N.Y. TIMES, Jan. 2, 2011, at BU3.

I. A HISTORICAL PERSPECTIVE ON CHINESE AND AMERICAN IP LAWS

A. *China's Aggressive Patent Law Reform in 2008*

China, in 2008, enacted its third and most aggressive amendment to its patent laws.⁴ Implementing regulations, which contain many of the “how to” instructions for patent-practitioners, came into force February 1, 2010.⁵ These regulations are equivalent to the U.S. rules of practice in chapter 37 of the U.S. Code of Federal Regulations (“C.F.R”).⁶ China’s Guidelines for Patent Examination also became effective in February of 2010.⁷ These Guidelines are equivalent to the U.S. Manual of Patent Examination Procedure (“MPEP”). Unlike the U.S. case-by-case approach, China’s system of judicial interpretation is a synthesis of rules derived from judge-made law, legislation and concepts of the Supreme Court judges.

In contrast to the United States, which has patent legislation drawing its origin in the American Revolution and the Constitution in the late 1700s,⁸ China’s first patent law was enacted in 1985, quickly followed by first and second amendments in 1992 and 2000.⁹

B. *The U.S. Patent Law has Developed by Legislation and Litigation*

The U.S. patent landscape has tracked the development of technology from the light bulb and steam engine to genetic engineering, semiconductors, rockets for outer space, nanotechnology for ultra-small inner space, biotechnology, financial and other business methods, and the world of the internet. Providing legal support to encompass such a wide expanse of technology has been a challenge. However, U.S. Congress and especially U.S. courts have managed to fashion rules and remedies to accommodate and support beneficial commercialization of such innovation.

⁴ Patent Law of the People’s Republic of China (promulgated by the Standing Comm’n Nat’l People’s Cong., Dec. 27, 2008, effective Oct. 1, 2009) [hereinafter Chinese Patent Law]. For English translation of the amended Chinese patent law, see EU-CHINA PROJECT ON THE PROTECTION OF INTELLECTUAL PROPERTY RIGHTS, THIRD REV. OF CHINA’S PATENT LAW: LEGAL TEXTS AND DOCUMENTS ON THE DRAFTING PROCESS 2006–2008 (IPR2 2009) [hereinafter THIRD REV. OF CHINA’S PATENT LAW], available at http://www.ipr2.org/images/eu_patent_law-final.pdf.

⁵ Implementing Regulations of the Patent Law of the People’s Republic of China (promulgated by the St. Council, June 15, 2001, amended Jan. 9, 2010) (China), http://www.sipo.gov.cn/sipo_English2008/laws/lawsregulations/200804/t20080416_380326.html [hereinafter Implementing Regulations].

⁶ See Ruay L. Ho, *Priority Claim Differences Between China and the US*, IP FORTUNE L.L.C., (Nov. 3, 2007), <http://www.intelproplaw.com/Articles/files/Priority%20Claim%20Differences%20between%20China%20and%20the%20US.pdf>.

⁷ Guidelines for Patent Examination (promulgated by the St. Intell. Prop. Off., Jan. 21, 2010, effective Feb. 1, 2010) (China) [hereinafter SIPO Guidelines].

⁸ See *Bilski v. Kappos*, 130 S.Ct. 3218, 3242 (2010).

⁹ THIRD REV. OF CHINA’S PATENT LAW, *supra* note 4, at 1.

The Founders wrote the basis of the U.S. patent system into the Constitution.¹⁰ They intended to promote the sciences and the useful arts by granting limited monopolies to authors and inventors for public disclosure of their respective writings and discoveries.¹¹ Thomas Jefferson, as quoted by the Supreme Court in *Diamond v. Chakrabarty*,¹² wrote that “[i]ngenuity should receive a liberal encouragement,”¹³ Abraham Lincoln said that the patent system was one of the most important developments in world history next to the printing press and the discovery of America.¹⁴

The U.S. patent statutes were revised three times in the nineteenth century.¹⁵ The law was recodified and updated in 1952 when Congress added the last sentence of section 103 of the U.S. Patent Act (“section 103”) which states that “[p]atentability shall not be negated by the manner in which the invention was made.”¹⁶ This clarified that a flash of genius is not necessary to have a patentable invention as some earlier case law had suggested;¹⁷ at the same time the revised language recognized that many new inventions were being made in corporate laboratories by the interaction of several scientists and no longer in kitchens or garages where a single bright inspiration gave rise to a new product.

As an example of the flexibility of the Courts in regard to changing technologies, in *Diamond*, the Supreme Court held that microorganisms produced by genetic engineering are not excluded from patent eligible subject matter.¹⁸ This ruling was made over the strong resistance of the United States Patent and Trademark Office (“USPTO”), which contended that such an innovation did not come within any of the statutory classes of the 1952 Act.¹⁹ The Court cited Congressional committee reports that Congress intended to “include anything under the sun that is made by man” as patentable subject matter.²⁰ Subject matter which is not eligible for patenting in the United States includes laws of nature and newly discovered elements unchanged by man. As a result, bacteria containing genes altered by human endeavor may be patentable even though the subject matter is a living organism. The Harvard mouse is an example of patentable living subject matter since the mouse is a result of man-made genetic manipulation.²¹

¹⁰ U.S. CONST. art. I, § 8, cl. 8.

¹¹ *Id.*

¹² *Diamond v. Chakrabarty*, 447 U.S. 303 (1980).

¹³ *Id.* at 308.

¹⁴ Jeffrey M. Samuels & Linda B. Samuels, *Lincoln and the Patent System: Inventor, Lawyer, Orator, President*, 3 ALB. GOV'T L. REV. 645, 668–89 (2010).

¹⁵ Douglas C. Limbach & David C. Cohen, *PTO's Proposed Rule Changes Halted (for Now)*, MED. DEVICE & DIAGNOSTIC INDUS. (Apr. 1, 2008), <http://www.mddionline.com/article/ptos-proposed-rule-changes-halted-now>.

¹⁶ 35 U.S.C. § 103(a) (2006).

¹⁷ See, e.g., Stanley S. Green, *The 'Flash of Genius' Standard of Patentable Invention*, 13 FORDHAM L. REV. 84, 86–87 (1944).

¹⁸ *Diamond*, 447 U.S. at, 316–17.

¹⁹ *Id.* at 319–21.

²⁰ *Id.* at 309.

²¹ U.S. Patent No. 4,736,866 (filed June 22, 1984).

The Court further advanced the Jeffersonian principle of liberal encouragement of ingenuity in its decision in *State Street Bank v. Signature Financial Group*.²² This ruling confirmed patent protection for a wide array of newly spawned financial and internet businesses.²³ The most recent pronouncements of the Supreme Court in *Bilski v. Kappos*²⁴ regarding business and computer related patents addressed the limitations of claiming such inventions.²⁵

C. The United States Abandoned its Longstanding “First-to-Invent” System in 2011

The USPTO has been the central point for combat between conflicting patent claimants for several centuries. These interferences have included famous battles over the rights to the telephone between Elisha Gray and Alexander Graham Bell, where Bell was eventually awarded U.S. Patent No. 174,465.²⁶ Other notable interferences include *McCreary v. Zworykin*,²⁷ for basic rights in early television technology, and *Consolidated Elec. Light Co. v. McKeesport Light Co.*²⁸ over patents pertaining to incandescent light bulbs.²⁹ In more recent times, protracted fighting over the so called Ziegler catalysts occupied the USPTO and the Federal Courts on appeal to adjudicate the legal right to produce large volumes of high quality polypropylene.³⁰ The recent U.S. patent reform relegates such interferences and the accompanying case law to the annals of history.

On September 16, 2011, President Barack Obama signed into law the latest U.S. patent law reform, known as the Leahy-Smith, or America Invents Act (“AIA”).³¹ The primary change to existing U.S. law enacted in AIA is the conversion from “first-to-invent” to “first-to-file” inventorship criteria.³² A number of the other changes to the law flow from that major change, and these amendments are discussed below.

Although Congress enacted meaningful changes in the patent law reform of 1995³³ and 1999,³⁴ as discussed below, Congress had struggled for years whether to

²² *State Street Bank & Trust Co. v. Signature Fin. Grp.*, 149 F.3d 1368, 1372 (Fed. Cir. 1998).

²³ *Id.* at 1373.

²⁴ *Bilski v. Kappos*, 130 S.Ct. 3218 (2010).

²⁵ *Id.* at 3228–29.

²⁶ Mark A. Lemley, *The Myth of the Sole Inventor*, 110 MICH. L. REV. 709, 721 n.65 (2012).

²⁷ *McCreary v. Zworykin*, 19 C.C.P.A. 990, 993 (C.C.P.A. 1932).

The motion to dissolve by McCreary is practically a repetition of a motion to dissolve as to Zworykin in interference No. 55448, *Farnsworth v. Reynolds v. Case v. Sabbah v. McCreary v. Zworykin*. For reasons stated in the decision of the law examiner in that interference the motion by McCreary is denied.

Id.

²⁸ *Consol. Elec. Light Co. v. McKeesport Light Co.*, 159 U.S. 465 (1895).

²⁹ See J. Benjamin Bai, *Enablement Issues Concerning Aggressively Broad Generic Claims*, 7 NW. J. TECH. & INTELL. PROP. 1, 2–3 (2008).

³⁰ See, e.g., *U.S. Steel Corp. v. Phillips Petroleum Co.*, 865 F.2d 1247, 1249–50 (Fed. Cir. 1989).

³¹ Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) [hereinafter AIA].

³² *Id.* § 3.

³³ Uruguay Round Agreements Act, Pub. L. 103-465, 108 Stat. 4809, 4973 (1994).

change “first-to-invent” to “first-to-file” due to a variety of competing interests. In 2011 the clarion cry in Congress became “job creation” and resistance to reform, including first-to-file, melted under that banner.³⁵

Historically, the current patent reform had been championed under a different banner, i.e., harmonization. The Intellectual Property Owners Association, an organization that speaks for most of the major Fortune 500 patent chiefs, had long argued for reform that would bring the U.S. patent system into harmony with the patent systems of the rest of the world.³⁶ Prior to the enactment of AIA, all the other countries of the world employed a system based on the first-to-file, while the U.S. was the only country with a first-to-invent system.³⁷ A first-to-invent system requires adjudication of conflicting patent rights in “interference” proceedings within the USPTO.³⁸ Interferences, rightly or wrongly, are labeled as costly, complex, arcane and a few other labels not fit for publication.³⁹

Critics of this “jobs” rationale for AIA point out that the number of interferences is small and the overall impact of the change in the law will be muted with respect to job creation; and that what will be lost is the fairness of awarding an invention to the rightful first inventor.⁴⁰ Yet the proponents of AIA and the first-to-file system have prevailed after more than half a century of debate, lobbying and counter-lobbying. As was pointed out at the 2011 winter meeting of the Association of Corporate Patent Counsel, the die-hard advocates of first-to-invent have retired, passed away or dropped their opposition to first-to-file.⁴¹ The chief patent counsel of large corporations, responsible for larger quantities of filing, favors first-to-file as it results in faster and more certain determination of patent rights.⁴²

Another point of Congressional spin on enactment of AIA is that the new law represents the first major change in U.S. IP law in sixty years, and that the previous law was stuck in the past. Such spin ignores the Inventors Protection Act of 1999⁴³

³⁴ Intellectual Property and Communications Omnibus Reform Act of 1999, Pub. L. No. 106-113, 113 Stat. 1051 [hereinafter Patent Reform Act of 1999].

³⁵ See Lynn Tyler, *Patent Reform: Much Ado About Nothing or Will 2011 be the Year?*, INSIDE INDIANA BUS., <http://www.insideindianabusiness.com/contributors.asp?id=1904#middle> (last visited Apr. 16, 2012).

³⁶ *U.S. Patent Reform Primer*, INTELL. PROP. OWNERS ASSOC. (Oct. 20, 2009), http://www.ipo.org/AM/Template.cfm?Section=IPO_Daily_News_&Template=/CM/HTMLDisplay.cfm&ContentID=24305#6.

³⁷ See, e.g., Lisa C. Elsevier, *Schendel v. Curtis: DNA Standards Misapplied to Fusion Protein Patents*, 3 J. INTELL. PROP. L. 353, 354 (1997).

³⁸ *Airport Surface Tech., L.L.C. v. FieldTurf, Inc.*, 268 F. Supp. 2d 999, 1002 (N.D. Ill. 2003).

³⁹ See *Eli Lilly & Co. v. Bd. of Regents of Univ. of Wash.*, 334 F.3d 1264, 1274 (Fed. Cir. 2003) (Lourie, J., dissenting).

⁴⁰ See *United States Now a 'First to File' Jurisdiction*, MANDOUR & ASSOC. (Sept. 27, 2011), <http://www.losangelespatentattorney.pro/2011/09/united-states-now-a-first-to-file-jurisdiction.html>.

⁴¹ See generally Ass'n of Corp. Patent Counsel, *Professional Program in San Diego* (Jan. 16–18, 2012) (exhibiting a variety of opinions agreeing that the voice of first-to-invent advocates has died down).

⁴² See Cyndia Zwahlen, *Patent Measure Causing Concern Among Independent Inventors*, L.A. TIMES (July 11, 2011), <http://articles.latimes.com/2011/jul/11/business/la-fi-smallbiz-patents-20110711>.

⁴³ Patent Reform Act of 1999, *supra* note 34.

and other changes in the Patent Reform Act of 1995.⁴⁴ In these prior patent reform acts, changes included ending the longstanding practice of keeping U.S. patent applications secret and allowing publication of most applications eighteen months after first filing.⁴⁵ In addition, the 1995 reforms relaxed interference laws to level the playing field so that proof of first invention made abroad is on the same footing as evidence generated in the United States.⁴⁶ At the same time, the duration of a U.S. patent was changed from seventeen years from the time the patent was granted to the time between patent issue and twenty years from the filing date.⁴⁷ The 1999 Act set up *inter partes* reexamination, thereby permitting more effective challenges to potentially invalid patents that block rights in the way of commercialization and job creation.⁴⁸

While the change to first-to-file was strongly opposed by the small inventor organizations and was omitted from the 1999 amendments,⁴⁹ arguably the Inventors Protection Act of 1999 was as significant as the harmonization in AIA. The major points of the 1995 and 1999 changes discussed above remain in force in AIA.

D. Echoes of Chinese Patent Philosophy in AIA

The U.S., unlike centrally-directed China, does not promulgate a unitary set of strategic goals for patenting or development of technologies. Rather, goals are set by many different government agencies and private entities that are free to plan for the future as they see fit.

However, at least one AIA provision might be interpreted as a Chinese style directive. In section 25, the USPTO is required to establish regulations for prioritizing applications for products and processes that are important for national competitiveness without recovering the excess cost of such examinations.⁵⁰ That is to say the USPTO is being directed to identify and speed up granting of patents on “hot” technologies that should make the U.S. more competitive in world markets. While numerical goals are not being set, as in China, technological targets or goals are being established by the U.S. government in the process. The USPTO is directed to complete this review by September 2012, although it is not clear what happens if this timetable is not met.⁵¹ Progress on this task will likely be watched closely by China and other countries hoping to gain intelligence on U.S. government priorities for sponsoring innovation.

⁴⁴ Patent Reexamination Reform Act of 1995, H.R. 1732 104th Cong. (1995) (codified as amended at 35 U.S.C. § 122).

⁴⁵ 35 U.S.C. § 122 (2006).

⁴⁶ Uruguay Round Agreements Act, *supra* note 33, § 531.

⁴⁷ 35 U.S.C. § 154(c)(1).

⁴⁸ James W. Beard, *A Better Carrot Incentivizing Patent Reexamination*, 1 HASTINGS SCI. & TECH. L.J. 169, 175 (2009).

⁴⁹ See Edward Wyatt, *Senate Passes Bill to Change Patent System and Pricing*, N.Y. TIMES, Mar. 8, 2011, at B9.

⁵⁰ AIA, § 25 (to be codified at 35 U.S.C. § 2(b)(2)).

⁵¹ U.S. PAT. & TRADEMARK OFF., MONTHLY REPORT ON AIA IMPLEMENTATION (Nov. 16, 2011), available at http://www.uspto.gov/aia_implementation/2011-nov-aia_report.pdf.

II. THE SINO-AMERICAN PATENT LAW DIVIDE

In preparing the analysis in this section, the authors have relied on an official translation of the Chinese Laws and Regulations and in part on Peksung IP partner, Stephen Yang's excellent analysis in February 2010 titled, "China Patent Prosecution Practice & Latest Development."⁵²

A. Chinese Utility Model Patents can Lead to Swift Justice.

China has one type of patent protection that has no parallel in the U.S. This is the utility model patent, which provides short term protection (ten years) under a simplified examination process.⁵³ SIPO examines the utility model only for formal requirements but does not search or apply prior art.⁵⁴ This results in the grant of such a patent in less than one year.⁵⁵

Utility models are popular in China, and under the latest amendments in 2009 they may be filed concurrently with "invention" patents under certain circumstances.⁵⁶ Only one patent may be granted, however, and the applicant must elect to withdraw one or the other to prevent double patenting.⁵⁷ The popularity of the utility model stems from the quick patent grant that may be asserted immediately in court following its grant by SIPO. Since it is not examined for prior art in SIPO, generally the Chinese trial court requires the plaintiff to file a patent search and analysis to demonstrate the validity of the claims being asserted in the infringement action.⁵⁸ Chinese Patent Law ("C.P.L.") article 61 states that a patent assessment report may be required.⁵⁹ In addition, the plaintiff in an infringement suit must show how each and every element of the defendant's product is captured within at least one claim of plaintiff's utility model patent.⁶⁰ If the patent holder prevails, he may swiftly abate the infringement—often stopping infringing conduct, obtaining damages, and even receiving a public apology for the misconduct.⁶¹

One drawback of a utility model patent is that its life is limited to ten years from filing instead of twenty years for an "invention" patent.⁶² Depending on the life of the patent, this may not be a significant problem, e.g., in semiconductors and electronics

⁵² See Stephen Yang, Partner, Peksung Intellectual Property Ltd., Presentation at the Association of Patent Law Firms February 2010 Meeting, *China Patent Prosecution Practice & Latest Development: What U.S. Attorneys Should Know and Do* (Feb. 2010).

⁵³ Chinese Patent Law, *supra* note 4, art. 42.

⁵⁴ SIPO Guidelines, *supra* note 7, at R.44.1.

⁵⁵ Uma Suthersanen, *Utility Models and Innovation in Developing Countries* 20 (Int'l Ctr. for Trade and Sustainable Dev., Working Paper No. 13, 2006), available at http://www.unctad.org/en/docs/iteipc20066_en.pdf.

⁵⁶ Chinese Patent Law, *supra* note 4, art. 9.

⁵⁷ *Id.*

⁵⁸ *Id.* art. 61.

⁵⁹ *Id.*

⁶⁰ J. Benjamin Bai et al., *What Multinational Companies Need to Know About Patent Invalidation and Patent Litigation in China*, 5 NW. J. TECH. & INTELL. PROP. 449, 460–61 (2007).

⁶¹ *Id.* at 461–62.

⁶² Chinese Patent Law, *supra* note 4, art. 42.

where the life cycle for certain products is relatively short. Many chemicals and pharmaceuticals, however, take a long time in development and count on extended protection offered by an “invention” patent. Processes are not generally considered proper subject matter for utility model patents.⁶³

Utility models or “small” patents are employed in other countries such as Germany, a country which China emulated when drafting its patent laws.⁶⁴ Seasoned IP professionals such as Karl Jorda, retired professor of IP law at Franklin Pierce Law School have suggested amending U.S. patent law to include utility model patents.⁶⁵ However, this movement did not gain sufficient traction to be included in AIA.

The value of Chinese utility model patent is illustrated by *Schneider Elecs*.⁶⁶ In that case, Schneider was sued for infringement of a utility model patent issued to the Chint Group of China.⁶⁷ Schneider was ordered by the Intermediate Court in Wenzhou to pay money damages amounting to over \$44 million.⁶⁸ This is the largest damage award in Chinese history and was hotly contested by Schneider.⁶⁹ On appeal, the parties settled the case. In the past, only very modest damages were awarded by Chinese courts.⁷⁰ Whether or not this award would have been ultimately confirmed, it demonstrates recognition by the Chinese courts that meaningful damage awards are necessary to establish respect for the rights of patent owners, including those based on utility model patents.

B. Patent Application Filing and Prosecution in China and the United States

1. Many Similarities Between the Practices

The overall number of similarities—in the filing processes, prosecuting by responding to patent office actions, granting, and maintaining of applications and granted patents—are impressive. However, there are important differences in details and, in some cases, in subtle culturally-based philosophical differences that can lead to a different result given the same set of facts. However, global businesses that file applications in the U.S. often file counterpart applications in China, and recently Chinese enterprises are filing more of their Chinese invented applications

⁶³ Suthersanen, *supra* note 55, at 1–2.

⁶⁴ *Id.* at 16.

⁶⁵ Karl F. Jorda, *Utility Models: The Panacea for Our Broken Patent System*, GERMESHAUSEN CENTER NEWSL. (Franklin Pierce Law Center) Winter/Spring 2007, at 12.

⁶⁶ *Chint v. Schneider*, Wenzhou Intermediate People’s Court, Wenzhou, Zhejiang Province, P. R. China (Sept. 26, 2007).

⁶⁷ *Industry Report, China: Intellectual Property Infringement, Indigenous Innovation Policies, and Frameworks for Measuring the Effects on the U.S. Economy*, Inv. No. 332-514, USITC Pub. 4199 at 54 (Nov. 2008) [hereinafter USITC Pub. 4199].

⁶⁸ *Id.*; IP AND ANTITRUST: AN ANALYSIS OF ANTITRUST PRINCIPLES APPLIED TO INTELLECTUAL PROPERTY LAW § 47.2 n.75 (Wolters Kluwer 2011).

⁶⁹ USITC Pub. 4199, *supra* note 67, at 54–55.

⁷⁰ *Id.*

abroad.⁷¹ Chinese attorneys in many larger Chinese firms are fluent in English.⁷² While few U.S. patent attorneys know the Chinese language,⁷³ attorneys of Chinese origin in many firms who are fluent in Mandarin are on hand to handle the nuances. While the Chinese and U.S. governments at the top levels at times exhibit hostile behavior toward each other, the working relationships among the respective IP and legal communities on both sides seems to be pleasant and productive.

2. Differences in Patent Eligible Subject Matter

Turning now to some areas where differences exist, article 25 of the C.P.L. specifies subject matter that cannot be patented in China.⁷⁴ Included are several categories that would appear to be patentable under section 101 of the U.S. Patent Act (“section 101”) and U.S. case law. These prohibited categories include: methods for diagnosis or treatment of diseases; animal and plant varieties; and substances obtained by nuclear transformation.⁷⁵

Under U.S. law, unlike in China, processes for diagnosis or treatment of diseases are routinely patented as methods or processes authorized by section 101.⁷⁶ Chinese practitioners advise that diagnosis or treatment of diseases may be patented by using Swiss-type claims.⁷⁷ Animal varieties are patentable such as the Harvard mouse provided they are the product of genetic manipulation and hybrid plant varieties and patentable by virtue of section 161 of the U.S. Patent Act, where the patenting of hybrid plants is specifically authorized.⁷⁸ Finally, any new and useful product is patent eligible under section 101 whether by nuclear transformation or otherwise.⁷⁹

⁷¹ See WIPO ECON. & STATISTICS DIV., WORLD INTELLECTUAL PROPERTY INDICATORS 6 (Dec. 2011), available at <http://www.wipo.int/ipstats/en/statistics/patents/> (noting the growth in Chinese PCT filings).

⁷² See Anne M. Wall, *Intellectual Property Protection in China: Enforcing Trademark Rights*, 17 MARQ. SPORTS L. REV. 341, 365 (2006).

⁷³ See Jonathan Adams, *English for Everyone*, DAILY BEAST (Aug. 15, 2007), <http://www.thedailybeast.com/newsweek/2007/08/15/english-for-everyone.html> (comparing the number of non-native speakers studying Mandarin with those studying English); *Chinese Patent Attorneys and Agents*, ABACUS CHINESE TRANSLATION, <http://www.certifiedchinesetranslation.com/Chinese-patent-attorneys.html> (last visited Apr. 16, 2012).

⁷⁴ Chinese Patent Law, *supra* note 4, art. 25.

⁷⁵ *Id.*

⁷⁶ See *Ass'n for Molecular Pathology v. U.S.P.T.O.*, 653 F.3d 1329, 1357–58 (Fed. Cir. 2011); U.S. Patent No. 7,741,025 (filed Sept. 10, 2007); U.S. Patent No. 6,545,014 (filed June 15, 2001).

⁷⁷ See Liantao Li & Tina H. Tai, *Features of Swiss-Type Claims*, MANAGING INTELL. PROP. (Apr. 1, 2009), <http://www.managingip.com/Article/2175956/Search/Features-of-Swiss-type-claims.html?Home=true&Keywords=FEATURES+OF+SWISS-TYPE+CLAIMS&Brand=Site&tabSelected=True>.

⁷⁸ 35 U.S.C. § 161 (2006).

⁷⁹ See *id.* § 101.

3. *Chinese Applications are Not Automatically Examined by SIPO*

When a patent application is filed with the USPTO it is placed in line in the back of earlier-filed applications; but then it is taken up for substantive examination against the prior art as soon as its turn arises.⁸⁰ Chinese “invention” applications are not automatically examined according to article 35 of the C.P.L.⁸¹ At any time within the first three years of pendency before SIPO, an applicant may request examination. If no request is made within the three year period, the application is deemed withdrawn unless justification for failure to make a timely request can be demonstrated.⁸²

4. *Applicants in the United States Must Submit Known Prior Art References but the Chinese Practice is Less Clear*

Applicants in China are instructed to submit known prior art references in article 36 of the C.P.L., however, no punishment is provided for failure to do so.⁸³ In respect to prior art cited on applications for foreign counterparts, the applicant in China must submit such prior art if requested by the examiner.⁸⁴ Failure to submit may result in withdrawal of the application unless a good reason is demonstrated for not doing so.⁸⁵ Applicants in China are not under an obligation to search for prior art.⁸⁶ Such a search also is not required for the USPTO, however, U.S. applicants are duty bound to submit known reference materials under their duty of candor.⁸⁷ Failure to supply all known reference materials can result in a defense to enforcement of any granted patents based on the charge of inequitable conduct or fraud on the patent office.⁸⁸ In addition, the patent attorneys involved may be sanctioned or even barred from practice by the USPTO.⁸⁹

5. *Post Application Data is Not Accepted in China*

One very different aspect of practice in SIPO versus the USPTO is the treatment of data collected after the filing of an application. Both article 26 of the C.P.L. and section 112 of the current U.S. Patent Act require a clear and complete description of the invention so as to enable a skilled person to carry it out as well as claims that

⁸⁰ U.S. PAT. & TRADEMARK OFFICE, U.S. DEP'T OF COMMERCE, MANUAL OF PATENT EXAMINING PROCEDURE § 708 (8th ed. 8th rev. 8, July 2010) [hereinafter MPEP].

⁸¹ Chinese Patent Law, *supra* note 4, art. 35.

⁸² *Id.*

⁸³ *Id.* art. 36.

⁸⁴ *Id.*

⁸⁵ *Id.*

⁸⁶ *Id.* art. 26.

⁸⁷ 37 C.F.R. § 1.56(a) (2010).

⁸⁸ *Larson Mfg. Co. of S.D. v. Aluminart Prods. Ltd.*, 559 F.3d 1317, 1326 (Fed. Cir. 2009).

⁸⁹ *See Weiffenbach v. Logan*, 27 U.S.P.Q.2d (BNA) 1870, 1 (Dec. Com'r Pat. 1993).

clearly point out the invention sought to be protected.⁹⁰ However, for example, where a claim is rejected on the basis of obviousness or as not inventive it is often desired to demonstrate by comparative data that even though the two products are quite similar, the performance of the claimed product is different and surprisingly better than the prior art. If the data sought to be employed is not already in the patent application having been generated after filing, SIPO usually does not permit the use of such data to prove “inventiveness”.⁹¹ On the U.S. side, 37 C.F.R. 132 authorizes the submission of factual information, data and statements by experts commenting on patentability of the claimed subject matter.⁹² The USPTO and the Courts have routinely accepted post application performance data for chemical and drug compositions and for other products.⁹³ The lack of acceptance of post-filing generated data is a great concern for pharmaceuticals where the practice is to file early on a promising composition and then generate supplementary and comparative data later on. This is a significant bone of contention with the Chinese patent authorities. Another significant difference arises out of the Chinese requirement for legalization and further back up proof of the authenticity of documents as evidence in court or SIPO proceedings.⁹⁴

6. “Best Mode”

Historically, the U.S. patent statutes have required that the inventor include in the application the best mode of an invention as contemplated at the time of the invention.⁹⁵ Failure to include the best mode is a defense to validity that has been often raised in infringement suits with infrequent success.⁹⁶ No best mode requirement is included in the Chinese law which only requires that the description is clear enough to allow a skilled person to carry out the invention.⁹⁷ AIA expressly eliminates “best mode” as a defense to infringement but does not remove the mention of best mode in the statute.⁹⁸ Thus, it is not clear whether an inventor is required to include the best mode; and the practice that is to be followed is equally unclear. Over the years, best mode has been a concern for inventors trying to decide whether to file

⁹⁰ Chinese Patent Law, *supra* note 4, art. 26; 35 U.S.C. § 112 (2006).

⁹¹ See Antoinette Koski, *IP: Are We There Yet? How to Meet Chinese Patent Law Data Disclosure Requirements*, INSIDE COUNSEL (Jan. 4, 2011), <http://www.insidecounsel.com/2011/01/04/ip-are-we-there-yet-how-to-meet-chinese-patent-law-data-disclosure-requirements>.

⁹² 37 C.F.R. § 1.132 (2010).

⁹³ See, e.g., *Yeda Res. & Dev. Co. v. Imclone Sys. Inc.*, 443 F. Supp. 2d 570, 627 (S.D.N.Y. 2006).

⁹⁴ Bai, *supra* note 60, at 454.

⁹⁵ See 35 U.S.C. § 112.

⁹⁶ See *Bayer AG v. Schein Pharms. Inc.*, 301 F.3d 1306, 1321, 1323 (Fed. Cir. 2002) (explaining that the preference the defendant claimed should be included in the application did not materially affect the carrying out of the invention and, therefore, did not need to be disclosed for compliance with the best mode requirement).

⁹⁷ Chinese Patent Law, *supra* note 4, art. 26.

⁹⁸ 35 U.S.C. §§ 112, 282.

for patent protection where the best mode must be disclosed or keep the invention secret and risk copying.⁹⁹

a. Continuation Applications are Permitted at the USPTO but Not SIPO

Another significant difference relates to methods of keeping applications pending in order to have an opportunity to present new arguments to the patent office regarding patentability. In the U.S., after a final rejection by an examiner, an applicant may continue the dialogue with the examiner by filing a request for continued examination, or a continuation application.¹⁰⁰ This can keep a U.S. application alive for many years.

However, Chinese law does not yet permit filing applications to keep prosecution pending except in the limited circumstances where the examiner has required division of the claimed subject matter into separate applications.¹⁰¹ Hence, upon final rejection of a Chinese application, an applicant's only option is an appeal to the Patent Reexamination Board ("P.R.B."),¹⁰² which is akin to the USPTO Board of Patent Appeals and Interferences ("B.P.A.I.").¹⁰³ Chinese law only permits the filing of divisional applications where the examiner requires an election of inventions in the original application.¹⁰⁴ Thus, one way to leave open the possibility of multiple applications in China is to file claims in the initial application with a disparate scope of subject matter that will likely draw a restriction requirement.

C. The Patent Appeals Process in China and the United States

Similar to the process in the United States, Chinese applicants on final rejection may appeal to the aforementioned P.R.B. for review of patentability of their claims. U.S. applicants may appeal to the B.P.A.I. which will become the Patent Trial and Appeal Board ("P.T.A.B.") under AIA.¹⁰⁵

Applicants dissatisfied with the decision of the P.R.B. in China may bring a lawsuit in the Beijing No. 1 Intermediate People's Court.¹⁰⁶ U.S. applicants may

⁹⁹ See, e.g., *Glaxo Inc. v. Novopharm Ltd.*, 52 F.3d 1043, 1046 (Fed. Cir. 1995) (discussing a debate between the patent attorney and the inventor on whether to disclose the azeotropic granulation process when the inventor wanted to keep it secret, but felt it was the best way to make Form 2 salt).

¹⁰⁰ 37 C.F.R. § 1.114 (2010); 35 U.S.C. § 302.

¹⁰¹ Implementing Regulations, *supra* note 5, at R.42.

¹⁰² Chinese Patent Law, *supra* note 4, art. 41.

¹⁰³ Haitao Sun, Post-Grant Patent Invalidation in China and in the United States, Europe, and Japan: A Comparative Study, 15 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 273, 288-89; see also 35 U.S.C. § 6.

¹⁰⁴ Implementing Regulations, *supra* note 5, at R.42.

¹⁰⁵ AIA, § 3(j) (to be codified at 35 U.S.C §§ 134, 145, 146, 154, 305) (noting that each provision will be amended by striking "Board of Patent Appeals and Interferences" each place it appears and inserting "Patent Trial and Appeal Board").

¹⁰⁶ Chinese Patent Law, *supra* note 4, art. 41.

appeal adverse decisions on patentability to the Court of Appeals for the Federal Circuit or to the Federal District Court in the District of Columbia.¹⁰⁷ Appeals to the Federal Circuit are based on the USPTO record, while appeals to the District Court are brought when additional witnesses or evidence are needed to supplement the record.¹⁰⁸

D. Reexamination for Invalidity

The Chinese P.R.B. also handles petitions for reexamination of granted patents where an adverse party asserts invalidity of a granted patent.¹⁰⁹ The grounds for reexamination in China include, but are not limited to, prior art and sufficiency of disclosure as set forth in the Chinese Implementing Regulations.¹¹⁰ Fraud and inequitable conduct are not permitted as bases for challenging a patent in China.

The USPTO also has reexamination processes where the patentee may try to reinforce validity, or third parties may challenge the validity, of a granted patent. Similar to China the U.S. reexamination can be *ex parte*¹¹¹ or *inter partes*.¹¹² However, the Chinese reexaminations are decided by the P.R.B. while one or more examiners decide U.S. reexaminations. A reexamination decision adverse to either the patentee or third party requester is reviewable by the B.P.A.I.

The U.S. process will change under AIA, however, to permit *inter partes* reexaminations to be conducted directly before the reincarnated P.T.A.B.¹¹³ Chinese reexamination can be brought any time after grant, whereas in the new U.S. system *inter partes* review (“I.P.R.”)¹¹⁴ cannot be filed until conclusion of a new U.S. procedure called post grant review (“P.G.R.”).¹¹⁵

Under the changes enacted by AIA, the newly constituted P.T.A.B. will handle a wide array of appeals including *ex parte* appeals of rejected patent claims, reexamination for invalidity, and opposition appeals.¹¹⁶ That consolidation in the USPTO is similar to, but goes further than, the Chinese patents appeals system.

Changes in AIA will complicate the treatment of invalidity where, in new P.G.R. proceedings or in I.P.R., issues of validity decided by USPTO give rise to the defense of estoppel in a later court action thereby preventing re-litigation of the same issues of invalidity.¹¹⁷

¹⁰⁷ 37 C.F.R. § 1.983 (2010).

¹⁰⁸ 35 U.S.C. § 145.

¹⁰⁹ Chinese Patent Law, *supra* note 4, art. 45–46.

¹¹⁰ *Id.*; Implementing Regulations, *supra* note 5, R.65.

¹¹¹ 35 U.S.C. § 302.

¹¹² *Id.* § 311.

¹¹³ AIA, § 6(a) (to be codified at 35 U.S.C. § 316(c)).

¹¹⁴ *Id.*

¹¹⁵ *See infra* Part III.

¹¹⁶ AIA, § 7(a)(1) (to be codified at 35 U.S.C. § 6(b))

¹¹⁷ Hung H. Bui, *An Overview of Patent Reform Act of 2011: Navigating the Leahy-Smith America Invents Act Including Effective Dates for Patent Reform*, 93 J. PAT. & TRADEMARK OFF. SOC'Y 441, 464 (2011).

E. The Chinese System has No Equivalent to U.S. Reissue Proceedings to Correct Major Patent Defects.

China has no proceedings to correct granted patents comparable to U.S. reissue proceedings.¹¹⁸ Only typographical errors may be corrected at the discretion of SIPO.¹¹⁹ By contrast, in the United States, past and current law permits correction of granted patents by permitting changes to claims in reissue, reexamination, and, soon, P.G.R. proceedings.

F. Beware of the Chinese P.R.B.'s Ex Officio Powers.

Under Chinese practice, once a reexamination proceeding has been initiated, whether by a party adverse to the patentee or by the inventors who may be seeking to enhance the validity of their own patent, the P.R.B. may initiate examination *ex officio*, or on its own.¹²⁰ Such examination or appeal may go beyond the requested scope, ground, and/or evidence produced by the parties and may be continued by the P.R.B. even if the request is withdrawn or the case is settled.¹²¹ Chinese attorneys recommend withdrawing before substantive examination is started if one must withdraw and, where a less aggressive approach seems reasonable, that the patent holder consider settlement prior to oral hearing.¹²²

G. Litigation in China.

One major difference between the patent litigation systems of China and the United States is that U.S. courts permit the adjudication of both invalidity and infringement in a single judicial setting.¹²³ In China, invalidity is decided by SIPO;¹²⁴ infringement is decided in the courts.¹²⁵ Thus, if a person is sued in China for infringement, the court will decide that issue. The accused party can take the issue of invalidity to SIPO.¹²⁶ However, article 62 of the C.P.L. provides that in a dispute over patent infringement, “if the alleged infringer has evidence proving its or his technology or design belongs to the prior art or is a prior design, it will not constitute patent infringement.”¹²⁷ Thus if an accused infringer can show he is copying a prior product, the infringement court may rule in his favor. On the other

¹¹⁸ See, e.g., 35 U.S.C. § 251 (2006).

¹¹⁹ SIPO Guidelines, *supra* note 7, at 590.

¹²⁰ *Id.* at 426.

¹²¹ *Id.*

¹²² See *id.*

¹²³ See, e.g., *Uniloc U.S.A., Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1323 (Fed. Cir. 2011) (addressing both invalidity and infringement).

¹²⁴ Chinese Patent Law, *supra* note 4, art. 45.

¹²⁵ *Id.* art. 61.

¹²⁶ See Sun, *supra* note 103, at 292.

¹²⁷ Chinese Patent Law, *supra* note 4, art. 62.

hand, where, for example, an analysis for prior art is needed to prove lack of inventiveness it is likely that would have to be decided by the experts in SIPO.

Initiation of a lawsuit for infringement is somewhat different in China than in the United States. Article 60 of the C.P.L. states that parties “shall” settle disputes through negotiation.¹²⁸ If negotiations fail, the patentee can bring a lawsuit in the People’s court or request the local patent administrative authority for settlement.¹²⁹ The administrative authority has the power to order the infringer to stop infringement and request mediation for payment of compensation for infringement.¹³⁰ Parties dissatisfied with rulings of the administrative authority may bring a lawsuit in the People’s court.¹³¹ In reality, most patent infringement actions are brought in court and not in the patent administrative authority.¹³²

In regard to the standard of proof required to prevail, in the U.S. courts, the patent holder must prove infringement by a preponderance of the evidence.¹³³ Article 61 of the C.P.L., by contrast, requires the accused infringer to provide proof of the difference between his process used for making a product and the patented process.¹³⁴ U.S. patents enjoy a presumption of validity in the courts which means that an accused infringer must overcome the presumption by clear and convincing evidence.¹³⁵ In reexamination of patents in the U.S., the standard of invalidity is a simple preponderance of the evidence.¹³⁶

The procedures for gathering information to litigate are quite different in China than in the United States. Unlike in the U.S., where discovery is a dominant part of litigation, there is no U.S.-style discovery in China.¹³⁷ However, if there is an evidentiary basis to suspect infringement during an investigation by the administrative authority, the authority may query the parties so as to find relevant information to the suspected violation and may conduct an on-site inspection over the site of the party suspected of having committed the violation.¹³⁸ Further, the authority has the power to copy relevant contracts and invoices, check out suspected products, and confiscate suspected counterfeit products.¹³⁹ Also, once pertinent information is identified, a Chinese court may enter an order requiring the custodian

¹²⁸ *Id.* art. 60.

¹²⁹ *Id.*

¹³⁰ *Id.*

¹³¹ *Id.*

¹³² Compare ST. INTELL. PROP. OFF., PATENT STATISTICS ANNUAL REPORT 199 (2009), available at <http://www.sipo.gov.cn/tjxx/2009.pdf> (noting that in 2009, the patent administrative authority entertained 15,771 patent infringement issues), with Shengping Yang, *Patent Enforcement in China*, 4 LANDSLIDE 48, 48 (2011) (explaining that in 2010, “the local people’s courts received . . . a total of 42,931 civil intellectual property . . . cases.”).

¹³³ *Cross Med. Prods., Inc. v. Medtronic Sofamor Danek, Inc.*, 424 F.3d 1293, 1310 (Fed. Cir. 2005).

¹³⁴ Chinese Patent Law, *supra* note 4, art. 61.

¹³⁵ 35 U.S.C. § 282 (2006); *Microsoft Corp. v. i4i Ltd. P’ship*, 131 S.Ct. 2238, 2242 (2011) (affirming rule that proof of invalidity requires clear and convincing evidence).

¹³⁶ *In re Swanson*, 540 F.3d 1368, 1377 (Fed. Cir. 2008).

¹³⁷ See Louis S. Sorell, *A Comparative Analysis of Selected Aspects of Patent Law in China and the United States*, 11 PAC. RIM L. & POL’Y J. 319, 332 (2002).

¹³⁸ Chinese Patent Law, *supra* note 4, art. 64.

¹³⁹ *Id.*

to preserve that information.¹⁴⁰ Less draconian, more informal measures to gather information, such as use of private investigators, are widely used in Chinese litigation.¹⁴¹ Because of the lack of formal discovery, it is often necessary to employ a private investigator to obtain sufficient information to start an administrative action or lawsuit.¹⁴²

Western observers are often surprised to learn of the rules for acceptance of proof in Chinese proceedings. Notarization is required for acceptance of most documents.¹⁴³ Beyond notarization, it may be required to obtain proof that the notary is duly authorized.¹⁴⁴ These additional procedures are frustrating and often cause delay for foreign litigants in China. There is a healthy distrust of evidence offered on a partisan basis hence the additional requirements for documentary proof. Additionally, the Supreme People's Court has required that testimony be cross-examined to be accepted as a basis for holding infringement.¹⁴⁵ By contrast, in U.S. litigation, statements made in court and under oath are accepted as evidence even if the adverse party decides not to cross-examine the witness.¹⁴⁶

In the U.S., litigation may be commenced by filing and serving a complaint in the appropriate Federal District Court subject to venue considerations. A complaint may be filed alleging infringement based on information and belief even if a diligent effort has not yet uncovered substantial proof of infringement.¹⁴⁷ The U.S. statutes offer ample opportunity for the plaintiff patent holder to require the accused infringer to surrender all relevant information.¹⁴⁸ The plaintiff can require the defendant to turn over copies of a wide range of documents pertinent to the alleged infringement; and then can depose witnesses including managers, financial, sales and technical employees of the defendant.¹⁴⁹ Products may be inspected and

¹⁴⁰ Chinese Patent Law, *supra* note 4, art. 67.

¹⁴¹ See generally Robert Bejesky, *Investing in the Dragon: Managing the Patent Versus Trade Secret Protection Decision for the Multinational Corporation in China*, 11 TULSA J. COMP. & INT'L L. 437, 488 (2004) ("As soon as an IP right infringement is suspected, a private investigator should be hired to trace the source of the infringement to decrease the extent of loss prior to an enforcement action.").

¹⁴² *Id.*

¹⁴³ Civil Procedure Law of the People's Republic of China (promulgated by Standing Comm'n Nat'l People's Cong., effective Apr. 9, 1991) art. 67 ("The people's court shall take the legal acts, legal facts and documents notarized according to legal procedures as basis for ascertaining facts, except when there is contrary evidence sufficient to invalidate the notarial certification.").

¹⁴⁴ See *id.*

¹⁴⁵ CCPIT PAT. & TRADEMARK LAW OFF., SELECTED INTELLECTUAL PROPERTY CASES IN CHINA 18–20 (Ma Hao, ed., 2009) [hereinafter SELECTED IP CASES] (discussing the opinion of the Supreme People's Court of China opinion in *Zhenshong v. Jiansong*).

¹⁴⁶ See, e.g., FED. R. EVID. 601.

¹⁴⁷ Richard A. Kamprath, *Patent Pleading Standards After Iqbal: Applying Infringement Contentions as a Guide*, 13 SMU SCI. & TECH. L. REV. 301, 309–10 (2010) (stating that "the plaintiff should plead facts showing or supporting an inference of misconduct by the defendant.").

¹⁴⁸ See, e.g., FED. R. CIV. P. 34(a).

¹⁴⁹ See *id.* (discussing the rules for producing documents); *id.* 30(c) (discussing the rules for depositions by oral examination).

analytical information retrieved.¹⁵⁰ There are substantial penalties for the destruction of evidence including fines and even an adverse judgment.¹⁵¹

The statute of limitations under the C.P.L. is quite short, being two years counted from date the patentee or plaintiff knew or should have known of the infringement.¹⁵² By contrast the statute of limitations in the United States is six years. However, the doctrine of laches might apply earlier than the onset of the statute of limitation, severely limiting the compensation or damages that the defendant could recover.¹⁵³

Damages or compensation for infringement are wildly different in U.S. litigation from Chinese patent suits. U.S. awards have reached into the billions of dollars and recoveries in the millions of dollars are quite common.¹⁵⁴ In the 2009 infringement suit, *Centocor Ortho Biotech v. Abbott Labs.*,¹⁵⁵ the plaintiff was awarded \$1.67 billion in damages. Article 63 of the C.P.L. speaks of civil and criminal liabilities and sets forth a fine of 200,000 Yuan (about \$31,700 USD).¹⁵⁶ The award of \$44 million in *Schneider Elecs.* was quite unusual as very low damage awards are commonplace in China at the present time. Damage awards are likely to increase as the patent law matures in the Chinese courts and the need for stronger enforcement is more fully recognized.

Western observers often raise major concerns about the fairness of Chinese courts in deciding issues of social or political interest in China. Pfizer's Viagra product and contested patent application is an example of a situation where the Beijing High Court intervened to maintain the validity of Pfizer's patent and correct a potentially embarrassing injustice.¹⁵⁷ The Court submerged the short term interests of a large number of Chinese companies that stood ready to copy Pfizer's patented product and satisfy the market against the interests of Pfizer to help preserve China's reputation and compliance with international intellectual property treaties.¹⁵⁸

¹⁵⁰ *Id.* 34(a)(1).

¹⁵¹ *Id.* 37(b).

¹⁵² Chinese Patent Law, *supra* note 4, art. 68.

¹⁵³ *A.C. Aukerman Co. v. R.L. Chaides Const. Co.*, 960 F.2d 1020, 1028 (Fed. Cir. 1992) ("The Supreme Court has long recognized the defense of laches to a patent infringement action brought in equity.").

¹⁵⁴ *See, e.g., Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1308 (Fed. Cir. 2009) (resulting in a \$357,693,056.18 jury award); *see generally* Martha K. Gooding & William C. Rooklidge, *The Real Problem with Patent Infringement Damages*, 91 J. PAT. & TRADEMARK OFF. SOC'Y 484, 486 (2009) (documenting several large jury awards).

¹⁵⁵ *Centocor Ortho Biotech v. Abbott Labs.*, 636 F.3d 1341, 1344 (Fed. Cir. 2011).

¹⁵⁶ Chinese Patent Law, *supra* note 4, art. 63.

¹⁵⁷ Geoff Dyer, *Pfizer's Viagra Patent Upheld in China*, FIN. TIMES (Dec. 28, 2006), <http://www.ft.com/cms/s/0/3008419c-96a3-11db-8ba1-0000779e2340.html>; *Newsletters Regarding IPR, CHINA DAILY* (Nov. 5, 2007), http://www.sipo.gov.cn/sipo_English2008/news/iprspecial/200904/t20090417_452899.html.

¹⁵⁸ Tai Hong & Cheng Miao, *What Can be Learned from the Case of Viagra Patent Invalidation*, 2 CHINA PATS. & TRADEMARKS 52, 55 (2008); *see also* Timothy Roe, *Pfizer Emerges Victorious in China Viagra Patent Battle*, SEEKING ALPHA (Nov. 5, 2007), <http://seekingalpha.com/article/52698-pfizer-emerges-victorious-in-china-viagra-patent-battle>.

Unlike in the U.S. where there is systematic reporting and abstracts of decisions in lawsuits at all levels of the court systems, reports of Chinese cases are sporadic at present. Except for certain Supreme Court “judicial interpretations” which are binding on lower courts, the effect of prior case law as a binding precedent is not part of the Chinese legal system.¹⁵⁹ CCPIT Patent and Trademark Office, one of the oldest patent law firms in China, recently produced an English translation of some of the leading cases, which is helpful in providing insight to foreigners into the rationale of Chinese Courts.¹⁶⁰

H. Third Party Submission of References and Comments is Prevalent in China; U.S. Applicants Are Wary of “Estoppel”

Another significant difference in practice between SIPO and the USPTO relates to third party submission of references and observations. Under both AIA¹⁶¹ and China’s latest patent reform,¹⁶² third parties can submit patents and other references to the patent examiner following publication of the application in an effort to block the granting of a patent.

In the U.S., interested third parties are quite reluctant to submit references with or without comments for fear that the examiner will not see the references as invalidating pending claims and simply list the reference as having been considered.¹⁶³ That denigrates the value of such a reference in later invalidation proceedings in the U.S. legal system, while no such prejudice exists in China.¹⁶⁴ Hence there is little to lose by submitting such a reference in China whereas caution is advisable in the United States. The written prosecution history, including remarks of the applicant and the examiner, may be employed at each successive stage in the USPTO and in court to detect inconsistencies and especially to find potentially prejudicial remarks of the patent applicant to overcome a reference and limit claimed subject matter.¹⁶⁵ China also has a guide on prosecution history that applies to applicant’s amendments and statements that limit claims.¹⁶⁶ Some Chinese attorneys advise that the submission of references be made anonymously.

¹⁵⁹ See *The China Law Center Co-Sponsors Workshop and Training on Judicial Precedent in Jiangsu Province*, YALE LAW SCHOOL (July 22, 2007), <http://www.law.yale.edu/intellecualife/5346.htm#> (“China is a civil law system and thus does not recognize judicial precedents as binding in later cases.”).

¹⁶⁰ See generally SELECTED IP CASES, *supra* note 145.

¹⁶¹ AIA, § 6 (to be codified in scattered sections of 35 U.S.C.).

¹⁶² Implementing Regulations, *supra* note 5, at R.48.

¹⁶³ Mark D. Janis, *Rethinking Reexamination: Toward A Viable Administrative Revocation System for U.S. Patent Law*, 11 HARV. J.L. & TECH. 1, 69 (1997) (“The existing reexamination provisions severely restrict public participation in the reexamination process.”).

¹⁶⁴ Implementing Regulations, *supra* note 5, at R.67.

¹⁶⁵ *Ormco Corp. v. Align Tech., Inc.*, 498 F.3d 1307, 1314 (Fed. Cir. 2007) (“[T]he prosecution history can often inform the meaning of the claim language”) (emphasis omitted).

¹⁶⁶ *China Clarifies Principles and Rules of Patent Protection*, CMS CAMERON MCKENNA (Apr. 8, 2010), <http://www.law-now.com/law-now/2010/chinapatentapril2010.htm?cmckreg=true>.

I. Unlike the United States, China Requires Inventor's Remuneration

Another feature of Chinese law that is distinctly different from American practice is the requirement that employers set up policies for payment to inventors for inventions that are related to their workplace responsibilities or so called service inventions.¹⁶⁷ This is another aspect of German patent law adopted by China.¹⁶⁸ Under the 2008 reform act, an employer in China may establish any system that fairly compensates the inventors for each invention or patent, but such a requirement is quite burdensome and requires expensive bookkeeping in order to assure compliance.¹⁶⁹

If an employer fails to adopt and adhere to its own policy, an inventor may recover compensation based on China's state policy, which is very favorable to inventors.¹⁷⁰ American and other global companies have consistently resisted the incorporation into U.S. law of such burdensome requirements charging they are "job killers," and pointing out that a corporate inventor's job is to innovate.¹⁷¹ Under this theory, the innovators' compensation for invention is included in their paycheck.

J. Novelty Rules Differ in China and the United States, but will be Aligned Under AIA

The standards of novelty in China and the United States are currently different but will become similar when certain provisions of the AIA become effective. China currently has a rule of absolute novelty based on world-wide publication or public use prior to the application date.¹⁷² The same criteria will be adopted by the United States in 2013.¹⁷³

Public use and sale are grounds of rejection in the United States, at the present time, only when the use or sale takes place in the United States.¹⁷⁴ Upon the change in 2013, a use or sale anywhere in the world will be patent defeating, making the rules on public use/sale similar in both the United States and China. In both

¹⁶⁷ Chinese Patent Law, *supra* note 4, art. 16 ("The entity that is granted a patent right shall award to the inventor or creator of a service invention-creation a reward and, upon exploitation of the patented invention-creation, shall pay the inventor or creator a reasonable remuneration based on the extent of spreading and application and the economic benefits yielded.")

¹⁶⁸ JOACHIM FELDGES & BIRGIT KRAMER, BUSINESS LAWS OF GERMANY § 13:36 (Thompson Reuters 2010) ("If the employer claims the invention, the employee is entitled to remuneration.")

¹⁶⁹ Chinese Patent Law, *supra* note 4, art. 16.

¹⁷⁰ See Implementing Regulations, *supra* note 5, arts. 76–78.

¹⁷¹ Vai Io Lo, *Employee Inventions and Works for Hire in Japan: A Comparative Study Against the U.S., Chinese, and German Systems*, 16 TEMP. INT'L & COMP. L.J. 279, 291–92 (2002) ("In the event of dispute, courts have generally interpreted invention assignment contracts in favor of the employer."); see also *Cubic Corp. v. Marty*, 185 Cal. App. 3d 438, 457 (Cal. App. 4th Dist. 1986) (enforcing a contract giving patent rights to the employer).

¹⁷² Chinese Patent Law, *supra* note 4, art. 22.

¹⁷³ AIA § 3(b) (to be codified at 35 U.S.C. § 102).

¹⁷⁴ 35 U.S.C. § 102(b) (2006) ("A person shall be entitled to a patent unless . . . the invention was . . . 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 . . .").

countries, there will be limited grace periods during which the inventor can publish. In either country, the grace period regulations must be carefully examined.¹⁷⁵

Also, while the USPTO may reject an application based on prior publications anywhere in the world, under the so called *Hilmer* rule, a patent which claims priority to a non-U.S. patent application is not a reference against a U.S. patent application until the date that the reference application is actually filed in the USPTO.¹⁷⁶ In 2013, that will change and a U.S. patent or application which claims priority in a non-U.S. application can be applied as prior art as of the non-U.S. filing date (priority date) of the foreign application, again establishing concordance between U.S. and Chinese law.¹⁷⁷ Finally, the current law in the United States allows a general, one year grace period before a statutory bar comes into effect.¹⁷⁸ Once the 2013 provisions come into play, the grace period will be limited to the inventor's activity.¹⁷⁹

There will still remain some other subtle differences on issues of novelty, including what constitutes an anticipating disclosure and the length of grace periods that may be applicable, so concerned persons should consult a Chinese or U.S. patent attorney to determine novelty prior to filing.

K. Non-Obvious Subject Matter is Required in the United States and China

In order to sustain the validity of an "invention" or regular patent in the United States and China, the claimed invention must be an advance over the prior art that is both novel and non-obvious. Terms of art such as "inventive step" and "height of invention" are often used to describe the necessary inventive element in China.¹⁸⁰ Chinese Law defines "inventiveness" as "compared with technology existing before the date of application the invention has prominent substantive features and represents a notable progress."¹⁸¹ Existing technology refers to prior technology on a worldwide basis.¹⁸²

In the United States, the subject matter of an invention sought to be patented must be non-obvious viewed as a whole under *Graham v. John Deere*,¹⁸³ as further

¹⁷⁵ Chinese Patent Law, *supra* note 4, art. 24.

¹⁷⁶ *In re Hilmer*, 359 F.2d 859, 877 (C.C.P.A. 1966).

¹⁷⁷ AIA, at § 3(b) (to be codified at 35 U.S.C. § 102).

¹⁷⁸ 35 U.S.C. § 102(b) (2006) (stating no patent shall issue if it was described or patented "more than one year prior to the date of the application for patent in the United States.").

¹⁷⁹ AIA, at § 3(b) (to be codified at 35 U.S.C. § 102).

¹⁸⁰ Yi-Chen Su, *What About Know-How: Heightened Obviousness and Lowered Disclosure is Not a Panacea to the American Patent System for Biotechnology Medication and Pharmaceutical Inventions in the Post-KSR Era*, 14 MARQ. INTELL. PROP. L. REV. 321, 349 (2010) ("[T]he Chinese patent system has generally adopted the European problem-and-solution approach in determining obviousness.").

¹⁸¹ Chinese Patent Law, *supra* note 4, art. 22.

¹⁸² *Id.* art. 30.

¹⁸³ *Graham v. John Deere Co.*, 383 U.S. 1, 15 (1966) ("If this difference is such that the subject matter as a whole would have been obvious at the time to a person skilled in the art, then the subject matter cannot be patented.").

determined in the recent U.S. Supreme Court ruling of *KSR v. Teleflex*.¹⁸⁴ Patentability cannot be negated by the manner in which the invention was made.¹⁸⁵ This sentence was added to the U.S. Code in recognition of the fact that, in modern corporate research, several scientists might make serial innovations from a known starting point where each of the several changes might be obvious from each other.¹⁸⁶ However, the obviousness standard requires that the examiner look at the prior art at the starting point versus the final invention, that is look at the invention as a whole.¹⁸⁷ If that is not obvious from the prior art then the subject matter is patentable in the United States.

L. Business Methods are Patentable in the United States, while a Three Part Technical Test is Applied in China to Assess Patentability.

Transactions, such as those related to games, gambling, and banking processes, may be patentable in the United States as so called “business method patents” if properly tied to a machine or apparatus. In *Bilski v. Kappos*¹⁸⁸ the Supreme Court affirmed the decision of the Court of Appeals for the Federal Circuit that Bilski’s application did not contain patentable subject matter since the calculation method was not tied to a machine or apparatus, nor did it transform an article into a different state or thing. However, the Supreme Court reversed the Federal Circuit’s holding that the machine or transformation tests are the sole tests of patentable subject matter, especially in this information age.¹⁸⁹ Over the past decade, China’s stance has evolved to reluctant acceptance of “business methods” if they satisfy a three part test whereby a technical solution uses technical means to achieve a technical result, provided they are supported in the original disclosure.¹⁹⁰ However, the three-step business transaction method described in the *Bilski* case would not be patentable in China even if tied to a machine. Yet appropriate business method

¹⁸⁴ *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 405 (2007).

¹⁸⁵ 35 U.S.C. § 103(a) (2006).

¹⁸⁶ *Carter-Wallace, Inc. v. Gillette Co.*, 675 F.2d 10, 14 (1st Cir. 1982). This sentence was inserted into the statute because the Senate wanted to reverse the test: “That is to say, the new device, however useful it may be, must reveal the flash of creative genius, not merely the skill of the calling. If it fails, it has not established its right to a private grant on the public domain.” *Id.*; *Graham*, 383 U.S. at 16 n.8 (stating “it is immaterial whether [the patent] resulted from long toil and experimentation or from a flash of genius.”).

¹⁸⁷ 35 U.S.C. § 103(a).

¹⁸⁸ *Bilski v. Kappos*, 130 S.Ct. 3218, 3229 (2010).

¹⁸⁹ *Id.* at 3231 (“In disapproving an exclusive machine-or-transformation test, we by no means foreclose the Federal Circuit’s development of other limiting criteria that further the purposes of the Patent Act and are not inconsistent with its text.”).

¹⁹⁰ *Principles of Examining Business Method Patent Application*, IPR IN CHINA (June 20, 2008), http://www.chinaipr.gov.cn/guidespatentarticle/guides/agparent/agpguidance/200806/241156_1.html; Steve Song & Guowei Liu, *Patent Eligibility of Business Method in China from the U.S. Perspective*, 1 CHINA PAT. & TRADEMARKS 54, 55 (2011), available at <http://www.cpt.cn/uploadfiles/20110107112430782.Pdf>.

inventions may be patentable if the application and claims are carefully structured from the beginning by specialized Chinese patent attorneys.¹⁹¹

M. China has Compulsory License Provisions which are Strongly Opposed in the United States

U.S. law provides that patentees have the right to exclude others from using their patented subject matter for the full term of the patent.¹⁹² China, on the other hand, passed a provision in the 2008 amendments that permits compulsory licensing in certain circumstances.¹⁹³ An application for compulsory licensing can be made three years after grant or four years after filing, or if China deems the patentee's acts result in a monopoly.¹⁹⁴ Article 51 of C.P.L. deals with the right to request a compulsory license in order for a later inventor to practice an improvement that is otherwise blocked by an earlier broadly claimed invention.¹⁹⁵ Semi-conductor inventions are specifically mentioned in C.P.L. article 52 which specifies the circumstances where such a patent may be subject to compulsory licensing.¹⁹⁶ Chinese law states that the compulsory license is for the domestic Chinese market unless otherwise prescribed.¹⁹⁷ These provisions are of concern to the United States and global manufacturers. For example pharmaceutical and semiconductor makers fear that China will declare their position a monopoly and require a compulsory license of the patent.¹⁹⁸ Compulsory licensing of intellectual property like the taking of real property under eminent domain is always ripe for abuse to the detriment of the property holder.

N. AIA Provides Meaningful Prior User Rights in the United States for the First Time

While China and most countries of the world have had prior user rights in their laws for many years, the U.S. Congress has steadfastly opposed including prior user rights up to the time of AIA. However, the harmonization changes of AIA seem to require that Congress finally provide some protection for manufacturers who invest in a process of making a product and are accused of infringement based on a later invented patent. Under current law, an infringing manufacturer can be held liable

¹⁹¹ Zheng Lizhu & Kenneth Y. Choy, *The Impact of Bilski on Business Method Patent*, KING & WOOD (Feb. 2009), <http://www.kingandwood.com/article.aspx?id=The-Impact-of-Bilski-on-Business-Method-Patent&language=en>.

¹⁹² *Waterman v. Mackenzie*, 138 U.S. 252, 255 (1891) (stating that a patent grants the patentee the "exclusive right to make, use, and vend the invention or discovery throughout the United States").

¹⁹³ See Chinese Patent Law, *supra* note 4, arts. 48–51.

¹⁹⁴ *Id.* art. 48.

¹⁹⁵ *Id.* art. 51.

¹⁹⁶ *Id.* art. 52.

¹⁹⁷ *Id.* arts. 48, 50, 53.

¹⁹⁸ See J. Benjamin Bai et al., *What Does the Third Amendment to China's Patent Law Mean to You?*, 21 INT'L Q. 2, 2 (2009).

for infringement and his operation may be enjoined from further processing unless he can prove that his process was open to the public for more than one year prior to the patent application date.¹⁹⁹ Since most manufacturers restrict access to their facilities which are often deemed to be secret operations there is often no adequate defense to protect domestic investment.²⁰⁰ AIA provides that such a prior use whether secret or not is subject to a prior user defense and may continue to operate.²⁰¹ The prior user right arises only if the prior use took place continuously from one year prior to the date of the patent application.²⁰²

Congress did not include “substantial preparations” for manufacturing as a defense and there are other fine points that may need adjustment in future patent reform.²⁰³ Premarket activity for regulatory review such as for drug products gives rise to the prior user defense.²⁰⁴ The defense cannot be asserted against University owned patents, however.²⁰⁵

The prior user defense is a personal defense that must be asserted by the parties who gave rise to the defense or their successors in interest.²⁰⁶ The patent that is asserted is not invalidated as a result of the prior user defense and hence is not of benefit to others.²⁰⁷ In addition this defense is specific to the site that gave rise to the prior use.²⁰⁸ Whether the original plant may be expanded in capacity on the same site is an open question.

Article 69 of the C.P.L. states the basic prior user rights for patents applicable in China.²⁰⁹ It is not an infringement if the accused has, before the effective date of the application for patent, continuously used the process or product.²¹⁰ The Chinese law specifies that the continued use shall be of the same scope.²¹¹ This provision is in line with prior user provisions in other countries and may restrict expansion of plant capacity.

O. Security Reviews Differ in China Versus the United States

China recently changed its approach to examining applications for international patents where the invention was made in China. Prior to 2009, a Chinese applicant for an invention made in China was required to first file the application in China

¹⁹⁹ 35 U.S.C. § 273(a)(2)(B) (2006).

²⁰⁰ U.S. PAT. & TRADEMARK OFF., REPORT ON THE PRIOR USER RIGHTS DEFENSE 7 (Jan. 2012) [hereinafter PRIOR USER RIGHTS] (describing how prior to AIA, a manufacturer who invents a manufacturing process, but does not disclose it, would now have a potential defense against an infringement suit by a later patent applicant).

²⁰¹ AIA, § 5(a) (to be codified at 35 U.S.C. § 273(a)).

²⁰² *Id.*

²⁰³ *See id.*

²⁰⁴ *Id.* (to be codified at 35 U.S.C. § 273(c)(1)).

²⁰⁵ *Id.* (to be codified at 35 U.S.C. § 273(e)(5)(A)).

²⁰⁶ *Id.* (to be codified at 35 U.S.C. § 273(e)(1)(A)).

²⁰⁷ *Id.* (to be codified at 35 U.S.C. § 273(g)).

²⁰⁸ *Id.* (to be codified at 35 U.S.C. § 273(e)(1)(C)).

²⁰⁹ Chinese Patent Law, *supra* note 4, art. 69.

²¹⁰ *Id.*

²¹¹ *Id.*

before filing elsewhere.²¹² Now, like U.S. law, any application that is to be filed abroad must first go through a national security examination.²¹³ Such a security examination can take several months.²¹⁴ Authorities in China may use the initial four month period to object to foreign filing, and may take up to six months to make a final denial of foreign filing.²¹⁵

Unlike China, however, an invention made in the U.S. can be foreign filed within several days based on an expedited petition for a license.²¹⁶ We are not aware of any provision for expedited clearance in SIPO.

P. China's Employment Laws Govern some Trade Secret and Non-Compete Issues Concerning Intellectual Property

Not all intellectual property-related provisions are contained in China's patent laws. One must also look to China's employment laws, which were also amended and revamped in 2008.²¹⁷ Several features of these laws are quite different from American practice. The new employment contract law in China clarifies that, in order to enforce a non-compete clause, there must be provided post-termination compensation for the period during which the non-compete restriction remains effective.²¹⁸ In the United States, non-compete laws are governed by each state and we are not aware of any state which requires post termination compensation to support a non-compete provision.²¹⁹ Another surprise in Chinese law is the restriction on the personnel who can be subject to confidentiality provisions. Only technical and managerial personnel are generally eligible. In addition, trade secret litigation cases in China indicate that special compensation may be paid to employees who are required to maintain secrets.²²⁰ This is often accomplished by showing that a part of the overall pay of an employee, e.g., five percent, is allocated to maintaining trade secrets during employment and after termination.

²¹² *Id.* art. 20.

²¹³ Compare *id.* (describing China's State security examination requirement), with 35 U.S.C. § 184 (2006) (describing the process for filing a patent application in a foreign country which states that any application is subject to a national security review under section 181).

²¹⁴ SIPO, GENERAL INTRODUCTION TO THE THIRD REVISION OF THE PATENT LAW OF THE PEOPLE'S REPUBLIC OF CHINA AND ITS IMPLEMENTING REGULATIONS 3 (Dec. 10, 2010), http://english.sipo.gov.cn/laws/lawsregulations/201012/t20101210_553631.html (describing the timeline for notification and decisions of State security examinations).

²¹⁵ *Id.*

²¹⁶ 37 C.F.R. § 5.12 (2010); 35 U.S.C. § 184.

²¹⁷ Labor Contract Law of the People's Republic of China (promulgated by the Standing Comm'n Nat'l People's Cong., June 29, 2007, effective Jan. 1, 2008) arts. 23–24.

²¹⁸ *Id.*

²¹⁹ 10-265 LABOR AND EMPLOYMENT LAW § 265.01 (Matthew Bender & Co. 2011) (stating that enforcement of restrictive covenants varies from state to state).

²²⁰ Chen Danhong & You Yunting, *Shall It be Companies' Obligation to Pay Employees Confidentiality Remuneration by China Laws?*, BRIDGE IP LAW COMMENTARY (Feb. 17, 2012), <http://www.chinaiplawyer.com/companies-obligation-pay-employees-confidentiality-remuneration-china-laws-2/>.

III. WHAT DOES AIA PORTEND FOR THE FUTURE?

The remaining sections of this article discuss some significant changes to U.S. law introduced by AIA and comment on Chinese practice if there is a corresponding provision.

A. Grace Periods have been Altered, Increasing the Risk of Commercialization Prior to Filing a Patent

AIA significantly changes the nature of grace periods applicable to prior art. Under current law effective up to March 16, 2013, inventors enjoy full protection against disclosures, public use and sales that occurred within one year of filing an application, regardless of who made the disclosure.²²¹ Under AIA, any printed publication, public use or sale, even one day prior to the application's filing date, can be an effective reference against a patent application.²²² Section 102, however, is amended by AIA to provide a limited grace period of one year for disclosure obtained directly or indirectly from the inventors.²²³

Many aspects of commercial development in the U.S. have relied on the general one year grace period rooted in American law which permitted intercompany activities such as testing prior to filing patent applications.²²⁴ It can be argued that, under AIA changes, patent protection for many of these inventions will be lost to the detriment of American commerce.

A circumstance of wide application is where an inventor associated with a Company A in the U.S., for example, reduces to practice in his laboratory a novel anti-corrosion paint composition that shows promise in the small scale testing, but requires a larger scale test only available at an automotive Company B nearby. The inventor discloses the invention to Company A that discloses the information to Company B. Additional tests at Company B reveal numerous new uses for the composition and confirm those disclosed. Company B provides a full report back to Company A where Company A then files a patent application on the inventions and all this activity takes place within one year.

Under existing law there should be no question that a patent granted on Company A's application could not be invalidated based on these disclosures since an unrestricted grace period of one year applies. However, Congress has added language in AIA to restrict the terms and conditions under which the one year grace period applies. What is meant by disclosures directly or indirectly from the inventor will have to be construed by the courts when a defense is asserted.²²⁵ The answer is

²²¹ 35 U.S.C. § 102(b) (2006).

²²² AIA, § 3(b) (to be codified at 35 U.S.C. § 273(a)(1)).

²²³ *Id.*

²²⁴ See Todd McCracken, *Patent Reform Bill Hurts Small Business*, 18 WESTLAW J. INTELL. PROP. 1, 2 (2012).

²²⁵ See James Yang, *First Inventor to File System Under the America Invents Act*, OC PATENT LAWYER (Oct. 21, 2011), <http://ocpatentlawyer.com/first-inventor-to-file-system-under-the-america-invents-act/> (describing the potential for various interpretations of disclosure that will need to be decided by litigation).

not as simple as always file on any invention prior to disclosure for testing at another organization since many commercial organizations make numerous inventions such as the new paint composition referenced above and wish to send the samples out for larger scale or different testing. It is very expensive to file them all prior to sampling. This issue will have to be answered by counsel for each organization that engages in such activities as the risk assessment will be highly fact sensitive.

B. AIA Narrows the Application of Certain Other Types of Prior Art Benefiting Commerce

On the other side of the coin, the AIA removes certain patents and applications as references under section 102(a)(2) where the subject matter was developed under a joint research agreement.²²⁶ It also renders inapplicable as references certain commonly owned or assigned applications or patents.²²⁷ These changes remove certain barriers to patent coverage of inventions made under commercial joint development agreements and commonly assigned subject matter, and will result in expanded patent coverage of new technology.²²⁸ The authors are not aware of corresponding provisions in Chinese law.

One important change is the requirement of common ownership is no longer required at the time the invention was made. A reference may be removed by a later merger of interests between the current applicant and the reference applicant.²²⁹

C. New Misjoinder Provisions of the AIA

The amended law in section 299 of the U.S. Patent Act codifies that accused infringers may be joined in one action where:

- The right to relief is asserted against the parties jointly, severally or alternative liability;
- The cause arises out of the same transaction or occurrence or series of such;
- Accuses the same product or process;
- Alleging that the defendants infringe the same patent is insufficient ground for joinder.²³⁰

²²⁶ AIA, § 3(b) (to be codified at 35 U.S.C § 102(c)).

²²⁷ *Id.* (to be codified at 35 U.S.C. § 102(b)(2)).

²²⁸ PRIOR USER RIGHTS, *supra* note 200 (describing how section 273 will expand to cover all technologies).

²²⁹ *Id.*

²³⁰ 35 U.S.C. § 299.

Litigation by non-practicing entity firms, commonly called trolls, has been steadily on the rise for the past several years.²³¹ A common troll practice has been to name as many defendants as possible who infringe the same patent in popular jurisdictions such as Delaware or the Eastern District of Texas.²³² This practice is substantially curtailed by this new law where products and transactions are different even though the same patent might be infringed. The result of this change is not likely to deter trolls from bringing suits against infringers, although the cost of separate suits could be a deterrent; and different district courts will be faced with the task of claim construction of the same claims that are being interpreted in one or more other districts.²³³ Variable interpretations of the same claim may or may not be corrected at the Court of Appeals for the Federal Circuit

D. Under AIA, Novelty will be Defeated by International Public Use or Sale

Use or sale anywhere in the world will be novelty defeating beginning March 16, 2013 when the relevant provisions of AIA take effect.²³⁴ This might significantly increase the risk of capitalizing certain innovations of global interest.²³⁵ Yet this provision is part of the global patent harmonization package.

E. Unlike Interference Proceedings, Derivation Proceedings will Survive Under AIA

Interferences will be phased out as noted above.²³⁶ A slim vestige will remain, however, in the form of derivation proceedings where the inventor of a later filed application attempts to prove that the inventor of an earlier filed application derived the claimed invention from him.²³⁷ The proceedings are initiated once the second inventor learns of the derived claims from publication of the first application and files a petition, and the derivation claim must be filed within one year period

²³¹ Joe Beyers, *Perspective, Rise of the Patent Trolls*, CNET NEWS (Oct. 12, 2005), http://news.cnet.com/Rise-of-the-patent-trolls/2010-1071_3-5892996.html.

²³² Stijepko Tokic, *The Role of Consumers in Deterring Settlement Agreements Based on Invalid Patents: The Case of Non-Practicing Entities*, 2012 STAN. TECH. L. REV. 2, 9 (2012) (describing how non practicing entities will dilute costs by suing multiple defendants); J. Jason Williams et al., *Strategies for Combating Patent Trolls*, 17 J. INTELL. PROP. L. 367, 368 (2012) (stating that the Eastern District of Texas and the District of Delaware are among the most popular, and most favorable, jurisdictions used by non-practicing entity firms).

²³³ Erick Robinson, *New Patent Reform Law Could Reduce Lawsuits by Non-practicing Entities*, OPENSOURCE.COM (Sept. 16, 2011), <http://opensource.com/law/11/9/new-patent-reform-law-could-reduce-lawsuits-non-practicing-entity> (describing how the new joinder rules could make litigation by non-practicing entities potentially cost prohibited).

²³⁴ AIA, § 3(b)(1) (to be codified at 35 U.S.C. § 102(a)).

²³⁵ McCracken, *supra* note 224, at 3.

²³⁶ See *supra* Part I.C. (describing how AIA changes the U.S. from a first-to-invent system to a first-to-file system and “relegates such interferences and the accompanying case law to the annals of history.”).

²³⁷ AIA, § 3(i) (to be codified at 35 U.S.C. § 135(a)).

beginning on date of that publication.²³⁸ These proceeding will be adjudicated by the newly constituted Patent Trial and Appeals Board.²³⁹

F. AIA Preserves Patent Term Extension Provisions

Key features of U.S. patent law that have no counterpart in China are the provisions permitting extension of patent terms for pharmaceutical and other technologies in consideration of delays in processing these patents in the USPTO.²⁴⁰ The patent extension provisions for pharmaceuticals enable drug companies to recoup the enormous investments in development and testing of drug products in the U.S. markets.²⁴¹ However, those advantages are compromised in China where no provision is made for extension of patents for any reason.²⁴² As China begins to develop its own proprietary drug products it is likely China will recognize the need to provide extended coverage.²⁴³

G. Qui Tam and Marking Changes in AIA

Congress used the new patent law as an opportunity to reverse a strong tide of *qui tam* actions for false patent marking. Under the former version of the false marking statute, anyone could bring suit on behalf of the United States for the marking of a patent that did not cover the marked device for the purpose of deceiving the public.²⁴⁴ The remedy for such an action was a fine of up to \$500 per offense, to be split with the United States government.²⁴⁵ The 2009 Federal Circuit decision in *Forest Group, Inc. v. Bon Tool Co.*²⁴⁶ created a “cottage industry” of false marking plaintiffs and led to the filing of hundreds of false marking cases over the course of a year. The Court held that the \$500 fine could be assessed on a per article basis, rather than per decision to mark, thus increasing dramatically the potential windfall to a false marking plaintiff.²⁴⁷

While the Federal Circuit took the first step in curbing the onslaught of false marking suits by holding that such actions were subject to the heightened pleading

²³⁸ *Id.*

²³⁹ *Id.* (to be codified at 35 U.S.C. § 135(b)).

²⁴⁰ 37 C.F.R. § 1.710 (2010); 35 U.S.C. §§ 155, 156.

²⁴¹ 35 U.S.C. § 156(c) (explaining that the Hatch-Waxman Act allows manufacturers to extend patent exclusivity to a maximum of five years).

²⁴² Bai, *supra* note 198, at 5 (“In addition, China does not afford patent term extension or patent term restoration, to compensate for regulatory delays in obtaining State Food and Drug Administration approval of drugs.”).

²⁴³ Jeffrey A. Andrews, *Pfizer’s Viagra Patent and the Promise of Patent Protection in China*, 28 LOY. L.A. INT’L & COMP. L. REV. 1, 9 (2006) (“With increasing profits and opportunity at stake, the Chinese drug companies that once built businesses around pirating foreign-owned pharmaceuticals are now beginning to use intellectual property laws as a strategic tool.”).

²⁴⁴ 35 U.S.C. § 292(a) (2006).

²⁴⁵ *Id.* § 292(b).

²⁴⁶ *Forest Grp., Inc. v. Bon Tool Co.*, 590 F.3d 1295 (Fed. Cir. 2009).

²⁴⁷ *Id.* at 1303.

requirements of Rule 9(b) of the Federal Rules of Civil Procedure,²⁴⁸ the ultimate death knell was sounded by Congress in AIA. The amended version of section 292 effectively eradicates these suits by removing the *qui tam* action.²⁴⁹ With the amendment, the United States can still bring suit for the \$500 fine, but private parties are limited to recovering damages based on a competitive injury suffered as a result of the false marking.²⁵⁰ Also, the amendment clarifies that the marking of an expired patent that once covered the marked device is no longer considered a false marking.²⁵¹ The amendments to section 292 are retroactive, and apply to false marking cases pending or filed on or after the date of enactment of AIA.²⁵²

Despite challenges to the constitutionality of the retroactive removal of the *qui tam* action by some of the plaintiffs affected, it is clear that the scope and number of false marking cases going forward will be drastically reduced.²⁵³ It remains to be seen whether the United States has the desire or the resources to continue any of the existing suits, or how often the government will use its ability to bring suits under the statute. Either way, AIA marks the end of false marking litigation as a viable business model.

AIA also makes the marking of patented products for the purpose of providing notice of patent protection easier. Section 287 prior to the new patent law allowed for the marking of a patented device with the word “patent” or the abbreviation “pat.” with patent numbers covering that product.²⁵⁴ In the event that it was impractical to mark the product directly, the statute also allowed for the affixing of a label to the packaging for that product.²⁵⁵ The benefit of marking a product was the ability to obtain damages for patent infringement without having to show actual notice of the patent prior to the filing of a patent infringement suit.²⁵⁶

Section 287 as amended in AIA allows for the marking of “patent” or “pat.” followed by an address for a website containing a listing of patent numbers that cover the device.²⁵⁷ The website must be free to access.²⁵⁸ Like the amendments to the false marking section, the amendment allowing for virtual marking is retroactive.²⁵⁹ This change in the law of marking will make it easier to maintain an up-to-date listing of patents in force that read on a marketed device. It will also potentially

²⁴⁸ *In re BP Lubricants USA, Inc.*, 637 F.3d 1307 (Fed. Cir. 2011).

²⁴⁹ AIA § 16(b) (to be codified at 35 U.S.C. § 292); Jefferson Perkins, *Patent Law Change: A First Look at the America Invents Act*, 24 DCBA BRIEF 30, 33 (2012) (“The new Act abolishes the *qui tam* action.”).

²⁵⁰ AIA § 16(b)(1)–(2) (to be codified at 35 U.S.C. § 292(a)–(b)); Perkins, *supra* note 249, at 33 (“A party may recover for false marking only if it can prove “competitive injury”).

²⁵¹ AIA § 16(b)(3) (to be codified at 35 U.S.C. § 292(c)).

²⁵² *Id.* § 16(b)(2)(4) (to be codified 35 U.S.C. § 292(b)).

²⁵³ Shivan Mehta, *Patent Reform Act of 2010: The Time for Change Is Now*, 7 OKLA. J.L. & TECH. 56, 56 (2011) (“It seems apparent that the courts will benefit greatly by a reduction of false marking litigation due to an increased burden upon the plaintiff to prove that he or she sustained a “competitive injury.”).

²⁵⁴ 35 U.S.C § 287(a) (2006).

²⁵⁵ *Id.*

²⁵⁶ *Id.*

²⁵⁷ AIA, § 16(a)(1) (to be codified at 35 U.S.C. § 287).

²⁵⁸ *Id.*

²⁵⁹ *Id.*

allow for a more cost effective means of changing a patent marking, particularly in the situation where the marking is made using a mold, as it will enable monitoring of a patent listing without undergoing the expense of changing the mold.

H. New Post Grant Proceedings in the United States

The introduction of post-grant review or an “opposition” procedure immediately on grant of a U.S. patent and up to nine months thereafter is a significant change in U.S. patent law.²⁶⁰ In the past, interferences have served this purpose among others, however, the opposition can be filed by any adverse party whereas standing in an interference action was limited to those having a conflicting application.²⁶¹ Interferences took “forever” to be concluded whereas the hope is that invalid claims can be relatively quickly adjudicated or settled among the parties in P.G.R.²⁶² If this notion is realized, then P.G.R. and its companion *inter partes* review (I.P.R.) will be a boon to commercialization and job creation. For this reason this article concludes with an outline of what is known of the new process.

Post grant review may be initiated by a petition from an adverse party seeking to invalidate a patent granted on or after the effective date.²⁶³ The threshold for initiation of P.G.R. is a showing in the petition that one or more of the patent’s claims is likely to be held invalid.²⁶⁴ Prior art references and other evidence of invalidity must accompany the petition.²⁶⁵ The petitioner must identify all parties in interest.²⁶⁶

Any ground of invalidity can be raised under section 282(b)(2).²⁶⁷ These grounds include conditions of patentability set forth in sections 101 through 103 which are fair game for P.G.R. Thus, grounds of invalidity that can be raised in PGR include lack of patent eligible subject matter under section 101, prior public use or sale under section 102, prior publication under section 102, obviousness under section 103 and

²⁶⁰ AIA § 6(d) (to be codified at 35 U.S.C. § 321).

²⁶¹ William Ahmann & Tenaya Rodewald, *Patent Reform: The Impact On Start-Ups*, 24 INTELL. PROP. & TECH. L.J. 3, 4 (2012) (“In an interference proceeding, a board at the [USPTO] or a federal court determines whether the party that was first to file (the senior party) or the party that was allegedly first to invent (the junior party) was entitled to a patent.”); David Herrington et al., *Congress Makes Substantial Changes to Patent Law with the America Invents Act*, 23 INTELL. PROP. & TECH. L.J. 3, 5 (2011) (“The Reform Act creates an entirely new post-grant review procedure, allowing anyone other than the patent owner to challenge the validity of a newly granted or reissued patent, on essentially any statutory grounds.”).

²⁶² See Ahmann, *supra* note 261, at 4 (noting that “[i]nterferences are expensive and complicated.”); see also Herrington, *supra* note 261, at 5 (“Once in effect, post-grant reviews should provide an attractive option for challenging a patent’s validity: They should offer a procedure that is more robust and wide-ranging than reexaminations under prior law yet faster and less expensive than court challenges.”).

²⁶³ Herrington, *supra* note 261, at 5.

²⁶⁴ Ahmann, *supra* note 261, at 5 (explaining that AIA allows challenges on essentially any statutory grounds).

²⁶⁵ AIA § 6(d) (to be codified at 35 U.S.C. § 322(a)(3)).

²⁶⁶ *Id.* (to be codified at 35 U.S.C. § 322(a)(2)).

²⁶⁷ *Id.* (to be codified at 35 U.S.C. § 321(b)).

defects of enablement or lack of proper written description under sections of 112.²⁶⁸ Congress added an additional ground for P.G.R. that would provide jurisdiction in the P.T.A.B. to take on important novel or unsettled question of law raised by the case subject matter.²⁶⁹

Post grant review must be initiated within nine months of patent grant.²⁷⁰ Post grant review, unlike *inter partes* review, only applies to patents granted on or after the effective date of the statute,²⁷¹ whereas any granted patent can be considered under *inter partes* review.²⁷² The I.P.R. proceedings can only be initiated after the period for P.G.R. or until after P.G.R. is terminated.²⁷³ The grounds of I.P.R. are restricted to invalidity by reason of prior patents or publications under sections 102 and 103.²⁷⁴ Prior use and sale are not to be part of I.P.R.²⁷⁵

While P.R.G. and I.P.R. are estimated to be less costly than litigation in court, AIA includes estoppel for all grounds which are raised or could have been raised, attorneys might be cautious about initiating these proceedings.²⁷⁶ There might be a preference for I.P.R. since the estoppel is limited to grounds based on published materials whereas P.G.R. includes essentially all grounds of invalidity. Moreover, the USPTO is not familiar with trials based on evidence of prior public use and sale; hence, most litigators might prefer to have these issues adjudicated by a Federal Court.

IV. CONCLUSION

The P.G.R. and I.P.R. sections of AIA are a good place to conclude since, like many of the new Chinese laws, these sections in particular require implementation regulations to be drafted and published for comment. Knotty issues remain since the U.S. and Chinese patent statutes are outlines containing only the key features of the laws without detailed processes and guidance.

The fees to be charged in order for the USPTO to recover its costs in conducting P.G.R., is an example of one of the difficulties in implementing such legislation. The USPTO is considering fees in the range from \$25,000 to \$50,000 for P.G.R.²⁷⁷ Such hefty fees are likely to be a disincentive to use of this important new feature of the law and the fees are likely to be opposed by the user community. Yet the new law

²⁶⁸ Bui, *supra* note 117, at 460 (explaining that P.G.R. may be based on any grounds that could be raised under paragraphs (2) or (3) of section 282(b)).

²⁶⁹ AIA § 6(d) (to be codified at 35 U.S.C § 324(b)).

²⁷⁰ *Id.* (to be codified at 35 U.S.C § 321(c)).

²⁷¹ *Id.* (to be codified at 35 U.S.C § 321).

²⁷² *Id.* § 6(a) (to be codified at 35 U.S.C § 311).

²⁷³ *Id.*

²⁷⁴ *Id.*

²⁷⁵ *Id.* (to be codified at 35 U.S.C § 311(b)).

²⁷⁶ *Id.* (to be codified at 35 U.S.C § 315).

²⁷⁷ DEP'T OF COM., TABLE OF PATENT FEE CHANGES, UNITED STATES PATENT AND TRADEMARK OFFICE 3 (Feb. 7, 2012), http://www.uspto.gov/aia_implementation/fee_setting_-_ppac_hearing_attachment_1-table_of_patent_fee_changes_7feb12.pdf.

requires the USPTO to recover its costs. There are hundreds of issues of implementation to be addressed and the schedule is tight.

Since the devil is in the details of both Chinese and American efforts to implement the new laws, the public interest demands that all stakeholders carefully examine and comment as draft regulations are published. It is interesting to note that the Chinese authorities have initiated the practice of permitting public comment on certain intellectual property regulations and that is a good sign for the future.

China has already implemented its 2008 amendments to the patent laws by guidelines and some judicial interpretations, whereas the U.S. is struggling to propose implementing regulations.²⁷⁸ Judicial interpretation in the U.S. will arise from specific litigation. The authors are struck by the aggressive goal setting on the Chinese which the Director of the USPTO described as “mind blowing.”²⁷⁹ However, charges in the recent *DuPont* trade secret case²⁸⁰ potentially linking Walter Liew, the defendant, to the Chinese government are not helpful to the cause of peaceful competition in the innovation race.²⁸¹ The authors will be keenly interested in observing the interactions between the growth of innovation and the ongoing changes needed in the laws and regulations to accommodate and promote quality patent coverage and enforcement both in China and in the United States.

Who got it right is anyone’s guess. With lots of luck, innovation, and a measure of good faith and understanding, both China and the U.S. might find that healthy battles in the patentable innovation race are part of a war where both sides can win.

²⁷⁸ Bui, *supra* note 117, at 441 (“The enactment of the Leahy-Smith America Invents Act represents the success of otherwise contentious efforts by Congress and industry groups to reform U.S. patent law since the early 2000s.”).

²⁷⁹ See Lohr, *supra* note 3, at BU3.

²⁸⁰ See *DuPont v. Kolon Indus.*, 637 F.3d 435, 454 (4th Cir. 2011).

²⁸¹ Abigail Rubenstein, *Chinese Cos. Indicted Over DuPont Trade Secret Theft*, LAW360 (Feb. 8, 2012), http://www.law360.com/ip/articles/307807?nl_pk=3657918c-3736-4fbc-89e4-664cdabe47e4&utm_source=newsletter&utm_medium=email&utm_campaign=ip.