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Comparison of United States AIA First-Inventor-to-File with Chinese First-to-File

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COMPARISON OF UNITED STATES AIA FIRST-INVENTOR-TO-FILE WITH CHINESE FIRST-TO-FILE¹

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ABSTRACT

On September 16, 2011, U.S. President Obama signed the Leahy-Smith America Invents Act. A significant change brought about by this reform of U.S. patent law is in the amendment to 35 U.S.C. § 102, shifting the U.S. from a first-to-invent system to a first-inventor-to-file system. This Article analyzes and compares the new U.S. first-inventor-to-file provisions with the Chinese first-to-file system, and discusses implications for those who file patent applications in both the U.S. and China.

I. INTRODUCTION

On September 16, 2011, U.S. President Barack Obama signed the Leahy-Smith America Invents Act (“AIA”), which marks undoubtedly the most major milestone of patent reform in the U.S. since the 1952 Patent Act.¹⁰ Substantively revising the U.S. law, the AIA, *inter alia*, establishes a first-inventor-to-file (“FITF”) system. Pre-AIA, the U.S. was a first-to-invent (“FTI”) system. This Article will discuss and analyze significant changes brought about by the AIA, transforming the U.S. to a FITF system, particularly the revision of 35 U.S.C. § 102, and the subsequent change in the definition of prior art.

The United States and China are very important players on the global scene, and their patent law systems, and any changes thereto, have great effects on each other, as well as on other countries in the world. This Article will also explain China’s first-to-file (“FTF”) system, highlighting similarities and differences with the new U.S. FITF system. After considering possible implications for those patent application filers who file in both China and the U.S., this Article will conclude with some observations as to possible strategies for maximizing opportunities and minimizing risks under the new framework in light of the fact that most countries are FTF and the U.S. is now transitioning to a FITF system. The term “transitioning” is purposefully chosen because FITF and FTI patents will coexist in the United States for at least another twenty years!¹¹

¹⁰ Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011); Overview of Leahy-Smith America Invents Act, GOVTRACK, <http://www.govtrack.us/congress/bills/112/hr1249> (last visited Mar. 13, 2013).

¹¹ See generally 35 U.S.C. § 154(a)(2) (2006) (specifying patents issued after June 8, 1995, are valid for 20-year term). Provisional patent applications are authorized in the U.S. by 35 U.S.C. § 111(b). If a nonprovisional patent application claiming priority to the provisional application is filed within 12 months of the provisional application filing date, the 20-year patent term starts from the nonprovisional application filing date, but the prior art effect starts from the provisional application filing date. See 35 U.S.C. § 119(e)(1) and § 154(a)(3). Therefore, if a provisional application was filed March 15, 2013, and a nonprovisional application properly claiming benefit/priority is filed March 14, 2014, the 20-year patent term will expire on March 14, 2034 (as long as no claim with an effective filing date after March 15, 2013, is added prior to issuance, thus converting the application into a transitional application, a hybrid of AIA and pre-AIA). Also, if all claims of a U.S. patent have an effective filing date before March 16, 2013, then that patent is under pre-AIA, even if it issues well after March 15, 2013. See America Invents Act § 146, 125 Stat. at 293. Hence, doing the math, one can see that AIA and pre-AIA

II. REFORM OF 35 U.S.C. § 102: RULE OF FIRST-INVENTOR-TO-FILE

Before the AIA, the U.S. was one of the only countries operating under an FTI patent system. Rights in inventions were the property of those who made the invention first.¹² For patents maturing from applications filed after June 7, 1995, a patent term was calculated as twenty years from the filing date of the patent application.¹³ The 20-year patent term from filing was not changed by the AIA.

Under FTI in the U.S., the inventor could choose to delay filing a patent application, waiting for either the invention or the market to mature. Even if someone else applied first, the first inventor could ultimately get the patent rights through proof of first invention, and warding off any attack in litigation in the U.S. courts or in the United States Patent and Trademark Office (“USPTO”) based on suppression, abandonment, or concealment of such later-filed invention.¹⁴

In some industries, such as pharmaceuticals, a patent is often more valuable at the end of its term than at the start, usually because the commercial product does not yet have regulatory approval at the start of the patent term. U.S. patent term measured from the filing date raised a dilemma that did not exist under the older U.S. patent law, where a patent term expired seventeen years after issuance.¹⁵ In particular, for a U.S. patent covering a drug product approved by the U.S. Food and Drug Administration (“FDA”) and marketed in the United States, it is important to maximize the duration of the twenty-year patent term that the commercial product is on the market due to the generally high cost of testing and obtaining approval from the FDA. Additionally, the time involved in obtaining such approval is generally long. The reality caused by the lengthy approval process is that there is often a long period of time between when the U.S. patent is granted and when the drug product is approved by the FDA for marketing in the U.S. market.

U.S. patents can simultaneously coexist until at least March 14, 2034, and possibly even beyond once patent term extensions and/or patent term adjustments are considered.

¹² 35 U.S.C. § 102(g) (2006). As of March 16, 2013, this section will, generally, only be applicable to those claims with an effective filing date before March 16, 2013, with the exception being *all* claims in an application/patent containing at least one claim with an effective filing date before March 16, 2013, and at least one claim with an effective filing date after March 15, 2013. *See* America Invents Act § 146, 125 Stat. at 293. Such exceptional, transition applications, as will be explained hereinafter, can be colloquially referenced as “Jedi Master Mixer” applications.

¹³ Uruguay Round Agreements Act, Pub. L. No. 103-465, sec. 532, § 154(a)(2), 108 Stat. 4809, 4984 (1994).

¹⁴ 35 U.S.C. § 102(g) (2006) As of March 16, 2013, applicable to those claims with an effective filing date before March 16, 2013, *and* any application/patent containing at least one claim with an effective filing date before March 16, 2013, and at least one claim with an effective filing date after March 15, 2013. *See* America Invents Act § 146, 125 Stat. at 293. For a dramatic example of a second-filer prevailing over a first-filer see *Chen v. Bouchard*, 347 F.3d 1299 (Fed. Cir. 2003).

¹⁵ 35 U.S.C. § 154 prior to 1994 amendments, Pub. L. No. 100-418, sec. 9002, 102 Stat. 1563, applied to applications filed before June 7, 1995.

To be sure, the high costs and lengthy approval process existed under the pre-twenty-year-from-filing U.S. patent system. However, in that system, the patent term of seventeen years did not even start until the patent was issued, which could set up an expiration date long after that which would occur if counted from twenty years from filing. Under the seventeen-year-from-issuance patents, delaying the issuance of patents until a time close to regulatory approval could reap tremendous financial benefits. In contrast, the twenty-year patent term clock ticks from the date the application is filed, whether the invention is on the market or not. This puts pressure on the applicant to obtain one or more U.S. patents quickly to maximize commercialization during the twenty-year term.

Under the twenty-year term, reducing the time between the U.S. patent application filing date and the launch date for drugs to be covered by claims issuing from that application maximizes the effective patent term and hence maximizes the patent protection. That is particularly true as the value of a U.S. patent covering an FDA-approved drug or method of treatment using the drug, may be more valuable at the end of the patent term for reasons explained above. Figure 1 demonstrates the value of a U.S. patent covering an ultimately FDA-approved drug over time:

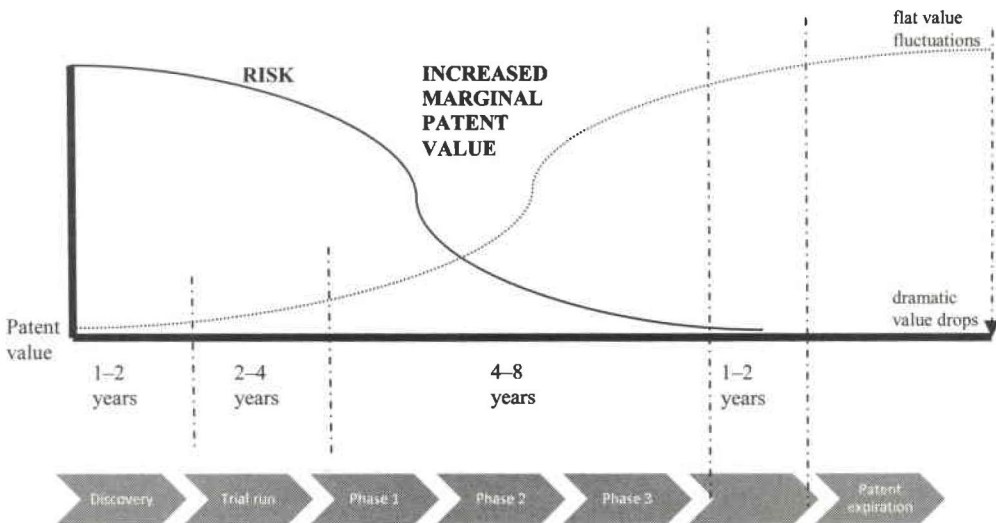


Fig. 1: Life cycle of patent value as shown in Liangchuan Wu & Lianghong Wu, *Pharmaceutical Patent Evaluation and Licensing Using a Stochastic Model and Monte Carlo Simulations*, 29 NATURE BIOTECHNOLOGY 798, 799 fig. 1 (2011) with data source noted as Ministry of Economic Affairs.¹⁶

¹⁶ Liangchuan Wu & Lianghong Wu, *Pharmaceutical Patent Evaluation and Licensing Using a Stochastic Model and Monte Carlo Simulations*, 29 NATURE BIOTECHNOLOGY 798, 799 fig.1 (2011).

In comparison, in high-tech industries where the technology changes rapidly, a patent term measured from the filing date may not be much of an issue, as commercializing a patent covering technology in a field of rapid change may be more important at the beginning of the patent term than at the end. In such instances, an appropriate strategy may be for a patent applicant to file a U.S. patent application as soon as possible after the invention and exert effort to gain the U.S. patent rights (and corresponding market benefits) as soon as possible.

Now, in addition to the twenty-year-from-filing patent term, which stays the same under the AIA, the FITF system applies pressure to companies and individuals to file their applications sooner (with due consideration for having sufficient information in the application to meet the 35 U.S.C. § 112 requirements of a U.S. patent application: written description, enablement, and best mode relative to the subject matter claimed). This pressure to file early concomitantly produces a patent expiration date earlier than desired (barring other considerations such as patent term extension and patent term adjustment), and possibly less effective patent exclusivity during the time a drug is on the market than under the FTI system of pre-AIA, where it was generally less risky to delay filing. As noted above, such circumstances may not be present in non-regulated commercial fields.

A. From Interferences to Derivation Proceedings

Pre-AIA, the FTI system could produce USPTO administrative disputes, called interferences.¹⁷ During such disputes, the USPTO, with possible appeal to the courts, could resolve who was first to invent by determining the specific dates of one or more of conception, diligence, and reduction to practice of the invention.¹⁸

Under the AIA FITF system, the USPTO will regard the earliest filing date of the application as the effective filing date for the claims contained therein, as well as the benchmark date for determining the applicable prior art.¹⁹ But that is not necessarily the case, as it fails to take into account “Jedi Master Mixer” applications,²⁰ which can be filed after

¹⁷ 35 U.S.C. § 135 (2006).

¹⁸ See *Chen*, 347 F.3d at 1312.

¹⁹ See *Changes To Implement the First Inventor To File Provisions*, 78 Fed. Reg. 11,024, 11,025 (Feb. 14, 2013) (to be codified at 37 C.F.R. pt. 1).

²⁰ If an application filed after March 15, 2013, and patent issuing therefrom, has at least one claim entitled to an effective filing date before March 16, 2013, and at least one claim entitled to an effective filing date after March 15, 2013, then the AIA transition provisions sections 3(n)(1) and (n)(2) coexist for all claims of that application/patent. See *America Invents Act*, Pub. L. No. 112-29, sec. 3(n)(1)–(2), § 146, 125 Stat. 284, 293 (2011). Therefore, pre-AIA 35 U.S.C. § 135, which provides for interferences, carries over and applies to all claims, irrespective of effective filing date. Compare 35 U.S.C. § 135 (2006), with *America Invents Act* § 135, 125 Stat. at 289–90. Practically, that means that interferences

March 15, 2013, and still invoke interferences under pre-AIA 35 U.S.C. § 135 by virtue of the transition provision, AIA section 3(n)(2).²¹ It would apparently be the case for any AIA application, for example, where all claims have an effective filing date after March 15, 2013, that interferences will not exist. For at least those applications, for proceedings²² filed on or after March 16, 2013, interferences will be replaced by a new derivation procedure.²³

The derivation procedure will be used to determine whether the invention presented by the first applicant was derived from the inventor of the later-filed application.²⁴ A petition requesting institution of a derivation proceeding may be filed only within one year from the date of the first publication of a claim “that is the same or substantially the same invention as a claim contained in a patent issued on an earlier application”²⁵ The Director of the USPTO decides whether to institute a derivation proceeding, and that decision is not appealable.²⁶ If the derivation proceeding is instituted, it takes place before the Patent Trial and Appeal Board (“PTAB”).²⁷ The PTAB has authority to correct the naming of the inventor in any application or patent at issue,²⁸ or make a decision adverse to claims in a patent, in which case the claims will be cancelled.²⁹ The parties may also settle or arbitrate a derivation dispute.³⁰ A district court litigation avenue is also available under 35 U.S.C. § 291.³¹

According to the USPTO’s final rules on derivation,³² which went into effect on March 16, 2013, to “implement the provisions of the . . . [AIA] that create a new derivation proceeding . . . [t]hese provisions . . . apply to applications for patent, and any patent issuing thereon, that are subject to first-inventor-to-file provisions of the AIA.”³³ Under the AIA’s

may exist for years to come, even in patents in which the effective filing dates of at least one, but not all, claims are after the March 15, 2013, watershed date.

²¹ See America Invents Act § 146, 125 Stat. at 293.

²² One of the most frustrating aspects of the AIA is its use of the term “proceedings.” In a colossal legislative blunder, the AIA *never* defines what is meant by “proceedings.”

²³ Compare 35 U.S.C. § 135 and § 291 (2006) with America Invents Act §§ 135, 291, 125 Stat. at 288–90. Note, the U.S. patent law included the concept of derivation pre-AIA as a bar to patentability. See 35 U.S.C. § 102(f) (2006).

²⁴ America Invents Act § 135(a), 125 Stat. at 289.

²⁵ *Id.*

²⁶ *Id.*

²⁷ America Invents Act § 135(b), 125 Stat. at 289.

²⁸ *Id.*

²⁹ America Invents Act § 135(d), 125 Stat. at 289–90.

³⁰ America Invents Act § 135(e)–(f), 125 Stat. at 290.

³¹ America Invents Act § 291, 125 Stat. at 288–89.

³² See generally Changes To Implement Derivation Proceedings, 77 Fed. Reg. 56,068, 56,068 (Sept. 11, 2012) (to be codified at 37 C.F.R. pt. 42). See also Rules of Practice for Trials Before the Patent Trial and Appeal Board and Judicial Review of Patent Trial and Appeal Board Decisions, 77 Fed. Reg. 48,621, 48,621–25 (Aug. 14, 2012) (to be codified at 37 C.F.R. pts. 1, 42, 90) (describing rules applying to discovery, evidence, and procedural requirements generally).

³³ Changes To Implement Derivation Proceedings, 77 Fed. Reg. at 56,058. Applications for patent and patents issuing thereon that are subject only to the first-inventor-to-file provisions of the AIA are

derivation proceedings, a claim is the “same or substantially the same[,]” as another claim if it is “patentably indistinct.”³⁴ The party alleging that the invention was derived has to show “substantial evidence, including at least one affidavit addressing communication of the derived invention and lack of authorization that, if un rebutted, would support a determination of derivation.”³⁵

And, of course, subject to future litigation, one would think that one cannot derive an invention that has not been conceived. According to the time-honored *Mergenthaler* decision, conception is defined as: “[F]ormation, in the mind of the inventor, of a definite and permanent idea of the complete and operative invention”³⁶

The focus of the AIA derivation proceeding, therefore, will be on proving that the first applicant derived the claimed invention from the second applicant.³⁷ By comparison, the focus in the pre-AIA interference proceeding was on proving conception, reduction to practice, and diligence between conception and reduction to practice or relying on constructive reduction to practice.

B. New Definition of Prior Art

The change from FTI to FITF changed the definition of prior art. In particular, geographic limitations do not apply to the definition of the prior art under FITF. For instance, all the public disclosures around the world in the forms of patents, publications, public uses, sales, or any other means by which a disclosure becomes publicly accessible can be regarded as prior art.³⁸ This definition includes non-printed disclosures made accessible to the public anywhere in the world in any language.³⁹ The change in the

those with all claims contained therein having effective filing dates after March 15, 2013, as well as “Jedi Master Mixer” applications and patents containing at least one claim with an effective filing date after March 15, 2013, and at least one claim with an effective filing date prior to March 16, 2013.

³⁴ Changes To Implement Derivation Proceedings, 77 Fed. Reg. at 56,090.

³⁵ *Id.* at 56,075–76.

³⁶ *Mergenthaler v. Scudder*, 11 App. D.C. 264, 276 (1897).

³⁷ And as just noted, one would assume that the second applicant will have to show that she had *Mergenthaler* conception and that the first applicant derived that *Mergenthaler* conception from the second applicant.

³⁸ See *infra* Section IV.D. There is still debate over whether AIA includes “secret prior art” as prior art. It seems clear the enactors intended to eliminate “secret prior art” of any kind, anywhere. See 157 CONG. REC. S5402-02 (daily ed. Sept. 8, 2011) (“Once an invention has entered the public domain, by any means, it can no longer be withdrawn by anyone.”). The U.S. PTO Examination Guidelines evidence the PTO’s intent to consider the phrase “on sale” in AIA 35 U.S.C. § 102(a)(1) as “public.” See Examination Guidelines for Implementing the First Inventor To File Provisions, 78 Fed. Reg. 11,059, 11,075 (Feb. 14, 2013) (to be codified at 37 C.F.R. pt. 1). But it may be extremely difficult for a patent applicant to find out about secret prior art prior to discovery in litigation. Furthermore, compare AIA’s 35 U.S.C. § 102(a)(2), where the prior art may be secret at the time of the effective filing date of the claimed invention if that art is “effectively filed” and then later published in one of three special ways: (1) U.S. Patent; (2) published U.S. patent application; and (3) published Patent Cooperation Treaty (“PCT”) application designating the U.S. See America Invents Act § 102(a)(2), 125 Stat. at 285–87.

³⁹ See America Invents Act § 102(a)(1), 125 Stat. at 285–87.

definition of prior art is effective March 16, 2013, for any application containing at least one claim having an effective filing date after March 15, 2013.⁴⁰

The U.S. retained a one-year grace period for an inventor's own work, so it remains the case in the U.S. that an inventor's own work cannot be prior art against himself or herself if disclosed within one year prior to filing the patent application.⁴¹

Pre-AIA, a patent application could only be used as prior art as of its U.S. filing date, even if filed earlier abroad. There was an inherent bias against use of patent applications originating outside of the U.S. as prior art; the foreign application could not use its foreign filing date for prior art purposes. This was known as the *Hilmer* doctrine, based on two U.S. litigations (*Hilmer I* and *II*).⁴²

Under the AIA, there is no distinction between indigenous inventions or foreign inventions for prior art purposes. The *Hilmer* doctrine is abolished, moot, or otherwise irrelevant, in the world of FITF. Now, under AIA, a foreign priority date can be used offensively as prior art under AIA's 35 U.S.C. § 102(a)(2) against the patent claims of others, as long as the subject matter in one of the three special publications was at least described in a foreign priority document which was "effectively filed" relative to the relevant subject matter.⁴³ This provides a systemic motivation for inventors to file their U.S. or foreign patent applications as early as possible to avoid more patent documents becoming possible prior art under the AIA when effectively filed and published.⁴⁴

⁴⁰ *Id.* at 293. And don't overlook the "Jedi Master Mixer" where the AIA prior art applies against all claims while at the same time pre-AIA §§ 102(g), 135, and 291 also apply against all claims. Amazingly, the strategic Jedi Master Mixer can actually be used to escape pre-AIA prior art. Consider the following example:

Application A only contains claims with effective filing dates before March 16, 2013, and is only subject to pre-AIA law. A public use or sale more than 1 year before the U.S. filing date would be a statutory bar under § 102(b). But then the applicant files a CIP after March 15, 2013, and presents, for example, twenty claims with an effective filing date before March 16, and one claim with an effective filing date after March 15, creating a "Jedi Master Mixer" application. Now the AIA applies to all claims and pre-AIA §§ 102(g), 135, and 291 apply to all claims. Let's assume that the applicant can avail herself of the exception under § 102(b)(1)(A) and escape from the putative AIA § 102(a)(1) public use or on sale in the U.S. Pre-AIA § 102(b) does not carry over by virtue of AIA section (3)(n)(2). Hence, relative to *all the claims* that statutory bar applies to *none* of the Jedi Master Mixer claims. The devastating pre-AIA bar is gone!

⁴¹ America Invents Act § 102(b)(1), 125 Stat. at 286.

⁴² See generally *In re Hilmer*, 359 F.2d 859 (C.C.P.A. 1966); *In re Hilmer*, 424 F.2d 1108 (C.C.P.A. 1970).

⁴³ America Invents Act §§ 102(a)(2), 102(d), 125 Stat. at 285–87. The three "special publications" described in § 102(a)(2) are: (1) U.S. Patent; (2) published U.S. patent application; and (3) published Patent Cooperation Treaty ("PCT") application designating the U.S.

⁴⁴ *Id.* Effectively filed requires that eventually at least one of the following three documents publish ("special publications"): a U.S. patent; a published U.S. patent application; or a PCT application designating the U.S., whether or not that PCT application ever enters into the U.S. national stage.

A comparison will show the impact of the removal of the *Hilmer* doctrine:

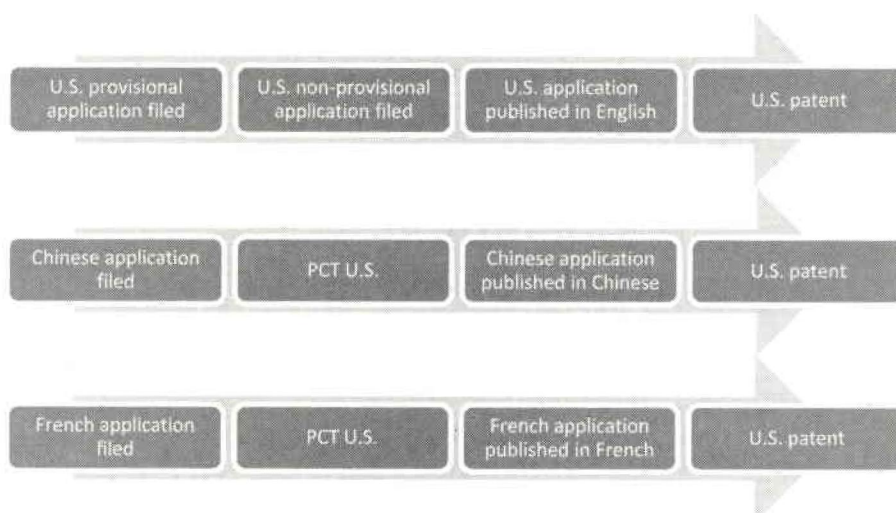


Fig. 2: Comparison of Prior Art Dates under AIA § 102(d)(2). As can be seen, under the AIA, both the Chinese and French applications, presumed to be effectively filed in Chinese and French, respectively, and published in a PCT application designating the U.S., have prior art dates under § 102(a)(2) and § 103 as of the Chinese and French filing dates, respectively. There is no geographic or language distinction between the three examples because the *Hilmer* doctrine is abolished. The important date is when the application is “effectively filed.”

As discussed above, the effective filing date for the claimed invention is critical to define the window of prior art for both novelty and non-obviousness purposes. The effective filing date is also critical to establish the applicable law, for example, pre-AIA, AIA, or both AIA and pre-AIA.

Generally, the “effective filing date” is the actual patent application filing date in the case of a still-pending application, assuming that the claim has § 112, first paragraph support in that application, unless the claimed invention is entitled to priority or benefit of an earlier patent filing.⁴⁵ This entitlement to priority or benefit exists where: (1) a claim for priority/benefit is made, and (2) the earlier patent filing, which is copendent with the later, contains written description and enablement support of the claimed invention,⁴⁶ as the AIA expressly removed the requirement of

⁴⁵ America Invents Act § 100(i)(1), 125 Stat. at 285. See also, 37 C.F.R. § 1.109.

⁴⁶ See MPEP § 201.08 and 35 U.S.C. §§ 119, 120, 121, 365(a)-(c) describing “disclosed in the manner provided by section 112(a)[.]” See also America Invents Act § 102(d)(2), 125 Stat. at 286–87 wherein “entitled to claim” priority/benefit requires only description of the subject matter. See also Examination Guidelines for Implementing the First Inventor To File Provisions, 78 Fed. Reg. 11,059, 11,074 (Feb. 14, 2013) (to be codified at 37 C.F.R. pt. 1) (“[I]n order for a prior art document to describe

disclosing the best mode in an earlier application for the purposes of showing entitlement to priority or benefit.⁴⁷

The new definition of prior art in the U.S. is accompanied by new post-grant procedures for third parties to request cancellation of U.S. patent claims based on prior art.⁴⁸ In addition to *ex parte* reexamination, which remains under the AIA as it was under pre-AIA (based on prior art patents and printed publications), as of September 16, 2012, there is (1) post-grant review, where the challenge must be filed within nine months of issuance and can be based on any ground of invalidity,⁴⁹ and (2) *inter partes* review, which can only be filed after nine months post-issuance and can only be based on 35 U.S.C. § 102 (anticipation) or § 103 (obviousness).⁵⁰

III. CHINA'S FIRST-TO-FILE SYSTEM

Like most other countries in the world, China operates under an FTF system, which means patent rights are granted to the first applicant:

If two or more applicants apply separately for a patent on the same invention-creation, the patent right shall be granted to the person who applied first.⁵¹

Under the Chinese FTF system, subject to, as explained further in Part IV.C, *infra*, a limited six-month grace period personal to the inventor, the time for deciding whether the invention is novel and non-obvious over prior art falls on the earliest effective filing date. In China, prior art means any

a claimed invention under AIA 35 U.S.C. 102(a)(1) or (a)(2), the prior art document need only describe and enable one skilled in the art to make a single species or embodiment of the claimed invention[.]”.

⁴⁷ 35 U.S.C. § 282(b)(3)(A), *amended by* America Invents Act, sec. 15, 125 Stat. at 328. Note that the best mode requirement still exists at least for all U.S. nonprovisional patent filings because it remains in 35 U.S.C. § 112(a).

⁴⁸ America Invents Act, sec. 6, 125 Stat. at 299–313.

⁴⁹ 35 U.S.C. § 321 et seq., *amended by* America Invents Act, sec. 6(d), 125 Stat. at 306. Post-grant review is only available, however, against claims with an effective filing date after March 15, 2013 (other than for transitional business method patents). The so-called “dead zone” between September 16, 2012, and the first patent issuing with claims with effective filing dates after March 15, 2013, was remedied by the Technical Amendment signed by President Obama on January 14, 2013. During the “dead zone,” *inter partes* reviews may be filed. *See also*, De Corte, Filip, Anthony Tridico, Tom Irving, Stacy Lewis & Christina N. Gervasi, *AIA Post-Grant Review & European Oppositions: Will They Work In Tandem, Or Rather Pass Like Ships In The Night?*, 14 N.C. J. L. & TECH. 93, 95 (2012) (discussing post-grant reviews).

⁵⁰ 35 U.S.C. § 311 et seq., *amended by* America Invents Act, sec. 6(a), 125 Stat. at 299. Post-grant review is only available, however, against claims with an effective filing date after March 15, 2013 (other than for transitional business method patents). The so-called “dead zone” between September 16, 2012, and the first patent issuing with claims with effective filing dates after March 15, 2013, was remedied by the Technical Amendment signed by President Obama on January 14, 2013. During the “dead zone,” *inter partes* reviews may be filed. *See, e.g.*, De Corte, Filip, Anthony Tridico, Tom Irving, Stacy Lewis & Christina N. Gervasi, *AIA Post-Grant Review & European Oppositions: Will They Work In Tandem, Or Rather Pass Like Ships In The Night?*, 14 N.C. J. L. & TECH. 93, 95 (2012) (discussing post-grant reviews).

⁵¹ Patent Law of the People's Republic of China (promulgated by the Standing Comm. Nat'l People's Cong., Dec. 27, 2008, effective Oct. 1, 2009), ch. I, art. 9 (2008) (China), *available at* http://20www.ipr2.org/images/eu_patent_law-final.pdf [hereinafter “China Patent Law”].

technology known to the public before the date of filing (if having right of priority, it shall be priority date) in China or abroad.⁵² This includes any technology which is publicly disclosed in a domestic or overseas publication or is publicly utilized in China or abroad or comes to be known to the public by any other means before the date of filing (if having right of priority, it shall be priority date), free of any geographic limitation. This current definition of prior art is considered an absolute novelty standard.⁵³

IV. HOW, IF AT ALL, DOES U.S. FITF DIFFER FROM CHINA FTF?

Although the United States has changed from FTI to FITF, it is different from the rule of FTF in China. The authors will analyze and compare the similarities and differences between China FTF and U.S. FITF in terms of acquisition of prior right, qualification of a patent applicant, grace period for novelty, scope of subject matter covered by “public use,” and patent applications where the claims conflict.

A. Principle of Acquisition of Prior Right

According to China’s FTF rule, a patent is granted to the person who files the application first, no matter whether the applicant is the inventor or not.⁵⁴

In the U.S., while the patent law is still focused on issuing patents to the first inventor, it now adds the additional objective that the patent be issued to the inventor who files the patent application first. If there is only one applicant who files an application, the patent right will be granted to such applicant. But if two or more applications are filed and the second application filing is within one year of the first application filing, a derivation procedure can be invoked to determine who is the first inventor.⁵⁵ A U.S. derivation proceeding under the AIA will determine whether the first applicant’s invention originates from a subsequent applicant’s (though possibly first inventor’s) invention. If the second filer is the first inventor, and proves that the first filer derived the subject matter from the second filer, the second filer may be awarded the patent right.⁵⁶ If the second filer does not meet the “substantial evidence” standard of proof, the first filer can proceed with patent prosecution and ultimately issuance of a U.S. patent. If

⁵² China Patent Law, ch. II, art. 22.

⁵³ Yixintian, Detailed Explanation of Patent Law of the People’s Republic of China, Intellectual Property Publishing House, 2011, 96–98, 244–50, 316–34.

⁵⁴ China Patent Law, ch. I, art. 9.

⁵⁵ America Invents Act § 135, 125 Stat. at 289.

⁵⁶ Changes to Implement Derivation Proceedings, 77 Fed. Reg. 56,068, 56,071 (Sept. 11, 2012) (to be codified at 37 C.F.R. pt. 42). “[A] derivation showing is not sufficient unless it is supported by substantial evidence and at least one affidavit addressing communication and lack of authorization, consistent with 35 U.S.C. 135(a), as amended. The showing of communication must be corroborated.” *Id.*

a similar series of events occurred in China, one would have to look at dates to see if China's grace period applied, otherwise the patent is awarded to the first filer.⁵⁷

Pre-AIA, under the FTI system in the U.S., the interference procedure was used to determine who was the first inventor. Importantly, U.S. patents and applications with claims with effective filing dates prior to March 16, 2013, will still be subject to the FTI system.⁵⁸ As mentioned in Part I, this very long transition will result in the coexistence of the AIA and pre-AIA patents until at least 2034. As of March 16, 2013, the AIA replaced interferences with derivation proceedings.⁵⁹ Interferences pending with the USPTO on September 16, 2013, may continue or may be converted to derivation proceedings.⁶⁰

B. Inventor's Qualification as Patent Applicant

In China, the employer holds the right to apply for a patent to an invention made in the course of employment using the resources of the employer.⁶¹ Such inventions are referred to as "service inventions."⁶² An exception to this is if there is a contract between the employee and employer specifying who shall have the right to apply for a patent and who shall have the patent right. In that case, such a contract shall prevail.⁶³ For non-service inventions, the right to apply for a patent rests with an inventor. Most inventions in China are service inventions; therefore, most patent applications filed in China are filed by companies.

The U.S. patent statute requires that the patent application identify the true and original inventor or inventors. For instance, 35 U.S.C. § 101 starts with the words, "Whoever invents or discovers . . ." Also, 35 U.S.C. § 115 requires that a patent applicant shall make an oath that he believes

⁵⁷ See *infra* Part IV.C.

⁵⁸ See America Invents Act § 146, 125 Stat. at 293.

⁵⁹ See *supra* note 55.

⁶⁰ See Changes to Implement Inter Partes Review Proceedings, 77 Fed. Reg. 48,680, 48,680 (Aug. 14, 2012) (to be codified at 37 C.F.R. pt. 42) ("In addition, the Chief Administrative Patent Judge may, in the interests-of-justice, order an interference commenced before September 16, 2012, to be dismissed without prejudice to the filing of a petition for post-grant review."). See also 37 C.F.R. § 42.200(d) (2013) ("Interferences commenced before September 16, 2012, shall proceed under part 41 of this chapter except as the Chief Administrative Patent Judge, acting on behalf of the Director, may otherwise order in the interests-of-justice.").

⁶¹ China Patent Law, ch. 1, art. 6.

An invention-creation, made by a person in execution of the tasks of the entity to which he belongs, or made by him mainly by using the material and technical means of the entity is a service invention-creation. For a service intention-creation [sic], the right to apply for a patent belongs to the entity. After the application is approved, the entity shall be the patentee.

Id.

⁶² *Id.*

⁶³ *Id.*

himself to be “the original inventor”⁶⁴ This is consistent with the U.S. Constitution, which states that patent rights are awarded specifically to inventors.⁶⁵ None of this changed under the AIA and the move to FITF. In other words, the existing *supra* law regarding U.S. inventorship, such as *Mergenthaler*, discussed *supra*, will continue, or at least will continue to evolve.

One change occurring under the AIA is that assignees are now allowed to file the patent application for any applications filed on or after September 16, 2012.⁶⁶ But, note that it is still a requirement to name the inventor and provide inventor documentation.⁶⁷ Permitting assignee filings brings the U.S. into step with most of the world. Therefore, for applications subject to the AIA, the first significant practice difference will be noted by applicants who file under the Patent Cooperation Treaty (“PCT”). The PCT applicant in all PCT countries, including the U.S., will be the assignee.

However, one should not be lulled into a false sense of security regarding the ability to file in the name of the assignee under the AIA. Specifically, the U.S. law still requires disclosure of the best mode known to each inventor.⁶⁸ Hence, for example, failure to identify all legitimate inventors at the time of filing a U.S. non-provisional application under the AIA or an international application under the PCT, might fail to disclose the best mode.

At the moment, disclosure of the best mode is still required under 35 U.S.C. § 112(a) but AIA removed any penalty for failing to file best mode.⁶⁹ This might cause the unwary to fail to disclose best mode and thus violate an express U.S. statutory requirement.

Nevertheless, patent litigation in U.S. district courts usually includes some aspect of equity. A seasoned patent litigator will warn any patentee that if a district court judge does not like the smell of the patentee’s case, she can find ample grounds among the plethora of defenses available to an infringer in a patent litigation to invalidate on other grounds, find unenforceable, or find non-infringed, the U.S. patent that violated the best mode requirement.⁷⁰

⁶⁴ 35 U.S.C. § 101 (2006); Leahy-Smith America Invents Act, Pub. L. No. 112-29, § 115, 125 Stat. 284, 293–96 (2011).

⁶⁵ U.S. CONST. art. I, § 8, cl. 1, 8 (“The Congress shall have Power . . . [t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries[.]”).

⁶⁶ America Invents Act § 118, 125 Stat. at 296–97 (“A person to whom the inventor has assigned or is under an obligation to assign the invention may make an application for patent.”).

⁶⁷ *Id.*

⁶⁸ 35 U.S.C. § 112(a).

⁶⁹ 35 U.S.C. § 282(b)(3)(A), *amended by* America Invents Act, sec. 15, 125 Stat. at 328.

⁷⁰ One should not forget the concept of inequitable conduct in the U.S., described as a plague. *Burlington Indus., Inc. v. Dayco Corp.*, 849 F.2d 1418, 1422 (Fed. Cir. 1988) (“[T]he habit of charging

Generally, in the U.S., even in the case of an employee inventing in the course of employment using the resources of the employer, the employment contract will be analyzed to see if it contained an obligation to assign any inventions to the employer.⁷¹ Some states in the U.S. have passed statutes which broadly declare anything that an employee "creates" is owned by the company, similar to the law in China.

C. Grace Period for Novelty

While China and the U.S. (under either pre-AIA or the AIA), both have a grace period for novelty, the grace periods are different in terms of length and applicability.

In China, the grace period is six months,⁷² compared to one year in the U.S.⁷³ The grace period in China only applies in limited circumstances. Specifically, an invention in China for which a patent is applied does not lose its novelty where, within six months before the date of filing, one of the following events occurred:

- (1) it was exhibited for the first time at an international exhibition sponsored or recognized by the Chinese Government;
- (2) it was made public for the first time at a prescribed academic or technical conference; or
- (3) it was disclosed by any person without the consent of the applicant.⁷⁴

If one of these three events has occurred, the invention may be entitled to a grace period for novelty.⁷⁵

The grace period in the U.S., both pre-AIA and post-AIA, does not have the restrictions on place as seen in items (1) and (2) above in China (although pre-AIA, public use and sale were both restricted to "in the United

inequitable conduct in almost every major patent case has become an absolute plague."). Perhaps the naïve believe that the *en banc* Federal Circuit case of *Therasense* ended inequitable conduct in the U.S. *Therasense, Inc. v. Becton, Dickinson & Co.*, 649 F.3d 1276, 1296 (Fed. Cir. 2011) (*en banc*). To be sure, it seems harder in the U.S. to establish inequitable conduct because the materiality and intent standards have been unlinked from each other and tightened. But post-*Therasense*, the co-authors are aware of four judicial holdings of inequitable conduct. See generally *Intellect Wireless Inc. v. Sharp Corp.*, No. 10 C 6768, 2012 WL 787051, at *1 (N.D. Ill. Mar. 9, 2012); *Apotex, Inc. v. Cephalon, Inc.*, No. 2:06-CV-2768, 2010 WL 678104, at *6 (E.D. Pa. Feb. 23, 2010) *aff'd*, No. 2012-1417, (Fed. Cir. Apr. 8, 2013); *Aventis Pharma S.A. v. Hospira, Inc.*, 675 F.3d 1324 (Fed. Cir. 2012).

⁷¹ See, e.g., *Preston v. Marathon Oil Co.*, 684 F.3d 1276, 1279, 1286 (Fed. Cir. 2012) (analyzing an employment agreement that included an "automatic" assignment of "all Intellectual Property . . . 'made or conceived' by an employee while employed . . .").

⁷² China Patent Law, ch. 2, art. 24.

⁷³ The length of the grace period in the U.S. is one year, the same pre-AIA and under the AIA. Compare 35 U.S.C. § 102(b) (2006), with America Invents Act § 102(b), 125 Stat. at 286.

⁷⁴ China Patent Law, ch. 2, art. 24.

⁷⁵ *Id.*

States” and, as explained in Part II.B, that restriction has been removed in the AIA).⁷⁶ Item (3) in China seems to allow an inventor to avoid the consequence of losing out on the rights to the invention without going through what in the U.S. would require in a derivation proceeding.

For U.S. patent applications containing at least one claim with an effective filing date after March 15, 2013, the grace period shall be determined from the effective filing date.⁷⁷ Under FTI, at least for purposes of pre-AIA 35 U.S.C. § 102(b), the grace period is calculated from the date of the first U.S. filing date.⁷⁸

The change to calculating the grace period from the earliest effective filing date means, whenever a patent application was filed outside of the U.S. first, the date starting the grace period under the AIA is earlier in time than under the FTI system. For example, under FTI, if a patent application was filed in China on January 1, 2010, and then the U.S. counterpart was filed on January 1, 2011, only the U.S. filing date would be used for calculating the grace period applicable to the January 1, 2011 filing. The grace period in the U.S. would thus reach back to January 1, 2010. Hence, prior art available on December 31, 2009, one day before the start of the grace period, could not be antedated and the grace period would not apply to that art.



Fig. 3: Pre-AIA grace period in U.S. (35 U.S.C. § 102(b)(2006)).

Under FITF, assume the patent application is filed first in China on January 1, 2014, and the U.S. counterpart is filed on January 1, 2015. Further assume that the effective filing date of the claimed invention in the U.S. counterpart is the January 1, 2014 priority date. Under those circumstances, the grace period reaches back to January 1, 2013—two years before the U.S. filing date.

⁷⁶ Compare 35 U.S.C. § 102(b) (2006), with America Invents Act § 102(a)(1), 125 Stat. at 285–86.

⁷⁷ America Invents Act § 102(b)(1), 125 Stat. at 286.

⁷⁸ 35 U.S.C. § 102(b) (2006) (“[T]he invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States....”).

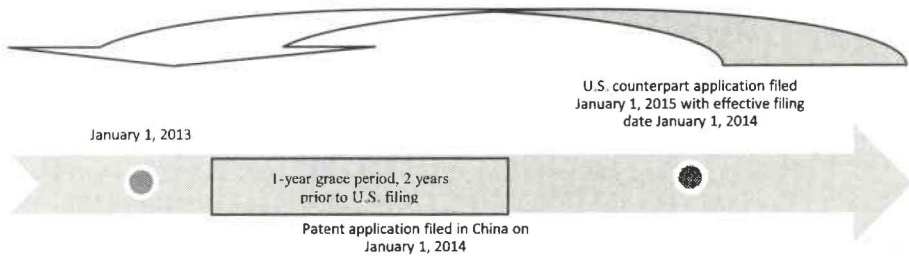


Fig. 4: AIA grace period in U.S. (35 U.S.C. § 102(b)(1), applies to applications containing at least one claim with an effective filing date after March 15, 2013)

As can be seen, the disclosure occurring before the first filing in China would have been a pre-AIA § 102(b) bar against the U.S. claims because it occurred more than one year before the actual U.S. filing. But in the land of the AIA, assuming the effective filing date of the U.S. claimed invention is the date of the Chinese application and assuming that the disclosure in the U.S. can be avoided by invoking an exception of the AIA § 102(b)(1), the claimed invention in the U.S. application is free of that public disclosure which was otherwise putative AIA § 102(a)(1) prior art.

And the astute reader will link this graphic to the earlier one revealing the “Jedi Master Mixer.” The key is to use strategically the patent system in the U.S. to put the application under the AIA provisions *and* pre-AIA 35 U.S.C. § 102(g) under transition provision AIA section 3(n)(2).⁷⁹ As long as the patentee can overcome any AIA 35 U.S.C. § 102(a)(1) or 102(a)(2) and any pre-AIA § 102(g) prior art issues, the patent applicant emerges victorious (to borrow a phrase from a James Bond movie, against all odds!).

In addition to the U.S. grace period time frame changing, the activity subject to grace period protection also changed under the AIA. Specifically, under FTI, the grace period applied universally to printed publications (anywhere) and public use or sale in the U.S., within one year prior to the U.S. patent application filing date.⁸⁰ Under FITF, *only* the inventor’s own disclosure, invoking the exception under either AIA § 102(b)(1)(A) or (B), is eligible for the grace period exception.⁸¹

However, there is a trap in invoking the grace period exception to prior art under either AIA § 102(b)(1)(A) or (B).⁸² Subject to the final word of future U.S. litigation, the grace period in the U.S. applies *only* for the same subject matter earlier disclosed by the inventor; “related” subject

⁷⁹ America Invents Act § 146, 125 Stat. at 293.

⁸⁰ 35 U.S.C. § 102(b) (2006).

⁸¹ America Invents Act § 102(b)(1), 125 Stat. at 286.

⁸² America Invents Act § 102(b)(1)(A)–(B), 125 Stat. at 286.

matter could still be used against the patentee for obviousness.

D. Scope of Prior Art Covered by “Public Use” in the U.S. and “Disclosure by Use” in China

Although the scope of prior art in the U.S. as set forth in AIA 35 U.S.C. § 102(a)(1) is expanded compared to pre-AIA (no restrictions based on geography and language), it is still greatly different from what is called “disclosure by use” in China, in terms of the scope of prior art covered by what is called “public use” in the U.S.

In China, no published technology shall constitute prior art unless the content of such technology is accessible to the public. As for trade secrets, even if commercialized, if the content is kept secret and is not accessible to the public, the commercialized trade secret shall not be deemed as being “disclosure by use.” Therefore, it shall not, under the Chinese law, fall within the scope of existing technology.⁸³ Under such circumstances, the person owning the trade secret may still elect to apply for a patent later so as to procure patent protection for the subject matter of the trade secret.⁸⁴

In the United States, pre-AIA, trade secrets are not considered public use if they are kept secret. Trade secret protection is governed by state law, as opposed to patent protection, which is governed by federal law. Pre-AIA, a public use can constitute prior art against the claims of the application if it occurred in the United States and occurred more than one year before the actual filing date of the application in the United States.⁸⁵ To determine whether a use is novelty-defeating “public use” in the U.S., pre-AIA requires, according to U.S. case law, consideration of (1) the extent of the use, and (2) the extent of publicity of the use.⁸⁶ Because use is generally undisputed, the analysis primarily focuses on whether the use was “public.”

When pre-AIA law (FTI) applies, when the invention is sold or put on display and used in its natural and intended way, a public use may well

⁸³ China Patent Law, ch. 3, art. 33.

⁸⁴ *Contra Metallizing Eng'g Co. v. Kenyon Bearing & Auto Parts Co.*, 153 F.2d 516 (2d Cir. 1946) (discussing forfeiture). In *Metallizing*, the claimed invention was a commercial process, practiced in secret, that was not available to the public. *Id.* at 517. The court (Judge Learned Hand) refused to let the inventor patent the process on the ground that it had been commercialized more than one year before patent filing. *Id.* at 520. Subject to future litigation in the U.S., many argue that the AIA has legislatively overruled *Metallizing* because the only possibilities for prior art are 35 U.S.C. §§ 102(a)(1) and (a)(2). In other words, there are those who argue that the idea of forfeiture is antithetical to the publicly accessible underpinnings of 35 U.S.C. §§ 102(a)(1) and (a)(2). The USPTO took that position in its February 14, 2013, guidelines. See generally Examination Guidelines for Implementing the First Inventor To File Provisions, 78 Fed. Reg. 11,059 (Feb. 14, 2013) (to be codified at 37 C.F.R. pt. 1) At least one of the co-authors agrees. And if the USPTO position is upheld, the U.S. AIA law becomes more similar to this point of Chinese law. See discussion *infra* Part.IV.D and notes 84–88.

⁸⁵ See, e.g., *In re Crish*, 393 F.3d 1253, 1256, 1260 n.6 (Fed. Cir. 2004).

⁸⁶ See *Atl. Thermoplastics Co. v. Faytex Corp.*, 970 F.2d 834, 836 (Fed. Cir. 1992).

occur.⁸⁷ A use is “public” even if the invention is completely hidden from view, for example, as part of a larger article, so long as the larger article is accessible to the public.⁸⁸

Even if the invention is arguably concealed as part of a larger product, using the invention in its intended environment and in a non-private manner may give rise to a public use. However, using an invention in a place where the inventor can reasonably expect privacy should not give rise to a public use.

The Federal Circuit has provided the following framework:

The proper test for the public use prong of the § 102(b) statutory bar is whether the purported use: (1) was accessible to the public; or (2) was commercially exploited. Commercial exploitation is a clear indication of public use, but it likely requires more than, for example, a secret offer for sale. Thus, the test for the public use prong includes the consideration of evidence relevant to experimentation, as well as, *inter alia*, the nature of the activity that occurred in public; public access to the use; confidentiality obligations imposed on members of the public who observed the use; and commercial exploitation⁸⁹

Pre-AIA § 102(b) applies to acts of the applicant as well as to the acts of others. Even if the inventor does not publicly use the invention, a public bar arises where a third party publicly uses the invention more than one year prior to the U.S. patent application actual filing date.⁹⁰ Unlike when the inventor uses the invention, for a third party use to constitute a public use bar, the invention must be ascertainable from the article sold or displayed.⁹¹

A related and important aspect of “loss of right to patent” pre-AIA, was the so-called “forfeiture” provision, under which the inventor’s pre-filing commercialization of an invention, even if non-public, represented a bar to patenting of the underlying unknown and unknowable process used to make the product sold. That forfeiture occurred if the product made by the secret process was sold or used on the market in the U.S. more than one year

⁸⁷ Public Use, MPEP § 2133.03(a) (8th ed. Rev. 9, Aug. 2012).

⁸⁸ *New Railhead Mfg. v. Vermeer Mfg.*, 298 F.3d 1290, 1299 (Fed. Cir. 2002) (holding an experimental drilling test, performed more than one year before the application filing date constituted public use, even though use took place underground, and the experimental drill bit could not be viewed in operation).

⁸⁹ *Invitrogen Corp. v. Biocrest Mfg., L.P.*, 424 F.3d 1374, 1380 (Fed. Cir. 2005).

⁹⁰ *See W.L. Gore & Assoc. v. Garlock, Inc.*, 721 F.2d 1540, 1549 (Fed. Cir. 1983); *see also*, *Baxter Int'l, Inc. v. Cobe Labs., Inc.*, 88 F.3d 1054, 1063 (Fed. Cir. 1996).

⁹¹ *Gore*, 721 F.2d at 1550; *Baxter*, 88 F.3d at 1058.

before a patent was sought.⁹²

Even when a claimed invention was a commercial process, practiced in secret, and not available to the public, if such practice was more than a year before the actual U.S. filing date, under the forfeiture doctrine, the courts would not let the inventor patent the process on the ground that it had been commercialized more than one year before filing of the patent application.

As noted in Part IV.D under the AIA, the forfeiture doctrine may have ended.⁹³ According to the legislative history of the AIA, removing the geographic and language restrictions on pre-AIA definitions of prior art was intended to eliminate “secret prior art” of any kind *anywhere*.⁹⁴ Under the AIA, invalidating prior art may be a public use or “otherwise available to the public.”⁹⁵ This may include the commercialization of a trade secret, and to the extent there is overlap with claimed subject matter, may be deemed a “public use.” The USPTO indicated that it will look to the pre-AIA case law on “accessibility” to evaluate “otherwise available to the public” in 35 U.S.C. § 102(a)(1).⁹⁶

Ultimately, this is the kind of issue that will be litigated as the U.S. adjusts to the AIA and the FITF system. The AIA may motivate patent applicants to select, as early as possible, either trade secret or patent protection, because there may be more pressure to file patent applications earlier than under pre-AIA law. If there is indeed no more forfeiture under the AIA, choosing a trade secret route early, after considering all the facts and circumstances, allows the patent applicant to delay filing, and thus delay the start of the patent term clock.

The broad definition of public use, of course, potentially causes some problems for the U.S. applicant. To establish public use, evidence of public use or offer to sell can come from anywhere in the world in any language to meet the test of public accessibility. However, a patent applicant might have difficulty in accessing such evidence prior to discovery

⁹² See, e.g., *Metallizing Eng'g Co. v. Kenyon Bearing & Auto Parts Co.*, 153 F.2d 516, 518 (2d Cir. 1946).

⁹³ See Examination Guidelines for Implementing the First Inventor To File Provisions, 78 Fed. Reg. 11,059, 10,062 (Feb. 14, 2013) (to be codified at 37 C.F.R. pt. 1).

⁹⁴ See CONG. REC. S5402-02 (daily ed. Sept. 8, 2011) (“Once an invention has entered the public domain, by any means, it can no longer be withdrawn by anyone.”); see also *supra* note 19 and accompanying text.

⁹⁵ Leahy-Smith America Invents Act, Pub. L. No. 112-29, § 102(a)(1), 125 Stat. 284, 285-86 (2011).

⁹⁶ Examination Guidelines for Implementing the First Inventor To File Provisions, 78 Fed. Reg. at 11,063-64 (“the case law on whether material is available and accessible as discussed in MPEP § 2128 will guide the Office and the public in making determinations as to whether any particular disclosure is sufficiently publicly available under the “otherwise available to the public” clause of AIA 35 U.S.C. 102(a)(1). The Federal Circuit recently reiterated that the ultimate question is whether the material was “available to the extent that persons interested and ordinarily skilled in the subject matter or art[,] exercising reasonable diligence, can locate it.”).

in U.S. litigation. Such evidence is likely to be accessed by discovery adduced by the patentee's opponent in U.S. litigation.

The only exception to invalidating public use will be for disclosures by the inventor, within one year of the effective filing date of the patent application at issue,⁹⁷ or public disclosures of the subject matter by the inventor before disclosure by a third party, within one year of the effective filing date of the patent application at issue.⁹⁸

E. Use of "Conflicting Application"

In China, prior art shall mean a technology known to the public at home and abroad before the date of filing.⁹⁹ The relevant existing technologies can be used to judge the novelty and non-obviousness of patent application.

In addition, any Chinese patent or Chinese patent application, which was filed before the filing date and was published after the filing date, can only be used to evaluate novelty, but not to evaluate non-obviousness.¹⁰⁰

In the United States, under pre-AIA § 102, the definition of prior art for the purposes of novelty and non-obviousness included patents and published patent applications, as well as other types of prior art.¹⁰¹ If any of those patents or published patent applications were filed by the inventor within one year, they fell within the grace period and shall not be used to evaluate novelty and non-obviousness under pre-AIA. The changes to the definition of prior art 35 U.S.C. § 102 apply to both anticipation under § 102 and obviousness under § 103.¹⁰² As noted above, under the AIA, U.S. patent claims with an effective filing date after March 15, 2013 will use that effective filing date for determining the relevant prior art.¹⁰³

Under the AIA, there may still be an issue with obviousness-type double-patenting ("ODP") between U.S. patents that are arguably related, even if not commonly owned.¹⁰⁴ This is a very hot question, as ODP is not a prior art rejection but a judge-made rule that seeks to preclude impermissible extension of patent term through issuance of multiple patents with different expiration dates. As the Manual of Patent Examination Procedure and U.S. case law explain, there are significant differences

⁹⁷ America Invents Act § 102(b)(1)(A), 125 Stat. at 286.

⁹⁸ America Invents Act § 102(b)(1)(B), 125 Stat. at 286.

⁹⁹ China Patent Law, ch. 2, art. 22.

¹⁰⁰ *Id.*

¹⁰¹ 35 U.S.C. § 102 (2006).

¹⁰² America Invents Act §§ 102, 103, 125 Stat. at 285–88; Examination Guidelines for Implementing the First Inventor To File Provisions, 78 Fed. Reg. 11,059, 11,075 (Feb. 14, 2013) (to be codified at 37 C.F.R. pt. 1).

¹⁰³ America Invents Act § 102, 125 Stat. at 285–87.

¹⁰⁴ See *In re Hubbell*, 709 F.3d 1140, 1147 (Fed. Cir. 2013).

between a rejection based on double patenting and one based on prior art.¹⁰⁵ Indeed, the USPTO recently emphasized:

Even if the U.S. patent or U.S. published application is not prior art under AIA 35 U.S.C. 102 or 103 as a result of AIA 35 U.S.C. 102(b)(2)(C), a double patenting rejection ... may still be made on the basis of the U.S. patent or U.S. patent application publication.¹⁰⁶

There is little doubt the USPTO will apply ODP to the AIA claims. That may stick, since ODP does not clash with the public accessibility requirements of the AIA. Rather, as noted above, ODP is to prevent “a patentee from claiming an obvious variant of what it has previously claimed.”

F. Common Ownership and Joint Research Agreements

Under the AIA, common ownership may now provide a defense under AIA § 102(b)(2)(C) against AIA § 102(a)(2) prior art documents that would otherwise be prior art,¹⁰⁷ as long as that ownership, which can also be created by implementation of a Joint Research Agreement (“JRA”),¹⁰⁸ is in place by the effective filing date (as opposed to the invention date) of the claimed invention. The JRA is not *required* to take advantage of this exception, but it *can be* used.

The date of invention is almost always earlier than the effective filing date of the claimed invention. In fact, the AIA change to “on or before the effective filing date” may mean that a patent applicant can purchase potential, even independently developed, AIA § 102(a)(2) prior art before filing a patent application, thereby removing the potential prior art as a threat.

Pre-AIA, common ownership was calculated from the date of invention and only provided protection against obviousness. China does not have this exception to prior art.

V. IMPLICATIONS ON FILERS IN BOTH CHINA AND THE U.S.

Chinese and U.S. patent application filers may have decided to file as many applications as possible in the U.S. prior to March 16, 2013, so that all claims will be subject to pre-AIA requirements. That is the devil we

¹⁰⁵ See e.g., MPEP § 804(2)(B), (3) (8th ed. Rev. 9, Aug. 2012).

¹⁰⁶ Examination Guidelines for Implementing the First Inventor To File Provisions, 78 Fed. Reg. 11,059, 11,080 (Feb. 14, 2013) (to be codified at 37 C.F.R. pt. 1).

¹⁰⁷ America Invents Act §§ 102(a)(2), 102(b)(2)(C), 125 Stat. at 286.

¹⁰⁸ See America Invents Act § 102(c), 125 Stat. at 286.

know. There certainly was a filing bubble before March 16, 2013.¹⁰⁹

In general, the prior art under pre-AIA will be narrower in parts than that under the AIA. Under pre-AIA, foreign priority documents are not pre-AIA § 102(e) and (g) prior art against the U.S. claims, nor can public uses or sales outside the U.S. be useful as prior art.

Of course, there was no sense in rushing to file patent applications before March 16, 2013, that did not enable or provide written description for the full scope of the claims. Such claims will just have to be filed in new applications, more fully satisfying the 35 U.S.C. § 112 requirements of enablement and written description after March 15, 2013, and will then be subject to the AIA.

But the AIA is not without its advantages. For example, as explained, at least the USPTO believes that the *Metallizing Engineering* doctrine of forfeiture will not exist under AIA. And the liberalization of common ownership explained in Part IV.F, as a defense under AIA § 102(b)(2)(C) to AIA § 102(a)(2) prior art, may be a lifesaver.

Furthermore, do not forget the new player on the stage, the totally unforeseen “Jedi Master Mixer.” As discussed, that procedure could rescue claims otherwise doomed under pre-AIA because of statutory bar art publicly available in the U.S. more than one year before the actual U.S. filing date. The following illustrations show the brave new AIA world that both Chinese and U.S. applicants will face:



Fig. 5: Definition of Prior Art, Scenario 1. Pre-AIA in U.S., B could antedate A showing prior conception/diligence/reduction to practice. Under AIA in U.S., A is prior art to B for §§ 102 and 103 purposes. AIA § 102(a)(1) and § 102(b)(1) do not apply. AIA § 102(a)(2) applies unless § 102(b)(2) exception applies.



Fig. 5: Definition of Prior Art, Scenario 2. Pre-AIA in U.S., foreign sale is not prior art to B’s application. AIA in U.S., foreign sale is prior art under § 102(a)(1).

¹⁰⁹ *Patent Statistics*, USPTO, www.uspto.gov (USPTO statistics report that the average monthly filing between October 2012 and February 2013 was 7,205, but the patent applications filed March 11–15, 2013 totaled 34,112 (a 473% increase), with filings in the week of March 25–29, 2013 at 5,818).



Fig. 6: Public disclosure as a sword and shield. A's public disclosure is not prior art against herself (within 1 year) (assuming 35 U.S.C. § 102(b)(1)(A) exception is available); A's public disclosure is a shield to A from B's publication (35 U.S.C. § 102(b)(2)(A)); and A's public disclosure is prior art against B's patent application (35 U.S.C. § 102(a)(1)). First-inventor-to-file loses!



Fig. 7: Compare result in China. A's public disclosure is defeating prior art against B's patent application, but also destroys absolute novelty of A's patent application (as does B's patent application filing). Neither gets the patent!

VI. CONCLUSION

Under the AIA, U.S. patent law was amended to replace FTI with FITF. Such a fundamental change will have a great impact, although FTI and FITF will coexist for more than the next twenty years because of the effective date and transition provisions of the AIA. Which system applies will depend on whether a patent or application has all claims with an effective filing date before March 16, 2013 (FTI), or all claims with an effective filing date after March 15, 2013 (FITF), or both in a “Jedi Master Mixer”!

FITF may have the consequence of shortening the effective life of patents which are valuable until the very end of their patent term. Therefore, it received strong objections from industries such as innovative pharmaceuticals. However, FITF “levels the playing field” among domestic and foreign applicants for U.S. patent protection by removing geographic and language restrictions and using the earliest effective filing date as the touchstone for determining relevant prior art.

In China, the FTF system applies, with an absolute novelty standard for prior art. Because the filing date of Chinese patent applications will now be considered the effective filing date for any counterpart U.S. patent applications filed, companies filing in both China and the U.S. will likely continue to file first in China.