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The Post-Grant Problem: America Invents Falling Short

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Note

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INTRODUCTION

Prior to the passage of the Leahy-Smith America Invents Act (AIA), the United States operated a patent system that was in many ways unique among developed nations. For example, priority was determined by the first applicant to invent the process or item in question,[1] an applicant had to disclose the "best mode" for practicing the claimed invention,[2] and the process for review of a patent after issuance was extremely limited.[3] Additionally, the patent prosecution system in the United States was a slow, inefficient process.[4] Patents were frequently invalidated, and those that were not invalidated required an inordinate amount of time and resources to defend.[5] In an attempt to address these issues, Congress passed AIA.[6] Under the new system many of the differences between the U.S. patent system and the European patent system have been har-

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1. H.R. REP. NO. 112-98, pt. 1, at 40 (2011).

2. 35 U.S.C. § 112 (2006); United States Patent and Trademark OFFICE, MANUAL OF PATENT EXAMINATION PROCEDURE §§ 2138.01 pt. I, 2165 (8th ed. 2010) [hereinafter MPEP].

3. *See* JANICE M. MUELLER, AN INTRODUCTION TO PATENT LAW 256–57 (2d ed. 2006).

4. *See generally* NAT'L RESEARCH COUNCIL, A PATENT SYSTEM FOR THE 21ST CENTURY 1–2 (Stephen A. Merrill et al. eds., 2004) (identifying weaknesses in the current U.S. patent system and proposing methods for improving the system).

5. *Id*. at 4.

6. H.R. REP. NO. 112-98, pt.1, at 38–40.

monized,[7] a new post-grant review process has been established,[8] and the ability of third parties to participate has been significantly increased.[9] It has yet to be determined, however, whether these changes will effectively promote the goals established by Congress.

The goal of this Note is to determine whether the new post-grant system established under AIA will ameliorate those issues identified by Congress as problematic within the current patent regime. Part I of this Note will describe the current international framework for patents as established by the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), the current United States patent regime, the current European patent regime, and the changes to the U.S. patent regime made by AIA. Part II compares the changes made by AIA—in particular changes regarding the new post-grant review—to the European system they are modeled after. Part III identifies failures and proposes a more selective pre-grant review system to address the failures. This Note concludes that, while the new patent regime created by AIA takes important steps towards addressing patent strength and litigation issues, under the current legal system a more stringent pre-grant review is necessary to meet the goals of AIA.

II. BACKGROUND

A. TRIPS: THE INTERNATIONAL FRAMEWORK FOR DOMESTIC PATENT LAW

Patent law in all World Trade Organization (WTO) countries, including the United States, is governed by TRIPS.[10] Signed in 1994, TRIPS attempts to harmonize intellectual property protection in order to promote free trade among mem-

7. *Id*. at 39.
8. *Id*. at 45.
9. *Id*. at 45–46.
10. Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 14, 1994, 1869 U.N.T.S. 299 [hereinafter TRIPS]; *Frequently Asked Questions About TRIPS in the WTO*, WORLD TRADE ORG., http://www.wto.org/english/tratop_e/trips_e/tripfq_e.htm (last visited Oct. 3, 2012). There are 157 member nations, including all major developed nations. *Members and Observers*, WORLD TRADE ORG., http://www.wto.org/english/thewto_e/whatis_e/tif_e/org6_e.htm (last visited Oct. 3, 2012).

ber nations.[11] TRIPS encompasses not only patents, but also copyrights, trademarks, geographical indications, industrial designs, topographies of integrated circuits, trade secrets, and anti-competitive behaviors.[12] Prior to TRIPS, international patent law harmonization was governed by the Paris Convention for the Protection of Industrial Arts of 1967 (ParC).[13] ParC was so widely accepted as a model that large portions of it are incorporated by reference into TRIPS.[14] Between ParC and TRIPS, standards for patent regimes have been established. These standards range from time frames for protections (not less than twenty years from filing)[15] to rights conferred.[16] Some standards include:

- The same rights must be granted to foreigners as citizens.[17]
- The filing date of a domestic patent application in one country will be the effective date for patent applications filed in all other countries, provided that subsequent applications are filed within the grace period.[18]
- With limited exceptions, individual technologies cannot be discriminated against.[19]
- Exclusive use rights are granted, though compulsory licensing may be required by granting countries.[20]
- The invention must be disclosed in a manner that would enable a person skilled in the art to practice the invention;[21] and
- "An opportunity for judicial review of any decision to re-

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11. NUNO PIRES DE CARVALHO, THE TRIPS REGIME OF PATENT RIGHTS 40 (2d ed. 2005).

12. *Id.* at 29.

13. Paris Convention for the Protection of Industrial Property, July 14, 1967, 21 U.S.T. 1583 [hereinafter ParC].

14. TRIPS, *supra* note 10, at art. 2.

15. *Id.* at art. 33.

16. *Id.* at art. 28.

17. *Id.* at art. 1.

18. ParC, *supra* note 13, at art. 4.

19. TRIPS, *supra* note 10, at art. 27; PIRES DE CARVALHO, *supra* note 11, at 167.

20. TRIPS, *supra* note 10, at arts. 28, 30; ParC, *supra* note 13, at art. 5; *Intellectual Property: Protection and Enforcement*, WORLD TRADE ORG., http://www.wto.org/english/thewto_e/whatis_e/tif_e/agrm7_e.htm (last visited Oct. 3, 2012).

21. TRIPS, *supra* note 10, at art. 29.

voke or forfeit a patent shall be available."[22]

There is no initial procedure or required reason prescribed for revocation, so any revocation is at the discretion of the patent-granting states.[23] The requirement for judicial appeal and a lack of direction as to what form this appeal must take have led to a wide range of mechanisms for challenging patents and appealing those decisions. For example, the United States uses a reexamination process in addition to federal litigation, while Europe uses a post-grant opposition system.[24]

B. RE-ISSUE, REEXAMINE: THE CURRENT U.S. PATENT REGIME

In the United States the federal government is granted the power to issue patents for the promotion of the "[p]rogress of Science and useful Arts" by the U.S. Constitution.[25] As a reward for investment and public disclosure an inventor is granted a limited monopoly for the claimed invention for a period of time, typically twenty years from the date the application was filed.[26] An invention could be a "process, machine, manufacture, or composition of matter."[27] There are, however, certain classes of inventions that cannot be patented, including laws of nature (e.g. gravity), natural phenomena (e.g. naturally occurring minerals), and abstract ideas (e.g. mathematical algorithms).[28]

The process for obtaining a patent is a long one, on average taking up to three years to obtain a single patent.[29] Additionally, the granting of a patent is not guaranteed. In order to obtain a patent the inventor must apply, and the invention must meet some very basic requirements. The invention must be novel, have utility, and must be a non-obvious improvement over any

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22. *Id.* at art. 32.
23. PIRES DE CARVALHO, *supra* note 11, at 372–73.
24. MUELLER, *supra* note 3, at 256–57, 263.
25. U.S. CONST. art. I, § 8, cl. 8.
26. 35 U.S.C. § 154 (2006); Kevin R. Davidson, *Retooling Patents: Current Problems, Proposed Solutions, and Economic Implications for Patent Reform*, 8 HOUS. BUS. & TAX L.J. 425, 428 (2008); *see* Kewanee Oil Co. v. Bicron Corp., 416 U.S. 470, 480–81 (1974).
27. 35 U.S.C. § 101.
28. MPEP, *supra* note 2, at § 2106.
29. Mark A. Lemley, *Patenting Nanotechnology*, 58 STAN. L. REV. 601, 604 (2005).

prior inventions (prior art).[30] The process for obtaining a patent—patent prosecution—tends to follow a standard trajectory. First the inventor or his legal representative files a patent application.[31] The patent examiner then determines what the inventor is trying to patent, whether it has utility, what relevant prior art exists, and if the invention claimed would not be obvious to a person "skilled in the art" in light of the prior art.[32] Even if all of these requirements are met, under the current first-to-invent system, the applicant will not receive the patent if there is another inventor who filed an application after, but nevertheless invented before the applicant.[33]

After the patent is granted, the validity of the patent can be challenged three different ways. First, the validity may be challenged in federal court.[34] When validity is challenged in court there is a presumption that all issued patents are valid, and in order to invalidate a patent the challenging party must meet a "clear and convincing evidence" standard.[35] Second, the validity may be challenged in an *ex parte* reexamination proceeding.[36] Anyone can request an *ex parte* reexamination, but only the patent holder can participate in the proceedings.[37] As a result, there are no estoppel consequences for third parties if the validity is challenged later in federal court, and the ruling of the examiner cannot be appealed by third parties to the United States Patent and Trademark Office's (USPTO) Board of Patent Appeals and Interferences (BPAI).[38]

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30. 35 U.S.C. §§ 101, 103.

31. MUELLER, *supra* note 3, at 38.

32. MPEP, *supra* note 2, at § 2144.08.

33. H.R. REP. NO. 112-98, at 40 (2011); MPEP, *supra* note 2, at § 2138.01. There are some limitations to this rule. Someone claiming to have invented first who applied second must initiate an interference proceeding. MPEP, *supra* note 2, at § 2301. This second applicant must not have "abandoned, suppressed, or concealed" the invention. 35 U.S.C. § 102(g); MPEP, *supra* note 2, at § 2138.03. An unreasonable delay in filing can be considered suppression or concealment. MPEP, *supra* note 2, at § 2138.03; *see* Peeler v. Miller, 535 F.2d 647, 656 (C.C.P.A. 1976). Additionally, there must be reasonable diligence to reduce the invention to practice and to file an application. MPEP, *supra* note 2, at § 2138.06.

34. MUELLER, *supra* note 3, at 32–36; *see also* Davidson, *supra* note 26, at 442–43.

35. MUELLER, *supra* note 3, at 364–65.

36. *Id.* at 258–62.

37. *Id.* at 258.

38. *Compare id.* at 258 (explaining the third-party requester's level of participation in an *ex parte* reexamination), *with id.* at 263–64 (explaining the procedure of *inter partes* reexamination, which includes the option for the

Finally, the validity may be challenged in an *inter partes* reexamination.[39] In an *inter partes* reexamination, third parties have an opportunity to participate in the arguments surrounding validity.[40] As a result, third parties that participate are estopped from raising any question of invalidity that could have been brought up at the reexamination proceedings, are allowed to appeal any ruling first to the BPAI and then to the federal circuit, and can request the court stay any federal litigation dependent on the validity of the patent until a decision is reached, but the court need not grant it.[41] In both *ex parte* and *inter partes* reexaminations there must be a substantial new question of patentability based solely on published patents or printed publications, and only a preponderance of the evidence is required.[42] *Ex parte* reexaminations are used rarely (roughly 0.2% of issued patents).[43] Since its enactment in 1999, *inter partes* reexaminations have been increasing, but there is no evidence that they will be used at a significantly higher rate than *ex parte* reexaminations.[44]

Some minor changes were made to U.S. patent law as a result of signing onto TRIPS.[45] Patent terms are now twenty years from the date of filing, instead of seventeen years from issuance.[46] Foreign inventers are now allowed to use evidence of practice or development in WTO countries to establish invention dates.[47] The definition of infringement was expanded,[48]

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third-party requester to appeal to the BPAI and is subject to the estoppel provision of 35 U.S.C. § 315(c) (2006)).

39. *Id.* at 263.

40. *Id.*

41. *Id*. at 263–65.

42. MPEP, *supra* note 2, at § 706.I; Sherry M. Knowles, Thomas E. Vanderbloemen & Charles E. Peeler, Inter Partes *Patent Reexamination in the United States*, 86 J. PAT. & TRADEMARK OFF. SOC'Y 611, 611–12 (2004).

43. Dale L. Carlson & Robert A. Migliorini, *Patent Reform at the Crossroads: Experience in the Far East with Oppositions Suggests an Alternative Approach for the United States*, 7 N.C. J.L. & TECH. 261, 269 (2006).

44. From 2006 through 2010, 973,368 patents were issued, and 903 *inter partes* reexaminations were filed (~0.1%). U.S. PATENT AND TRADEMARK OFFICE, PERFORMANCE AND ACCOUNTABILITY REPORT: FISCAL YEAR 2010, at 129, 137 [hereinafter ACCOUNTABILITY REPORT 2010].

45. *See* ROBERT P. MERGES & JOHN F. DUFFY, PATENT LAW AND POLICY: CASES AND MATERIALS 58 (5th ed. 2011).

46. 35 U.S.C. § 154 (2006); MERGES & DUFFY, *supra* note 45, at 58.

47. 35 U.S.C. § 104; MERGES & DUFFY, *supra* note 45, at 58.

and provisional applications were introduced.[49] Despite these attempts at global harmonization, major differences between the United States and other national patent regimes still exist.

C. PATTERNING AFTER PATENT OPPOSITION: THE EUROPEAN SYSTEM OF POST-GRANT REVIEW

European patents are governed by the European Patent Convention (EPC),[50] an agreement allowed by ParC.[51] Under the EPC, any patent granted by the European Patent Office (EPO) is enforceable in any contracting country as if it were a national patent.[52] In order for a patent to be issued the invention must be "[novel], include an inventive step, and [be] susceptible [to] industrial application."[53] Like in U.S. patent law, novelty is determined based on a comparison with only a single piece of prior art, not a combination of multiple pieces.[54] The inventive step, like the non-obvious requirement in U.S. patent law, should be determined based on the combination of all relevant prior art.[55] European patent applications are published the sooner of eighteen months after the filing date or eighteen months after the priority date—a date prior to the filing that the application claims is a better representation of when the invention was originally claimed—and priority rules are based on ParC and EPC rules.[56] Third parties who feel they have important information regarding an application can submit information relevant to the patent proceedings during the application process in filings called "observations."[57] Once a patent is issued, it is enforceable for twenty years from the filing date.[58] European patents are enforced at the national level.[59]

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48. 35 U.S.C. § 271; MERGES & DUFFY, *supra* note 45, at 58

49. 35 U.S.C. § 111; MERGES & DUFFY, *supra* note 45, at 58.

50. European Patent Convention, Oct. 5, 1973, 13 I.L.M. 270 [hereinafter EPC].

51. ParC, *supra* note 13, at art. 19; IAN MUIR ET AL., EUROPEAN PATENT LAW: LAW AND PROCEDURE UNDER THE EPC AND PCT 2 (2d ed. 2002).

52. EPC, *supra* note 50, at art. 2; MUIR ET AL., *supra* note 51, at 2.

53. EPC, *supra* note 50, at art. 52.

54. *Id.* at art. 54; MUIR ET AL., *supra* note 51, at 177; *see* MPEP, *supra* note 2, at § 2131.01.

55. EPC, *supra* note 50, at art. 56; MUIR ET AL., *supra* note 51, at 189; *see* 35 U.S.C. § 103 (2006); MPEP, *supra* note 2, at § 2141.

56. EPC, *supra* note 50, at arts. 87–89, 93.

57. *Id*. at art. 115.

58. *Id*. at art. 63.

59. *See* MUIR ET AL., *supra* note 51, at 131.

Unlike the United States, Europe operates under a first-to-file system.[60] This means, if two inventors claim the same invention in two different patent applications the first person that constructively filed their application under the ParC, rather than the first to invent, will receive the patent.[61] Also, unlike the United States, the EPC operates a post-grant patent opposition system.[62] The post-grant opposition must be filed within nine months of the grant of the patent in question.[63] It can be filed by anyone other than the patent holder and is a contentious proceeding between the patentee and the opposition party.[64] In the United States reexaminations can only be issued for substantial new questions of patentability based on printed prior art, but the EPC opposition proceedings allow for challenges based on a large number of factors including a lack of novelty, a lack of inventive step, a lack of industrial application, a lack of adequate disclosure, an inadmissible amendment, or that the subject matter is not an invention or a patentable subject matter.[65] Like the *inter partes* reexamination in the United States, an opposition can stay an infringement suit in any of the contracting nations.[66] If a third party wishes to intervene in an opposition they must file a notice of opposition statement, which lays out the grounds upon which the opposition is being requested and any evidence to support those grounds.[67] Three examiners, two of which must be new to the patent in question, are assigned to each opposition.[68] Unlike the United States' reexaminations, evidence can be admitted beyond printed prior art.[69] After evidence is submitted and oral

60. H.R. REP. NO. 112-98, at 40 (2011); Seth T. Carnathan, *Patent Priority Disputes—A Proposed Re-Definition of "First-to-Invent"*, 49 ALA. L. REV. 755, 755–57 (1998).

61. Carnathan, *supra* note 60, at 757–58.

62. EPC, *supra* note 50, at art. 99.

63. *Id.*

64. MUIR ET AL., *supra* note 51, at 226–31.

65. EPC, *supra* note 50, at art. 100; MUIR ET AL., *supra* note 51, at 237. Some countries, like Germany, allow for national level opposition proceedings. Other countries, like the U.K., do not.

66. Carlson & Migliorini, *supra* note 43, at 276.

67. EPC, *supra* note 50, at art. 105; Carlson & Migliorini, *supra* note 43, at 276.

68. Carlson & Migliorini, *supra* note 43, at 277.

69. *Id.* at 278; *see* 35 U.S.C. § 301 (2006); MPEP, *supra* note 2, at § 2205.

arguments are heard, the court will render a decision and revoke the patent, reject the opposition, or allow the patent to continue.[70] The result is binding on all EPC countries.[71] Either party can appeal the opposition ruling.[72] Estoppel only applies if the patent is revoked altogether; there is no longer a valid patent, so there are no longer any legal arguments for or against it.[73] As a part of the overall argument for global patent harmonization, which began with TRIPS, there has been a push to institute a post-grant opposition type system in the United States.[74]

After the opposition period has passed, some European countries allow validity to be challenged on any grounds, in some cases even without a case or controversy—a standing requirement for any U.S. case, including patent cases.[75] If the patent is found invalid in one of these proceedings it is only invalid in that jurisdiction, e.g. a German court can only invalidate a patent in Germany.[76]

D. ADDING AIA: FUTURE CHANGES TO U.S. PATENT LAW

Serious calls for patent reform began in 2004 when the National Academy of Sciences (NAS) released a report outlining the shortcomings of the current patent regime and proposing solutions.[77] The report found seven issues in the current regime including an inability to quickly respond to new technologies, issuing too many low quality patents, excessive periods of time required to defend the validity of a patent, and inconsistencies with international patent regimes.[78] The quality of patents was especially problematic, as low quality patents are more likely to be litigated and invalidated, creating uncertainty and under-

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70. Carlson & Migliorini, *supra* note 43, at 278.

71. *See* EPC, *supra* note 50, at art. 99; Carlson & Migliorini, *supra* note 43, at 276.

72. EPC, *supra* note 50, at art. 107.

73. Carlson & Migliorini, *supra* note 43, at 280.

74. *See* H.R. 2795, 109th Cong. § 321 (2005).

75. Countries that allow validity challenges include Germany, France, the U.K., and Switzerland. *See* Malwina Mejer & Bruno van Pottelsberghe de la Potterie, *Economic Incongruities in the European Patent System* 6 (ECARES, Working Paper No. 2009-003, 2009).

76. *See id*. at 6; Carlson & Migliorini, *supra* note 43, at 276.

77. NAT'L RESEARCH COUNCIL, *supra* note 4; H.R. REP. NO. 112-98, at 39 n.5 (2011).

78. *See* NAT'L RESEARCH COUNCIL, *supra* note 4, at 41–80.

mining the goal of the patent system.[79] When fully litigated, more than forty-six percent of U.S. patents are found invalid.[80] This statistic, however, may be expected. Patent litigation is extremely expensive, so truly questionable patents are far more likely to make it through trial without being settled.[81] Possible causes for the decrease in patent quality include an overburdened USPTO examiner staff, a high patent approval rate, uncertainty regarding the standards for newly patentable technologies, and a dilution of the non-obviousness requirement.[82] The NAS recommended, among other things, a reinvigoration of the non-obviousness requirement, a post-grant review system similar to the one used by the EPO, and an increase in the resources available to the USPTO.[83] In addition to these strength issues, as the number of patent applications has increased, the examiner staff has remained essentially the same size, leading to a backlog of more than 700,000 patent applications in 2010 and a wait of nearly fifteen months before the first office action.[84]

As part of his Strategy for American Innovation, on September 16th, 2011, President Obama signed into law the AIA.[85] As the first major overhaul to the U.S. patent regime in nearly sixty years, this broad-sweeping patent reform bill claims to increase the efficiency of the patent office, ease of filing, and strength of issued patents, while bringing the American system in line with the patent regimes of most other developed na-

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79. *Id.* at 46–47.

80. Carlson & Migliorini, *supra* note 43, at 264.

81. *See* NAT'L RESEARCH COUNCIL, *supra* note 4, at 48–49.

82. *Id.* at 51–62. From 1993 to 1998, eighty-five percent to ninety-seven percent of all patents were eventually allowed. *Id.* at 53.

83. *Id*. at 87–108.

84. *Id.* at 65; *Unreasonable Patent Application Delay and the USPTO Backlog*, PATENTLY-O (July 9, 2010, 3:11 PM), http://www.patentlyo.com/patent/2010/07/unreasonable-patent-applicant-delay-and-the-uspto-backlog.html.

85. *See A Strategy for American Innovation: Driving Towards Sustainable Growth and Quality Jobs*, WHITEHOUSE.GOV (Sept. 2009), http://www.whitehouse.gov/administration/eop/nec/StrategyforAmericanInnovation/; Josh Lowensohn, *Patent Overhaul Signed Into Law by Obama*, CNET NEWS (Sept. 16, 2011, 1:22 PM), http://news.cnet.com/8301-13578_3-20107519-38/patent-overhaul-signed-into-law-by-obama/.

tions.[86] The momentum towards patent harmonization was begun by TRIPS, but at the time TRIPS was signed, only minor changes were made to the U.S. system.[87] The AIA, on the other hand, has made many major changes to the current U.S. patent system, a number of which serve to harmonize the American patent system with other industrial nations.[88] For example, the first and most discussed change is the shift from a "first-to-invent" to a "first-to-file" system.[89] The goals of this change include reducing confusion in the priority system, reducing the initial hurdles in obtaining a valid patent, and streamlining the patent system.[90] In 2010, 211 patent applications were in interference, accounting for roughly .02% of all pending patent applications.[91] By creating an objective, easy-to-determine date to determine priority, interference proceedings to determine priority will no longer be necessary.[92] This will streamline and speed up the process of obtaining a patent by removing another time and resource intensive step in the prosecution process.[93] Despite this change, a patent will still only issue to a person who actually invented—rather than copied or reverse engineered—the invention in question. If an inventor wishes to challenge whether a previous filer is a true inventor she may do so under a newly established derivation proceeding before the Patent

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86. Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (to be codified in scattered sections of 35 U.S.C.); Press Release, Merchant & Gould P.C., The America Invents Act Becomes Law (Sept. 16, 2011), *available at* http://www.merchantgould.com/CM/NewsAlerts/The%20America%20Invents%20Act%20One%20Becomes%20Law.pdf.

87. *See* MERGES & DUFFY, *supra* note 45, at 58.

88. For a comprehensive mark-up of the current U.S. patent law, noting all American Invents changes, see DENNIS CROUCH, A MARK-UP AND COMMENTARY ON THE LEAHY-SMITH AMERICA INVENTS ACT (2011) (on file with the author).

89. *See* Press Release, Merchant & Gould P.C., *supra* note 86, at 1.

90. H.R. REP. NO. 112-98, at 40–42 (2011).

91. ACCOUNTABILITY REPORT 2010, *supra* note 44, at 128.

92. Janelle Waack, *IP: Interference Proceedings in Post-AIA America*, INSIDE COUNSEL (Feb. 14, 2012), http://www.insidecounsel.com/2012/02/14/ip-interference-proceedings-in-post-aia-america.

93. "Interference proceedings can take years to complete (even if there is no appeal to the United States Court of Appeals for the Federal Circuit), cost hundreds of thousands of dollars, and require extensive discovery." H.R. REP. NO. 112-98, at 41 (2011). Some new technologies can be tied up in interference for the bulk of their relevant patent periods; for example, integrated circuits, polymer chemistry, and lasers were all tied up in interference during the bulk of their relevant patent protection periods. Lemley, *supra* note 29, at 611–13.

Trial and Appeal Board (PTAB), formerly the BPAI.[94] To accommodate the new system, the priority and prior art rules have been changed.[95] All priority dates are based on the filing date of the application or any application that it claims priority to.[96] Prior art now includes any publication prior to the effective filing date, except any publications or disclosures made by the inventor within one year of the filing date.[97] The goal of this provision is to achieve all the benefits of a first-to-file system while still allowing for flexibility for inventors who need time to submit a patent application.[98]

The second change is an increase in the ability of third parties to submit documents for review during the patent application process.[99] Currently, third parties can only submit patents or publications without explanation within two months after a patent is published.[100] Under the new law, third parties will be able to submit "any patent, published patent application, or other printed publication of potential relevance to the examination of the application," as well as explanations as to their relevance.[101] The fear is, under the current regime, the limitations as to what can be submitted, as well as the restrictions on explanations, may decrease the value of these submissions and could even deter their use.[102] These changes should increase the strength of issued patents by ensuring all relevant information is disclosed and given due consideration.[103]

The third change is the removal of the "best mode" as a challenge to the validity or enforcement of a patent.[104] Under the current regime, in order to obtain a patent the applicant must disclose what they see to be the best way to build or perform the claimed invention at the time the application is filed—

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94. Leahy-Smith America Invents Act, Pub. L. No. 112-29, sec.7, § 6, 125 Stat. 284, 313 (2011); H.R. REP. NO. 112-98, at 42.
95. H.R. REP. NO. 112-98, at 40–43.
96. Leahy-Smith America Invents Act, sec. 3(a).
97. *Id.* at sec. 3, pt. b.
98. H.R. REP. NO. 112-98, at 42.
99. *Id.* at 45.
100. 37 C.F.R. § 1.99 (2011); MPEP, *supra* note 2, at § 1134.01.
101. Leahy-Smith America Invents Act, sec. 8.
102. H.R. REP. NO. 112-98, at 48–49.
103. *Id.* at 40.
104. Leahy-Smith America Invents Act, sec. 15(a).

a subjective standard.[105] If the patent does not disclose the best mode it may be unenforceable or invalid.[106] There is no best mode requirement in Europe.[107] After AIA, an applicant will still be required to disclose the best mode in the application in order to obtain the patent, but a potential infringer will no longer be able to invalidate the patent based on a lack of best mode disclosure.[108] By changing this requirement, the United States will harmonize its infringement defenses.[109] Additionally, by removing a possible challenge, AIA may reduce the amount of validity litigation, and thereby strengthen issued patents.[110]

The final major change is the introduction of a post-grant review and an *inter partes* review before the PTAB.[111] A post-grant review may be filed by any party who is not an owner of the patent within nine months of issuance or reissuance of a patent.[112] If the patent at issue is a reissued patent, only claims new to a reissue can be challenged.[113] Issues beyond patentability generally cannot be brought up in the post-grant review, but evidence beyond written prior art can be presented.[114] A post-grant review may be allowed upon "a showing that the petition raises a novel or unsettled legal question that is important to other patents or patent applications."[115] A post-grant review cannot be filed after a civil suit challenging validity is filed, and will automatically stay any such suits filed after the review.[116] The final decision can only be appealed to the Court of Appeals for the Federal Circuit, and the parties are estopped from arguing the issues again in civil court.[117] The parties are permitted, however, to settle prior to the decision and thereby avoid estop-

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105. MPEP, *supra* note 2, at § 2165.
106. CROUCH, *supra* note 88, at 120.
107. NAT'L RESEARCH COUNCIL, *supra* note 4, at 121.
108. CROUCH, *supra* note 88, at 55.
109. NAT'L RESEARCH COUNCIL, *supra* note 4, at 121.
110. *Id.*
111. Press Release, Merchant & Gould P.C., *supra* note 86.
112. Leahy-Smith America Invents Act, Pub. L. No. 112-29, sec. 6(d), 125 Stat. 284, 306 (2011).
113. *Id.*
114. *Id.*
115. *Id.* at sec. 6(a), § 324(b). It is currently uncertain what this will entail, but it is possible that it will open up the post-grant review to a much larger range of issues than the prior reexamination system allowed.
116. *Id.* at sec. 6(e), § 325.
117. *Id.*

pel.[118]

The *inter partes* review can be brought up by any party who is not an owner of the patent after the later of the nine month period for post-grant review or after the termination of a post-grant review.[119] Like the prior *inter partes* reexamination, only patentability can be challenged and only printed prior art can be submitted.[120] The standard for instituting an *inter partes* review is "reasonable likelihood" to prevail, while the standard under *inter partes* reexamination was "substantial new question of patentability."[121] Unlike an *inter partes* reexamination, which can be filed during or after civil litigation, an *inter partes* review cannot be filed after a civil suit challenging validity is filed and will automatically stay any such suits filed after the review.[122] The final decision can only be appealed to the Court of Appeals for the Federal Circuit, and the parties are estopped from arguing the issues again in civil court.[123] The parties are permitted, however, to settle prior to the decision and thereby avoid estoppel.[124] Settlement was not allowed under the *inter partes* reexamination and decisions were appealed first to the BPAI, and only after BPAI ruling to the Federal Circuit.[125] These new changes generally take effect on September 16, 2012.[126]

While post-grant review and *inter partes* review share many features, including the ability to settle, appeals directly to the Federal Circuit, and automatic stays of any subsequent validity litigation in the federal courts, it is critical to highlight the important differences.[127] The most important difference is what can be presented as evidence of patentability. In post-

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118. *Id*.

119. *Id.* at sec. 6(a).

120. *Id*; *see* 35 U.S.C. § 301 (2006); MPEP, *supra* note 2, at § 2205.

121. Leahy-Smith America Invents Act, sec. 6(a); MUELLER, *supra* note 3, at 257, 259.

122. Leahy-Smith America Invents Act, sec. 6(a); 35 U.S.C. § 318; *see* MPEP, *supra* note 2, at § 2205.

123. Leahy-Smith America Invents Act, sec. 6(a).

124. *Id.*

125. MPEP, *supra* note 2, at §§ 2659, 2674–83; MUELLER, *supra* note 3, at 263–65.

126. CROUCH, *supra* note 88, at 8.

127. Leahy-Smith America Invents Act, secs. 6(a), (d).

grant review the petitioner can present printed prior art (including publications and published patents) as well as declarations and affidavits showing expert opinions, statements of the inventor, or any other information relevant to the original patentability.[128] *Inter partes* review, however, remains limited to printed prior art.[129] Also, changes have been made to what can be challenged in the proceedings. In post-grant review, challenges are no longer limited to patentability, though that is still the major use.[130] A post-grant review can be allowed for "showing that the petition raises a novel or unsettled legal question that is important to other patents or patent applications" as well as any deficiencies in the declaration.[131] *Inter partes* review still only allows challenges based on patentability.[132] The final major difference is timing. Post-grant review must be conducted within the first nine months of issuance or reissuance of a patent.[133] *Inter partes* review, on the other hand, may only be filed after the nine month period for post-grant review has expired or after the termination of a post-grant review, whichever is later, provided it is prior to the end of the patent period.[134] These differences combine to make the post-grant review more restrictive than *inter partes* review with regards to time, but more flexible with regards to what validity issues can be challenged and what evidence can be presented.

All of these major changes bring the U.S. patent regime more into line with the patent systems of other industrialized nations. The shift to a first-to-file system and the removal of the best mode defense in infringement cases, in particular, remove aspects that were once characteristic of only the U.S. patent regime.[135] The changes also go far beyond the standardized requirements of TRIPS in harmonizing the patent law of the major patent countries.

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128. *Id.* at sec. 6(d).

129. *Id.* at sec. 6(a).

130. *Id.* at sec. 6(d).

131. *Id.* There is a concern that this standard is ill defined, but it will no doubt open up other avenues of challenge within post-grant reviews as compared to reexamination.

132. *Id.* at sec. 6(a).

133. *Id.* at sec. 6(d).

134. *Id.* at sec. 6(a).

135. MERGES & DUFFY, *supra* note 45, at 64–65; *See* NAT'L RESEARCH COUNCIL, *supra* note 4, at 124.

III. ANALYSIS

Much has been said about the shift from a first-to-invent to a first-to-file system in the United States, so it will not be addressed in this Note.[136] This Note will instead address the changes to how a patent's validity can be challenged after issuance and discuss whether the new system will meet the goals set out by Congress when it enacted AIA.

A. THE POST-GRANT PROBLEM: THE CHANGES AND FAILINGS OF AIA

1. Best Mode

The most prominent reason for changing the "best mode" defense against infringement is international harmonization of patent law enforcement.[137] The United States requires that the best mode of practicing the invention be included in the patent application.[138] Many have argued that this requirement is not necessary and is counterproductive.[139] Any use of this defense is necessarily subjective, because it is difficult to know what the state of knowledge was at the time of the application.[140] The European system has no such best mode requirement, and therefore no analogous infringement defense.[141] By removing the defense AIA harmonizes patent law enforcement with the international norm.[142]

Removing the best mode defense may also further other goals of patent reform including increasing the strength of issued patents and decreasing litigation.[143] Due to Federal Rule of Civil Procedure 13(a), claims of invalidity are compulsory counterclaims to any infringement suit.[144] If a party does not

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136. *See, e.g.*, Charles R. B. Macedo, Note, *First-to-File: Is American Adoption of the International Standard in Patent Law Worth the Price?*, 1988 COLUM. BUS. L. REV. 543, 543–46 (giving an overview of many arguments regarding first-to-file priority).

137. *See* H.R. REP. NO. 112-98, at 52 (2011).

138. 35 U.S.C. § 112 (2006).

139. H.R. REP. NO. 112-98, at 52 (2011).

140. *See id.*

141. *See* EPC, *supra* note 50, at art. 78.

142. *See* NAT'L RESEARCH COUNCIL, *supra* note 4, at 121.

143. *See* Press Release, Merchant & Gould P.C., *supra* note 86.

144. FED. R. CIV. P. 13(a); Polymer Indus. Prods. v. Bridgestone/Firestone,

claim that a patent is invalid when they are sued for infringement, then she cannot bring an invalidity suit after the infringement claim is litigated. Because of this, nearly every time a person is sued for infringement, they are likely to bring an invalidity counterclaim. Therefore, while removing the best mode defense, may reduce the ways in which an invalidity suit may be successful, it will probably not reduce validity litigation on its own. It may, however, by removing an extremely subjective defense to infringement, strengthen patents overall.[145]

2. Post-Grant Review

Like the removal of the "best mode" defense, the institution of the post-grant review is an attempt at international patent harmonization.[146] For the most part, the post-grant review mirrors the opposition proceedings in Europe. Both proceedings must be initiated within the first nine months after a patent is issued, both are contentious proceedings between two parties, and, in both, evidence can be admitted beyond printed prior art.[147] The issues that may be raised are also more similar now.

Inc., 347 F.3d 935, 938 (Fed. Cir. 2003) (holding that patent infringement claims are compulsory counterclaims in declaratory judgment actions asserting non-infringement and invalidity); Akzona, Inc. v. E. I. Du Pont de Nemours & Co., 662 F. Supp. 603, 618 (D. Del. 1987) ("In the instant case, both the declaratory judgment action and the counterclaim arise out of the same patents and both seek to define the scope and determine the validity of those patents. Such a situation is clearly within the mandate of Rule 13(a)."); Deering Milliken, Inc. v. Koratron Co., 293 F. Supp. 518, 522 (S.D.N.Y. 1968) ("[I]f this Court were to view the California complaint as a claim for infringement, it would in its discretion stay the action for declaratory relief because Deering Milliken must raise the issue of invalidity as a compulsory counterclaim in California, and therefore, the subject matter of both suits would be identical.").

145. *See* H.R. REP. NO. 112-98, at 52 (2011) (explaining the rationale behind removing the best mode defense).

146. *See generally id.* at 39–40 (highlighting the importance of harmonization in the patent reform debate). Additionally,

> [h]armonization's major benefit is that it cuts legal fees, particularly for pharmaceutical inventions, whose applications are typically filed in several countries. Second, harmonization cuts down on "forum shopping" in multicountry litigation enforcement efforts. Third, harmonization creates certainty of patent rights. Businesses need to know what actions in different countries are going to be covered by a given patent. Fourth, harmonization creates value. The more certainty you bring to the scope of a patent worldwide, the more value you create.

Michael D. Kaminski, *Patents and Property: International Harmonization*, 4 MODERN DRUG DISCOVERY 36, 37 (2001).

147. *Compare* Leahy-Smith America Invents Act, Pub. L. No. 112-29, sec.

As previously stated, in an opposition one may raise issues including a lack of novelty, lack of inventive step, lack of industrial application, lack of adequate disclosure, an inadmissible amendment, or that the subject matter is not an invention or a patentable subject matter.[148] In the post-grant review issues of patentability—including novelty and non-obviousness—may be raised in addition to any deficiencies in disclosure.[149] Disclosures may be deficient when they do not clearly state the invention in such a way as to enable a "person skilled in the pertinent art or science to make and use the invention without involving extensive experimentation."[150] Previously, only issues of patentability could be raised.[151] On February 9, 2012, the USPTO submitted for public comment the proposed procedural rule for post-grant review.[152] Under the current rules the post-grant review will be a trial with limited set motions, amendments, and discovery, and a party would be allowed to amend the claim at issue to address the questions brought forth by the post-grant review.[153] While the USPTO defines a trial as a contested case,[154] it is unclear if there will be oral argument like the European system or merely paper motions and petitions, much like current proceedings.[155] There is one major difference between the two systems. The opposition system only invokes estoppel when a patent is entirely revoked, while the post-grant review system estops all parties from arguing any issue that was raised or reasonably could have been raised in the proceedings regardless of the outcome.[156] In general, however, the new post-grant review is quite similar to the opposition system established in Europe.

6(d), 125 Stat. 284, 306 (2011), *with* EPC, *supra* note 50, at art. 99.

148. MUIR ET AL., *supra* note 51, at 237; EPC, *supra* note 50, at art. 100.

149. Leahy-Smith America Invents Act, sec. 6(d).

150. MPEP, *supra* note 2, at § 608.01(g).

151. MUELLER, *supra* note 3, at 257, 259–61.

152. 77 Fed. Reg. 6868 (Feb. 9, 2012).

153. 77 Fed. Reg. 7060 at 7079–80 (Feb. 10, 2012).

154. Press Release, Sughrue Mion PLLC, USPTO's Rule Proposals for Post-Grant Review (Feb. 13, 2012) *available at* http://www.sughrue.com/USPTOS-Rule-Proposals-for-Post-Grant-Review-02-13-2012/.

155. *See* Leahy-Smith America Invents Act, Pub. L. No. 112-29, sec. 6(a),(d), 125 Stat. 284, 299, 306 (2011).

156. *Id.* at sec. 6(a); Carlson & Migliorini, *supra* note 43, at 280.

Despite the importance of harmonization, a decrease in litigation is a more prominent goal of the post-grant review.[157] If there is an increase in the use of post-grant review over the *inter partes* reexamination, the combination of the number of issues able to be raised with the robust estoppel provisions will reduce the number of invalidity suits that can be brought in federal court.[158] Many issues existed in the old system, which reduced its overall use.[159] The new system addresses many of these.[160] First, there is now an option for settlement.[161] Second, the petitioners have greater involvement in the proceedings,[162] and finally, much more can be produced as evidence and more issues can be brought up.[163] As previously established, the post-grant system is very similar to the opposition system, and evidence shows that around five percent of patents in Europe trigger an opposition proceeding.[164] If the post-grant review was used at a similar rate, this alone would be a significant increase over the approximately 0.3% of patents subject to *inter partes* and *ex partes* reexaminations in the United States.[165] And when considered in light of the fact that, unlike validity challenges in federal courts, which have a clear and convincing evidence standard, post-grant review would have a preponderance of the evidence standard, many seeking to invalidate a patent may find the new post-grant system an attractive option, increasing overall use. Furthermore, under the current regulations all post-grant reviews must be completed within one year.[166]

There are significant institutional differences between the

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157. *See generally* H.R. REP. NO. 112-98, 38–40 (2011) (outlining the purpose of America Invents).

158. *Id.*

159. *Id.*

160. *See* Carlson & Migliorini, *supra* note 43, at 266–70.

161. Leahy-Smith America Invents Act, sec. 6(a).

162. *Compare id. with* MPEP, *supra* note 2, at §§ 2654–2659 (highlighting that a settlement option did not exist previously and has been added in America Invents).

163. *Compare* Leahy-Smith America Invents Act, sec. 6(a) *with* MPEP, *supra* note 2, at § 2658 (highlighting the different evidence rules between the old system and the system under America Invents).

164. DIETMAR HARHOFF, INST. FOR INNOVATION RESEARCH, ECONOMIC COST-BENEFIT ANALYSIS OF A UNIFIED AND INTEGRATED EUROPEAN PATENT LITIGATION SYSTEM 45 (2009).

165. ACCOUNTABILITY REPORT 2010, *supra* note 44, at 129, 137; Carlson & Migliorini, *supra* note 43, at 269.

166. 77 Fed. Reg. 48756, 48757 (Aug. 14, 2012).

United States and Europe, however, which will dampen the overall increase in use. First, patent infringement and court based validity challenges are handled on a country by country basis in Europe.[167] If one wishes to avoid wide scale litigation across all EPC countries she must invalidate the patent at the EPO level through opposition.[168] U.S. patents, on the other hand, are litigated between parties only once in the federal courts, not in each individual district.[169] A single decision regarding invalidity from either the PTAB *or* the federal courts will be binding across the entire country.[170] Because both venues have the same result, it is unlikely that a potential petitioner will choose post-grant review over an invalidity suit for that reason alone.

Second, opposition has much less robust estoppel provisions.[171] In Europe only the patent holder is estopped from arguments, and only if the patent is revoked in its entirety.[172] This makes the proceeding much more friendly to the petitioner, as there are far fewer risks if the opposition fails and an infringement proceeding is brought.[173] All defenses to that infringement are still available to the potential petitioner.[174] The post-grant review has a much higher risk.[175] Not only is the patent holder estopped if the patent is revoked, both she and the petitioner are also estopped from raising any issue that was or could have been raised in the proceedings.[176] If a post-grant re-

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167. *See* Carlson & Migliorini, *supra* note 43, at 276.

168. *Id.*

169. The concept of *res judicata* and collateral estoppel apply to patent cases in the federal court system. *See* Parklane Hosiery Co., Inc. v. Shore, 439 U.S. 322, 327–28; David P. Hoult v. Jennifer Hoult, 157 F.3d 29, 31–32 (1st Cir. 1998); Car Carriers, Inc. v. Ford Motor Co., 789 F.2d 589, 595 (7th Cir. 1989).

170. *See Parklane Hosiery Co., Inc.*, 439 U.S. at 327–28; *Hoult*, 157 F.3d at 31–32; *Car Carriers, Inc.*, 789 F.2d at 595.

171. *See* Carlson & Migliorini, *supra* note 43, at 280.

172. *Id.*

173. *See id.*

174. *See id.*

175. *Compare id.*, *with* Leahy-Smith America Invents Act, Pub. L. No. 112-29, sec. 6(a), 125 Stat. 284, 299 (2011) (explaining possible reasons for low utilization of reexamination proceedings and highlighting the changes that increase these risks).

176. Leahy-Smith America Invents Act, sec. 6(a).

view fails and an infringement proceeding is brought against the petitioner, a major defense against infringement has been removed.[177] While the evidence standard is lower in post-grant review, some would still be unwilling to take this risk in case of litigation.[178] The robust estoppel provisions will streamline the litigation process for patents that have gone through post-grant review, but may reduce the overall use of the post-grant review system and, as a result, may reduce the overall effect of AIA on reducing patent litigation.

Finally, there is an institutional bias in the United States for counterclaims.[179] In fact, invalidity is a compulsory counterclaim when there is an infringement suit.[180] In Germany, on the other hand, validity is not even permitted as a defense in an infringement proceeding, as invalidity must be claimed and litigated in a separate proceeding.[181] AIA does allow for a stay in infringement litigation if a potential infringer wishes to institute a post-grant review instead of a counterclaim.[182] This option, however, is unlikely to be used with any real frequency. First, invalidity is a natural defense in any infringement litigation, and there are very few practicing patent litigators who are also eligible and experienced in practicing in proceedings before the PTAB.[183] With the exception of the new *pro hac vice* recently allowed by the USPTO for the new administrative issues only (*inter partes* review, post-grant review, covered business method review, and derivation), in order to bring or defend

177. *See id*.

178. Additionally, the lower evidentiary standard is already in place in *inter partes* reexamination. If the lower standard were to increase the number of individuals willing to use the proceedings, the increase would already be factored into the data regarding old proceedings.

179. *See* FED. R. CIV. P. 13(a); Polymer Indus. Prods. v. Bridgestone/Firestone, Inc., 347 F.3d 935, 938 (Fed. Cir. 2003); Akzona, Inc. v. E. I. Du Pont de Nemours & Co., 662 F. Supp. 603, 618 (D. Del. 1987); Deering Milliken, Inc. v. Koratron Co., 293 F. Supp. 518, 522 (S.D.N.Y. 1968).

180. *Polymer Indus. Prods.*, 347 F.3d at 938.

181. JAN WILLEMS, SOME REMARKS ABOUT INVALIDITY AS A DEFENSE IN EUROPEAN PATENT INFRINGEMENT PROCEEDINGS (2001), *available at* http://www.softic.or.jp/symposium/open_materials/10th/en/willems2-en.pdf.

182. Leahy-Smith America Invents Act, sec. 6(a).

183. In order to be eligible to practice before the PTAB one must pass the Patent Bar Exam. To even be eligible to sit for the exam one must generally have at least an undergraduate degree in a science or technology related field. U.S. PATENT & TRADEMARK OFFICE, GENERAL REQUIREMENTS BULLETIN FOR ADMISSION FOR REGISTRATION TO PRACTICE IN PATENT CASES BEFORE THE UNITED STATES PATENT AND TRADEMARK OFFICE 1–7 (2012), *available at* http://www.uspto.gov/ip/boards/oed/grb.pdf.

against a post-grant review the lawyer must be registered to practice before the USPTO, which requires a science background and an admissions exam.[184] While most large firms will have both prosecutors and litigators, it may not be the case that they have a litigator who has also been admitted to practice before the USPTO. While they can utilize *pro hac vice*, they will still require the assistance of a registered patent attorney to assist in the proceedings.

Additionally, it is very possible that patent holders, as part of their litigation strategy, will wait until after the nine-month period has expired to begin sending cease-and-desist letters and filing infringement suits. There is no statute of limitations for patent infringement, but monetary damages are limited to infringements occurring in the six years prior to the filing of the suit.[185] Even when adding on the three-year average prosecution period, waiting nine months after issuance will not limit the legal remedies of the patent holder.[186] Yet by following this strategy the patent holder avoids giving notice of possible infringement issues and thereby avoids having her patent's validity challenged in a venue that only requires a preponderance of the evidence.[187] It is important to note, however, that this strategy may reduce the damages that can be collected by the patent holder, especially when the patent is for a product.[188] If the subject of a patent is not labeled with the proper patent information, the infringer is only liable for any infringement that occurs after it has knowledge of the patent.[189] When the patent in question is for a machine, manufacture, or composition of matter, or if the patent is properly labeled to indicate that there is a patent, no actual knowledge on the part of the in-

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184. *Id.*; James Donald Smith, *Message from Chief Judge James Donald Smith, Board of Patent Appeals and Interferences: USPTO Discusses Key Aspects of New Administrative Patent Trials*, USPTO.GOV, http://www.uspto.gov/aia_implementation/smith-blog-extravaganza.jsp#heading-4 (last updated May 21, 2012).

185. 35 U.S.C. § 286 (2006).

186. Patents protect inventions starting on the date that the application is filed. 35 U.S.C. § 154(a).

187. *See* 35 U.S.C. § 286; Leahy-Smith America Invents Act, sec. 6(a).

188. 35 U.S.C. § 287. Processes are exempt from the labeling requirement. 35 U.S.C. § 287(a).

189. *Id.*

fringer is required.[190] This provision applies to monetary damages only; injunctions can still be sought as filing of a suit constitutes notice on the part of the patent holder.[191] The similarities between the new post-grant review and the opposition system, therefore, may lead to an increase in the use of post-grant review, but the differences in the system as well as the institutional differences between patent litigation in Europe and the United States will significantly dampen this increase. In addition to all of these factors, the fees for filing a post-grant review are large. To file a post-grant review of up to twenty claims is $35,800, and each additional claim is $800.[192]

That being said, if a patent goes through the post-grant review proceeding and survives, it will be significantly stronger, at least with regards to the petitioner. The petitioner will be unable to argue that the patent is invalid on any of the possible post-grant review grounds and will have to overcome the clear and convincing evidence standard for any other validity issues.[193] This will make it much harder to invalidate a patent that has gone through post-grant review.

3. *Inter Partes* Review

Like post-grant review, *inter partes* review can increase the strength of patents and as a result reduce validity litigation.[194] The combination of estoppel provisions and the increased burden of proof in federal courts would make it more difficult to successfully challenge the validity of a patent that has gone through an *inter partes* review. As it is currently structured, however, there are only two major changes to the *inter partes* review from the old *inter partes* reexamination: the addition of a settlement option and the shift to a reasonable likelihood standard for initiating a proceeding.[195] These additions alone are unlikely to increase the use of *inter partes* review over *inter partes* reexamination.[196] The same barriers to use that exist in

190. *Id.*

191. *Id.*

192. *AIA Frequently Asked Questions*, USPTO.GOV, http://www.uspto.gov/aia_implementation/faq.jsp#heading-8 (last visited Oct. 4, 2012).

193. *See* 35 U.S.C. § 282; Leahy-Smith America Invents Act, Pub. L. No. 112-29, sec. 6(a), 125 Stat. 284, 299 (2011).

194. *See* Leahy-Smith America Invents Act, sec. 6(a).

195. *Id.*

196. *See generally id.* (outlining all changes in patent law to institute the *inter partes* review).

post-grant review exist in this context as well, with one notable exception. The *inter partes* review can be filed after the nine-month publication period.[197] There is still, however, an institutional bias towards validity litigation in response to an infringement suit, and there are very few practitioners who are willing and able to practice before the PTAB in *inter partes* reviews.[198] Additionally, the old limits to what issues can be raised—a significant new issue of patentability only—and what evidence can be presented—printed prior art only—still exist.[199] These limits are arguably more of a barrier to the use of the *inter partes* reexamination and the new *inter partes* review than the inability to settle.[200] As a result, it is unlikely that *inter partes* review will be used any more frequently than *inter partes* reexamination has been in the past, and the minor changes that AIA has made to this proceeding are unlikely to increase the strength of issued patents or decrease validity litigation.

B. A SIMPLE SOLUTION: MORE FRONT-END REVIEW

International patent regime harmonization is accomplished by the "best mode" changes and the post-grant review, and U.S. patents can be strengthened by the new proceedings if they are used. U.S. patent strength, however, will not be significantly increased, nor will validity litigation be decreased, because it is unlikely that there will be a significant increase in the use of the post-grant review or *inter partes* review over the *inter partes* reexamination. In fact, due to civil procedure rules, validity litigation in response to infringement actions may never be reduced, but patent strength may still be increased through a more stringent pre-grant review. The increase in pa-

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197. *Id.*

198. *See* FED. R. CIV. P. 13(a); Polymer Indus. Prods. v. Bridgestone/Firestone, Inc., 347 F.3d 935, 938 (Fed. Cir. 2003); Akzona, Inc. v. E. I. Du Pont de Nemours & Co., 662 F. Supp. 603, 618 (D. Del. 1987); Deering Milliken, Inc. v. Koratron Co., 293 F. Supp. 518, 522 (S.D.N.Y. 1968). These cases establish the compulsory counterclaim requirement in the United States.

199. *Compare* 35 U.S.C. § 312(a) (2006), *and* MPEP, *supra* note 2, at § 2609, *with* Leahy-Smith America Invents Act, sec. 6(a) (outlining the old requirements and highlighting the lack of alternation in America Invents).

200. *See generally* Carlson & Migliorini, *supra* note 43 (explaining the reasons for the low utilization of the *inter partes* reexamination).

tent strength, in turn, may shift the balance between patent holders and alleged infringers in favor of the holders, increasing the overall rate of settlement in these cases. As previously stated, possible causes for the decrease in patent quality include an overburdened USPTO examiner staff, a high patent approval rate, uncertainty as to the standards for newly patentable technologies, and a dilution of the non-obviousness requirement.[201] By addressing these concerns and narrowing claim construction, the strength of issued patents will be increased. The following are a few of the many possible reform measures that could be taken to ensure more front-end review and increase the quality of issued patents.[202] These are merely suggestions and it is not the scope of this Note to address the merits of these in any depth.

1. Third-Party Submissions

The AIA already attempts to assist in strengthening front-end review by increasing the ability of third parties to submit relevant prior art prior to submission.[203] Under the current system, a third party could submit published prior art, but could not even highlight the relevant portions to assist the examiners, let alone explain why the submission was relevant.[204] By allowing third parties to submit more information in an effective manner, it is more likely that examiners will have access to all relevant prior art before making decisions about the novelty and obviousness of an invention.[205] This means that it is less likely that previously unknown prior art will come up in post-grant proceedings or federal court invalidity suits, thereby the strength of issued patents will be increased. The new provision will only be helpful to the extent that patent examiners are able to review the incoming information.

2. Narrower Claim Construction, Stronger Non-Obviousness Requirement

Currently, applicants can claim the broadest possible invention at the initial stages.[206] This means that it is possible

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201. *See* NAT'L RESEARCH COUNCIL, *supra* note 4, at 80.

202. Other reforms may include construing ambiguous claims against the drafter, limiting continuations, etc.

203. Leahy-Smith America Invents Act, sec. 8(a).

204. 37 C.F.R. § 1.99 (2011); MPEP, *supra* note 2, § 1134.

205. H.R. REP. NO. 112-98, 49 (2011).

206. Phillips v. AWH Corp., 415 F.3d 1303, 1316–17 (Fed. Cir. 2005) (en

that an individual may receive a patent that covers more than just what they invented.[207] This is often considered a reward for being the first to come up with a great idea, but overly broad patents can lead to increased infringement and validity litigation.[208] Courts, therefore, are often required to narrow claims in order to make the patent true to the original invention.[209] The AIA did not address the scope of claims, so, in order to fix these issues, narrower claims should be required at the onset by the USPTO.[210] As the breadth of claims is typically determined by the USPTO examiners, USPTO regulations would need to be amended to ensure narrower claim scope.[211] Narrower claims could be established by increasing the number of rejections for over-breadth or non-enablement, defining more precisely the scope of the claims through the communications of the applicant with the examiner and the USPTO, and by requiring more statements by the examiners at issuance.[212] Right now, examiners are allowed to submit a "Reason for Allowance" with the patent to explain why it was allowed if the record as a whole does not reflect the reasons why it was allowed.[213] These statements can be used as evidence for claim breadth in litigation, but are generally not required to be written when the application is allowed.[214] Additionally, the claimed subject matter could also be narrowed through a more stringent non-

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banc) ("The Patent and Trademark Office ('PTO') determines the scope of claims in patent applications not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction . . . ."); MPEP, *supra* note 2, at § 2111.

207. *See Phillips*, 415 F.3d at 1316–17.

208. Overly broad patents also cause an anti-commons problem in new technologies, which stifles innovation. *See* Mark A. Lemley, *Patenting Nanotechnology*, 58 STAN. L. REV. 601, 618–19 (2005).

209. *See* NAT'L RESEARCH COUNCIL, *supra* note 4, at 25.

210. NAS recommends narrowing claims on overly broad patents after issuance. NAT'L RESEARCH COUNCIL, *supra* note 4, at 96. I, however, am arguing for narrowing the claims pre-issuance and thereby increasing the predictability of patent enforcement.

211. *See* MPEP, *supra* note 3, § 2173.04. The breadth of a claim can also be determined by the federal courts after issuance, but the large deference given to the USPTO limits the courts' effectiveness.

212. 37 C.F.R. § 1.104(e) (2011); MPEP, *supra* note 2, § 1302.14.

213. 37 C.F.R. § 1.104(e); MPEP, *supra* note 2, § 1302.14.

214. 37 C.F.R. § 1.104(e); MPEP, *supra* note 2, § 1302.14.

obviousness requirement, as suggested by NAS.[215] By making it harder to clear the obviousness hurdle, fewer claims would be allowed, and those that do make it would probably be more narrowly tailored. That being said, NAS only recognized an issue with non-obviousness for business method and genetics patents.[216]

By narrowing what a patent covers there will be fewer possible prior-art challenges, fewer validity challenges, more consistent interpretation in the courts, and fewer cases of possible infringement.[217] This will, in turn, reduce litigation and strengthen the patents that are issued. Additionally, as most of these changes regarding scope will be implemented through USPTO regulations, no additional legislation will have to be passed through Congress, allowing for quicker implementation of necessary reforms. These changes will, however, come at a cost. There will be less protection for cutting-edge inventions, more documentation and communication will be required to define the scope of the claims; as a result, there will be a need for even more USTPO examiners. The non-obviousness requirement will have to be altered by the Federal Circuit.[218] Additionally, these changes will signal a major shift in U.S. patent mentality and will create much confusion and litigation in the first decade or so.

3. More Examiners

The backlog at the USPTO presents a significant problem as to the strength of patents.[219] There is a serious push to shorten the amount of time between an application's submission and a patent's issuance. Because the staff of examiners at the USPTO is limited, in order to fulfill the demand each examiner must work on more patents at a quicker rate.[220] This may result in rushing patent applications. Prior-art searches will not be as thorough, and there will be more reliance on appli-

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215. NAT'L RESEARCH COUNCIL, *supra* note 4, at 59–62.

216. *Id.* at 87–95. The report also covers ways to reinvigorate the non-obviousness requirement, including expert testimony and a focus on the technological hurdle that the inventor needed to overcome. *Id.*

217. *See* Gregory Mandel, *The Non-Obvious Problem: How the Indeterminate Nonobviousness Standard Produces Excessive Patent Grants*, 42 U.C. DAVIS L. REV. 57, 91–92 (2008).

218. *See id.* at 64–65.

219. *See* NAT'L RESEARCH COUNCIL, *supra* note 4, at 51, 65.

220. *See id.* at 65.

cants to provide all relevant information. By rushing patent applications, the likelihood that invalidating issues will be found in issued patents down the road will increase. Prior art that was not disclosed or found may be discovered in the course of litigation, or patents may be invalidated for claiming more than they had a right to. In order to ensure that all applications are thoroughly and carefully reviewed in an acceptable period of time, there must be an increase in the number of examiners. Additionally, in order to properly institute third-party submissions and a narrower claim construction, there must be a sufficiently large staff in order to decrease the likelihood of an increased backlog. Hiring additional examiners will be an expensive process, though. AIA has attempted to address this issue by granting the USPTO fee-setting authority, but it did not grant spending authority.[221] Under AIA, in order for the funding to be sufficient for the hiring of new examiners the USPTO will continue to need the budget approval of Congress, and this will continue until Congress grants the USPTO spending authority as well, establishing it as a financially independent government organization.[222] It is highly unlikely that this will happen in the near future, as any changes that could result in a decrease in incoming federal funds will be strongly opposed in the current budget environment.

IV. CONCLUSION

Beginning in 2004, calls have been made to update the U.S. patent system, to make it more efficient, to create stronger patents, to reduce litigation, and to harmonize the U.S. regime with the international patent community.[223] The AIA attempts to address many of these issues. The question remains, however, if these changes will meet their intended goals.

The AIA has managed to address many of the major differences between U.S. and European patent law.[224] It has shifted the United States from first-to-invent to first-to-file,[225] it has

221. Leahy-Smith America Invents Act, Pub. L. No. 112-29, sec. 10, 125 Stat. 284, 316 (2011).

222. *Id*.

223. H.R. REP. NO. 112-98, at 38–40 (2011).

224. *See* Leahy-Smith America Invents Act, secs. 3, 6(a), 15.

225. *Id*. at sec. 3.

dropped the "best mode" defense in validity litigation,[226] and it has instituted a post-grant review system modeled after the European patent opposition.[227] Yet the post-grant system established by AIA falls short of its intended goals to reduce validity litigation and strengthen issued patents. If the post-grant review system is used at a significant rate, it will strengthen patents because the increase in what issues can be raised and the robust estoppel provisions will greatly reduce what can be challenged in federal court. One may believe that because it is so similar to the European system it would be used at a similar rate (around five percent), and it may be used more frequently because many of the issues with the old *inter partes* reexamination have been addressed (including what issues can be raised, what evidence can be used, and the ability to settle prior to a ruling from the BPAI). Because of the institutional differences between the United States and Europe, however, it is unlikely that there will be such a large increase in the use of the post-grant system in the United States. First, it is unnecessary to invalidate a patent through the USPTO in order to avoid duplicative litigation.[228] Second, the estoppel provisions, while slightly countered by the lower evidence standard, tie the hands of litigators when it comes to defending against infringement.[229] Finally, due to Federal Rule of Civil Procedure 13(a), there is an institutional bias for counterclaims in patent litigation.[230] As a result, the post-grant process is unlikely to be used at a significant rate, and as a result patents are unlikely to be any stronger than before.

In order to increase the strength of issued patents, the patents must be stronger prior to entering the post-grant review and litigation phase. The AIA takes a step in the right direction by increasing what can be submitted by third parties prior to issuance.[231] In order to truly strengthen the issued patents,

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226. *Id*. at sec. 15.

227. *Id*. at sec. 6(a).

228. *See* Parklane Hosiery Co. v. Shore, 439 U.S. 322, 327–28 (1979); Hoult v. Hoult, 157 F.3d 29, 31–32 (1st Cir. 1998); Car Carriers, Inc. v. Ford Motor Co., 789 F.2d 589, 595 (7th Cir. 1986).

229. *See Parklane Hosiery Co.*, 439 U.S. at 327–28; *Hoult*, 157 F.3d at 31–32; *Car Carriers, Inc.*, 789 F.2d at 595.

230. *See* FED. R. CIV. P. 13(a); Polymer Indus. Prods. v. Bridgestone/Firestone, Inc., 347 F.3d 935, 938 (Fed. Cir. 2003); Akzona, Inc. v. E. I. Du Pont de Nemours & Co., 662 F. Supp. 603, 618 (D. Del. 1987); Deering Milliken, Inc. v. Koratron Co., 293 F. Supp. 518, 522 (S.D.N.Y. 1968).

231. *See* Leahy-Smith America Invents Act, sec 8(a).

however, the patent office must also increase the number of examiners and narrow claim construction. This will result in a longer and more thorough patent application process, which will increase strains on an already overburdened and inefficient system. However, if the overall goal is to reduce litigation and increase patent strength, the changes are necessary.