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Ten Years of Inter Partes Patent Reexamination Appeals: An Empirical View

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TEN YEARS OF *INTER PARTES* PATENT REEXAMINATION APPEALS: AN EMPIRICAL VIEW

Eric J. Rogers†

Abstract

An empirical analysis of the first ten years of decisions by the Board Patent Appeals and Interferences regarding inter partes *patent reexamination appeals was conducted. The analysis of 101 cases focused on answering three broad questions: (1) How accurate are the specialist patent examiners of the Central Reexamination Unit of the U.S. Patent and Trademark Office? (2) Do patent owners or third party requestors fare better in appeals of decisions in* inter partes *reexamination proceedings? (3) Which types of appeals are more likely to be successful? The examiners' determinations were upheld more than three fourths of the time; third party requestors tended to be more successful than patent owners at winning appeals; and appeals solely by third party requestors of unadopted grounds of rejection were the most successful type of appeal. These historical observations can be used to predict the success rate for appeals of Patent Trial and Appeal Board decisions in* Inter Partes *Review (IPR) proceedings, which was implemented in September 2012. Appeals of IPR decisions by third party requestors are predicted to have a better success rate at maintaining patent claim rejections and adding new grounds of rejection than appeals by patent owners will have at receiving reversal of patent claim rejections.*

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TABLE OF CONTENTS

INTRODUCTION 308
I. BACKGROUND ON PATENT REEXAMINATION 309
A. The History of Patent Reexamination 309
B. The Basics of Patent Reexamination 311
1. Period of Patent Enforceability 313
2. A Substantial New Question of Patentability 313
3. Patent Owner Amendment of Patent Claims 315
4. Amending Patent Claim Scope and Intervening Rights 315
C. The Scope of Patent Reexamination 316
1. Requestor-Proposed Grounds of Rejection 316
2. Examiner-Proposed Grounds of Rejection 317
D. Burden of Proof and Claim Construction 317
E. Patent Reexamination from the Practitioner's Point of View 318
II. THE OPTIONAL *INTER PARTES* PATENT REEXAMINATION 321
A. The *Inter Partes* Patent Reexamination Procedure 322
B. Estoppel Effects Based on *Inter Partes* Patent Reexamination 323
C. Relationship Between Patent Reexamination and the Judiciary 324
D. *Inter Partes* Patent Reexamination Statistics Reported by the U.S. Patent and Trademark Office 325
III. APPEALING *INTER PARTES* PATENT REEXAMINATION DECISIONS 327
A. Methodology 328
B. Empirical Data 329
1. The Case Approach: Affirmed/Reversed Percentages by Case 330
2. Complications Caused by Cross-Appeals or the Merger of Appeals by Opposing Parties 332
3. The Appeals Approach: Compensating for Cross-Appeals and Merged-Appeals 336
4. Situations When All Patent Claims-At-Issue Remained Rejected by the BPAI Decision 337
5. The Simplicity of Breaking-Down Appeals by Individual Ground of Rejection 339
6. Overall Success Rate, Regardless of Participation 341

C. Miscellaneous Observations 342
1. All Appealed BPAI Decisions Regarding *Inter Partes* Reexaminations Were Affirmed 342
2. Concurrent Litigation 343
3. Merger of Patent Reexamination Proceedings 343
4. Pendency of *Inter Partes* Patent Reexaminations with Appeals 344
5. Technological Classifications 345
D. Conclusion 346
IV. *INTER PARTES* PATENT REEXAMINATION FROM THE PRACTITIONER'S POINT OF VIEW 347
A. *Inter Partes* Patent Reexam for Competitors, Licensees and Potential Infringers 347
1. Patent Challenge 347
2. Patent Litigation Settlement 347
3. Patent Licensing Negotiations 348
B. Advantages of *Inter Partes* Patent Reexamination 348
C. Disadvantages of *Inter Partes* Patent Reexamination 350
1. Pendency 352
2. Remands and Appealed Issues Left Undecided 353
D. Conclusion 353
V. THE AMERICA INVENTS ACT AND THE FUTURE OF *INTER PARTES* PATENT REEXAMINATION 353
A. *Inter Partes* Patent Review 354
CONCLUSION 357
APPENDIX I. STATISTICAL ANALYSES OF THE APPEALED IP REEXAM DATASET 359
APPENDIX II. SUMMARY OF STATISTICS 365

INTRODUCTION

Inter Partes Patent Reexamination is an administrative review process with significant participation by the requestor, whereby an issued patent can be challenged as existing in error. If during a patent reexamination a patent claim is determined to be defective, then the patent owner the opportunity to correct the error(s) and to cancel any patent claim that remains invalid. The benefits of patent reexamination include: (1) providing a mechanism to clear up patents with cloudy validity that is administered by the U.S. Patent and Trademark Office (USPTO), the only institution that can declare a patent valid;[1] (2) allowing a potential patent infringer to invalidate a patent and avoid costly litigation;[2] and (3) offering an alternative forum, presided over by experienced patent examiners,[3] to the federal courts for determining patent validity.

This raises the following questions: (1) How accurate are the patent examiners of the Central Reexamination Unit of the USPTO? (2) Do patent owners or third party requestors fare better? (3) Which types of appeals are more likely to be successful?

An analysis of the results of all the appeals of *Inter Partes* Patent Reexaminations completed in the first ten years of this process reveals the historical reversal percentages of reexamination decisions. Based on the empirical data presented, the examiners' determinations are upheld more than three fourths of the time (e.g., 76%-78% by individual grounds of rejection). The data presented here indicate that during appeals third party requestors tend to be more successful by about 14 percentage-points in maintaining patent claim rejections and adding new grounds of rejection compared to patent owners' successful attempts to have patent claim rejections reversed. This is probably caused by a systemic disadvantage to patent owners rather than any special advantage to third party requestors.

Part I of this article reviews patent reexaminations in general.

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1. *See In re* Constr. Equip. Co., 665 F.3d 1254, 1254-56 (Fed. Cir. 2011). *But see id.* at 1257-63 (Newman, J., dissenting) (arguing that once the judiciary holds a patent valid, then it is unconstitutional for an agency-instituted patent reexamination proceeding to declare that patent invalid based on the same issue, as well as being inconsistent with the Patent Statute, and precluded by the doctrines of res judicata and issue preclusion). The judiciary cannot find a patent claim to be valid; rather it can only find a patent claim is "not invalid." Thomson, S.A. v. Quixote Corp., 166 F.3d 1172 (Fed. Cir. 1999).

2. 126 CONG. REC. 30,364 (1980) (statement of Sen. Birch Bayh); 126 CONG. REC. 29,901 (1980) (statement of Rep. Harold Hollenbeck).

3. *See* H.R. REP. NO. 96-1307, pt. 1, at 3-4 (1980); 145 CONG. REC. S14,720 (daily ed. Nov. 17, 1999); 126 CONG. REC. 30,364 (1980) (statement of Sen. Birch Bayh).

Part II focuses on the *Inter Partes* Patent Reexamination proceeding. Part III discusses appealing *Inter Partes* Patent Reexamination decisions to the Board of Patent Appeals and Interferences and describes empirical data regarding results of appeals. Part IV highlights for practitioners some advantages and disadvantages of *Inter Partes* Patent Reexamination. Finally, Part V looks to the future of *Inter Partes* Patent Review after the enactment of the Leahy-Smith America Invents Act of 2011 (AIA).

I. BACKGROUND ON PATENT REEXAMINATION

Patent reexamination (reexam) is an administrative proceeding conducted by the USPTO wherein a party may file a request, during the period of enforceability of a patent, to reevaluate the validity of one or more patent claims in light of published reference(s) cited by the requester as raising a substantial new question of patentability of the patented subject matter.[4] The patent owner (PO), any third party, and the Director of the USPTO can request a reexam.[5]

A. The History of Patent Reexamination

The closest predecessors of the patent reexam were the Reissue and Protest Programs created by the "Dann Amendments" of 1977.[6] The USPTO intended these amended Reissue and Protest procedures to allow reexamination of patents based on prior art that was not of record in the original patent prosecution.[7] The so-called "no fault" Reissue procedure allowed patentees to request a reissue proceeding administered by the USPTO to reexamine their patents in light of newly recognized prior art without alleging error.[8] The Reissue application was made open to the public to allow for protests. The Protest procedure allowed a third party to file a protest in a reissue proceeding and participate in appeals.[9] The Reissue-Protest Program was terminated on December 8, 1981, while the first patent reexam procedure was being implemented.[10]

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4. 35 U.S.C. §§ 302-306 (2011).

5. *Id.*

6. *See* Donald J. Quigg, *Post-Issuance Re-Examination: An Inventive Attempt at Reform*, NAT'L L.J., June 1, 1981, at 31.

7. Rules of Practice in Patent Cases, 42 Fed. Reg. 5588, 5594-95 (Jan. 28, 1977).

8. *Id.*

9. *Id.*; Quigg, *supra* note 6, at 31. The Trial Voluntary Protest Program started in 1974 and ended in 1976.

10. *See* Reissue, Reexamination, Protest and Examination Procedures in Patent Cases, 47 Fed. Reg. 21,746 (May 19, 1982) (to be codified at 37 C.F.R. pt. 1); Reissue, Reexamination,

In 1980, Congress passed the first patent reexam statute as part of the Patent and Trademark Law Amendments Act of 1980, also known as the Bayh-Dole Act.[11] This act was intended to restore confidence in the validity of patents and thereby spur investment in new technologies.[12] Congress' purpose in establishing the reexam procedure in 1980 was to "strengthen[] investor confidence in the certainty of patent rights by creating a system of administrative reexamination of doubtful patents."[13] In addition, Congress wanted to reduce the threat of legal costs being used to "blackmail" patentees "into allowing patent infringements or being forced to license their patents for nominal fees."[14]

Chapter 30 of the Patent Statute gave rise to the *Ex Parte* Patent Reexamination (EP Reexam) procedure that recapitulated the initial examination process, but limited its scope to published prior art and patents.[15] The EP Reexam procedure first became available on July 1, 1981.[16] By the 1990s, about three to four hundred EP Reexams were being requested annually.[17] However, the *Ex Parte* format was heavily criticized as favoring the PO.[18] Many people felt that an EP Reexam was an unattractive alternative to litigation because a capably represented PO, by using a litigation-sized budget, could tilt the odds heavily in his or her favor.[19]

Protest and Examination Procedures in Patent Cases, 46 Fed. Reg. 55,666 (Nov. 10, 1981) (to be codified at 37 C.F.R. pt. 1); Interim Reissue, Reexamination, Protest, And Examination Procedures In Patent Cases Pending Proposed Revision of 37 CFR §§ 1.11, 1.56, 1.106, 1.175, 1.176, 1.193, 1.291, 1.555, 1.565, and 1.570, 1013 Off. Gaz. Pat. Office 18, 18-19 (1981).

11. Patent and Trademark Law Amendments Act of 1980, Pub. L. No. 96-517, 94 Stat. 3015, 69331 (1980) (codified as amended at 35 U.S.C. ch. 30 (2011)).

12. 126 Cong. Rec. 29,895 (1980) (statement of Rep. Robert Kastenmeier).

13. H.R. REP. NO. 96-1307, pt. 1, at 3 (1980).

14. *Id.* at 4.

15. 35 U.S.C. § 305 (2011).

16. *Id.* § 301.

17. U.S. Patent & Trademark Office, *Ex Parte* Reexamination Filing Data (Sept. 30, 2011) [hereinafter *Ex Parte Filing Data*].

18. *See, e.g.*, Kenneth R. Adamo, *Reexamination—To What Avail? An Overview*, 63 J. PAT. OFF. SOC'Y 616, 617-18 (1981); 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, 612 (2004).

19. *See, e.g.*, U.S. PATENT & TRADEMARK OFFICE, REPORT TO CONGRESS ON *INTER PARTES* REEXAMINATION 2 (2004), *available at* http://www.uspto.gov/web/offices/dcom/olia/reports/reexam_report.htm ("Subsequent Congressional review indicated infrequent use of *ex parte* reexamination, primarily because a third party who requested reexamination was unable to participate in the examination stage of the reexamination after initiating the reexamination proceeding. Interested parties suggested that the volume of lawsuits in the Federal District Courts would be reduced if third parties were

About two decades after creating the EP Reexam, Congress enacted the optional *Inter Partes* Patent Reexamination (IP Reexam) to provide a more favorable format for third party requestors (TPRs).[20] Specifically, in 1999, Congress passed the Intellectual Property and Communications Omnibus Reform Act of 1999, also known as the American Inventors Protection Act.[21] This act created the IP Reexam option, incorporated as chapter 31 of the Patent Act.[22] The IP Reexam was first available for any patent filed on or after November 29, 1999.[23] The IP Reexam procedure can be initiated by any party other than the PO and allows the TPR the opportunity for significant participation throughout the proceeding. Since 1999, TPRs have the option of requesting an EP Reexam and/or an IP Reexam, although IP reexams have been requested much less often.[24]

B. The Basics of Patent Reexamination

The majority of patent reexams (71%) are initiated by TPRs wishing to attack the validity of an issued patent owned by a competitor.[25] However, POs initiate a substantial minority of patent reexams as a way to strengthen their own patents and to double-check the validity of a patent prior to entering into costly litigation to enforce it.[26] In rare circumstances, third parties, such as the Director

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encouraged to, and able to, use reexamination procedures that provided an opportunity for them to present their case for patent invalidity at the USPTO during the examination stage of the proceeding. To address those concerns and provide such an opportunity, Congress enacted the 'Optional *Inter Partes* Reexamination Procedure Act of 1999' . . . ."); Mark D. Janis, *Rethinking Reexamination: Toward a Viable Administrative Revocation System for U.S. Patent Law*, 11 HARV. J.L. & TECH. 1, 69-78 (1997).

20. 35 U.S.C. §§ 311-319 (2011); *see* Sony Computer Entm't. Am. Inc. v. Dudas, 85 U.S.P.Q.2d (BNA) 1594, 1598 (E.D. Va. 2006); Michael L. Goldman & Alice Y. Choi, *The New Optional* Inter Partes *Reexamination Procedure and Its Strategic Use*, 28 AIPLA Q.J. 307, 313–14 (2000); Janis, *supra* note 19, at 40-42.

21. Consolidated Appropriations Act, Pub. L. No. 106-113, 113 Stat. 1501 (1999).

22. *See* 35 U.S.C. §§ 311-319.

23. Intellectual Property and Communications Omnibus Reform Act of 1999, S. 1948, 106th Cong. § 4608 (1999); 37 C.F.R. § 1.913 (2012). A patent application's filing date is based on its filing date regardless of any claim to an earlier priority date. Cooper Techs. Co. v. Dudas, 536 F.3d 1330, 1338-43 (Fed. Cir. 2008).

24. *See* Dmitry Karshtedt, *Contracting for a Return to the USPTO:* Inter Partes *Reexaminations as the Exclusive Outlet for Licensee Challenges to Patent Validity*, 51 IDEA 309, 323-32 (2011).

25. *See Ex Parte Filing Data*, *supra* note 17; U.S. Patent & Trademark Office, *Inter Partes* Reexamination Filing Data (Sept. 30, 2011) [hereinafter *Inter Partes Filing Data*]. There were 9,370 reexam requests out of a total of 13,171 requests, consisting of 1,389 IP Reexam requests plus 7,981 EP Reexam requests out of a total of 11,782 EP reexam requests.

26. *See* Joseph R. Re, *"Parallel Prosecution": Effect of Patent Prosecution on*

of the USPTO or non-profit organizations such as the Consumer Watchdog and Electronic Freedom Foundation, initiate patent reexams.[27]

The initiation of a patent reexam is predicated on the requestor raising a substantial new question of patentability based on printed reference(s) and/or patent(s).[28] Only patent claims presenting a substantial new question of patentability will be reexamined. Possible outcomes of a reexam include: (1) confirmation of the patent claim(s), (2) modification of the patent claim(s), and/or (3) cancellation of some or all of the patent claims.

Reexam is a post-grant review process that allows the USPTO to revisit issued patents that were already examined and granted by "re-examining" them. With "special dispatch" a team of three experienced specialist examiners of the USPTO's Central Reexamination Unit (CRU) performs each reexam.[29] Together they hold a Patentability Review Conference where they discuss patentability and decide to reject or allow each claim at issue.[30]

Typically, a reexam involves a newly discovered reference that was not originally considered by the USPTO during the original examination of the patent application. However, during this examination, sometimes the USPTO misses an issue that can be addressed later in a reexam by using "old" references discussed in a "new" light.[31]

In addition, changes in judicial interpretation of patentability are effective retroactively, regardless of when a patent was examined and

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Concurrent Litigation, 73 J. PAT. & TRADEMARK OFF. SOC'Y 965, 967-68 (1991) (discussing rationales for POs to request EP reexams of their own patents).

27. *See, e.g.*, Request for EP Reexam 90/009,868 of U.S. Patent No. 6,567,790 (Jan. 12, 2011); Request for EP Reexam 90/010,716 of U.S. Patent No. 6,243,373 (Oct. 14, 2009); Request for IP Reexam 95/000,154 of U.S. Patent No. 7,029,913 (July 17, 2006), *rev'd*, Found. for Taxpayer & Consumer Rights v. Wis. Alumni Research Found., No. 2010-001854, 2010 WL 1734377 (B.P.A.I. Apr. 28, 2010); Request for IP Reexam 95/000,020 of U.S. Patent No. 6,317,592 (May 29, 2003). The Electronic Frontier Foundation has a program called Patent Busters devoted to the reexamination of invalid patents. PAUL GOLDSTEIN, INTELLECTUAL PROPERTY: THE TOUGH NEW REALITIES THAT COULD MAKE OR BREAK YOUR BUSINESS 156 (2007).

28. 35 U.S.C. §§ 303-304, 312-313 (2011).

29. *See id.* § 305; 37 C.F.R. §§ 1.550(a), 1.937(a) (2012).

30. U.S. PATENT & TRADEMARK OFFICE, MPEP §§ 2271.01, 2671.03 (8th ed. Rev. 8, July 2010).

31. *In re* Swanson, 540 F.3d 1368, 1375-76 (Fed. Cir. 2008) (stating that a substantial new question (SNQ) does not merely depend on whether a reference was previously considered or cited, but whether, in the appropriate context of a new light, the reference bears on the question of the validity of the patent).

granted. Thus, a big shift in law can lead to a flurry of reexam requests, such as that occurred with the Supreme Court's opinion in *KSR* and its overturning of six years of precedent by the Court of Appeals for the Federal Circuit (Federal Circuit) on the non-obviousness requirement.[32]

1. Period of Patent Enforceability

A reexam allows anyone to challenge the validity of an issued patent at any point during the patent's period of enforceability, which extends to its expiration date plus six years.[33] This is because patent infringement damages can be recovered for past infringing conduct that occurred during the patent term and the statutory time limit on damages is six years.[34] If patent infringement litigation is ongoing past the six-year mark, then a reexam can be initiated even after six years from the end of the patent term.

2. A Substantial New Question of Patentability

In order to initiate a reexam proceeding, the requestor must establish that a substantial new question (SNQ) of patentability exists based on a published reference or patent.[35] The USPTO has three months to either decide if at least one SNQ is raised by the request and to either order a patent reexam or to deny the request.[36] The determination of a SNQ is final and non-appealable.[37]

A SNQ must be based on either a non-cumulative "new"

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32. KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398 (2007); *see also* Timothy J. Le Duc, *Requesting Stays Pending Patent Reexamination After* KSR*: Unworkable Standard at Play or No Standard at All?*, 15 INTELL. PROP. L. BULL 1, 1-3 (2010) (noting that the Supreme Court's *KSR* opinion on the obviousness standard resulted in a higher standard of patentability, as well as a lower standard for establishing an SNQ to initiate a reexams of patent initially examined under a lower obviousness standard.); W. Karl Renner & Thomas A. Rozylowicz, *Re-Examination Request: To File or Not to File?*, LAW360 (Apr. 15, 2009, 12:00 AM), *available at* http://www.fr.com/files/News/bea51b9d-0f00-4833-98f6-7b1f7a7318db/Presentation/NewsAttachment/429b6b7f-62e3-470e-88e0-7c0a7910fa33/Re-Examination%20Request-%20To%20File%20Or%20Not%20To%20File.pdf ("[T]he recent KSR decision, which yielded new USPTO examination guidelines, [has] dramatically affected rates of allowance in patent matters including re-examination."); Marc David Peters, *Reexamination after* KSR, Presentation at the 8th Annual Advanced Patent Law Institute in San Jose, Cal. (Nov. 29, 2007).

33. *See* 35 U.S.C. § 286 (2011); 37 C.F.R. § 1.510(a) (2012); MPEP, *supra* note 30, § 2211.

34. 35 U.S.C. § 286 (2011).

35. *Id.* §§ 303-304, 312-313.

36. *Id.*

37. *Id.* §§ 302, 312; 37 C.F.R. § 1.927 (2012); Heinl v. Godici, 143 F. Supp. 2d 593, 596-98 (E.D. Va. 2001).

reference or an "old" reference viewed in a "new" light.[38] A "new" reference, as opposed to an "old" reference, is one that was not used in the original examination of the patent. Because the USPTO did not record the "new" reference during the original examination, in the reexam it is as if the "new" reference is newly discovered. An "old" reference can be used to establish a SNQ, but the "old" reference cannot establish identical grounds of rejection already considered by the USPTO during the original examination.

The goals of reexam must be balanced against the potential for abuse due to unwarranted reexams intended to harass or burden the PO and thus waste a valid patent's life.[39] The requirement for a SNQ serves to inhibit the abuse of reexam requests and to promote USPTO efficiency by limiting reexams to new issues of patentability. Prohibiting reexamination of old patentability issues already considered during the original examination protects POs from harassment or spite.[40] Thus, reexam proceedings are carefully limited to new prior art that had escaped review at the time of the original examination.[41]

One could envision that invalidating an issued patent potentially makes the USPTO look incompetent. However, invalidating a patent by the USPTO-conducted reexam does not necessarily reflect on the quality of USPTO's original examination, when the prior art reference was not available at that time.

For example, if the reexam was based on a "new" reference, then (at worst) the USPTO's reference search was not completely effective. And even this might not necessarily be the case, since some references, called "secret prior art," are not accessible by the examiner at the time of original examination. Secret prior art is information publicly disclosed by a U.S. patent or patent application only after the time of examination. However, this information is effectively treated as prior art for purpose of novelty and obviousness as of its earlier filing date, even if neither the public nor the USPTO was aware of it until the later date.[42]

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38. *In re* Recreative Techs. Corp., 83 F.3d 1394, 1396 (Fed. Cir. 1996).

39. *Id.* at 1397.

40. *See Industrial Innovation and Patent and Copyright Law Amendments: Hearings on H.R. 6033, H.R. 6934, H.R. 3806, H.R. 2414 Before the Subcomm. on Courts, Civil Liberties and the Admin. of Justice of the H. Comm. on the Judiciary*, 96th Cong. 594 (1980).

41. H.R. REP. NO. 96-1307, pt. 1, at 7 (1980).

42. *See, e.g.*, *In re* Giacomini, 612 F.3d 1380,1383-85 (Fed. Cir. 2010).

3. Patent Owner Amendment of Patent Claims

During a reexam, the PO is allowed to amend their patent claims.[43] Consequently, all of the original patent claims could be declared invalid, while new or amended claims introduced during the reexam could be allowed to issue. Thus, even if a patent survives a reexam, it might be heavily modified or limited in scope. In addition, a PO can preserve an original claim by disavowing coverage of certain embodiments of the invention. These aspects of the reexam proceeding serve the purpose of increasing the quality of issued patents.

Although claims can be added or amended during a reexam, there is a statutory prohibition against the broadening of claims.[44] This means the scope of a new or amended claim cannot enlarge the scope of the original claims in the issued patent.[45] "Claims that are impermissibly broadened during reexamination are invalid . . . ."[46] A claim is impermissibly broadened if any conceivable product could infringe the amended claim but not the original claim.[47]

4. Amending Patent Claim Scope and Intervening Rights

If an amended patent claim is issued that changes the original claim's scope, then intervening rights will be created.[48] Intervening rights protect accused infringers by precluding a finding of patent infringement for conduct prior to the issue of the Reexam Certificate.[49] Intervening rights protect an accused infringer's reliance on the language of issued patent claims without fear that a later administrative proceeding might alter the claims' scope of a patent.

Any amended patent claim granted as result of a reexam is enforceable against infringing activity that occurred after the issuance of the original patent to the extent that its claims are substantially identical with the original patent claim.[50] Identity requires at most

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43. 35 U.S.C. §§ 305, 314 (2011).

44. *Id.* § 251; *In re* Freeman, 30 F.3d 1459, 1464 (Fed. Cir. 1994).

45. 35 U.S.C. § 305.

46. Predicate Logic, Inc. v. Distributive Software, Inc., 544 F.3d 1298, 1302 (Fed. Cir. 2008).

47. *Id.* at 1303.

48. 35 U.S.C. §§ 252, 307(b), 316(b) (2011); Marine Polymer Techs., Inc. v. HemCon, Inc., 672 F.3d 1350, 1362-65 (Fed. Cir. 2012) (en banc decision by an equally divided court).

49. A revision of patent by any reexamination amendment or cancellation does not have legal effect until a reexamination certificate is issued. 35 U.S.C. § 307.

50. *Id.* §§ 252, 307(b), 316(b); *see* Fortel Corp. v. Phone-Mate, Inc., 825 F.2d 1577, 1579-81 (Fed. Cir. 1987).

"without substantive change."[51] Generally, an amendment clarifying the claim language without changing the scope is considered identical. Thus, intervening rights do not apply when reliance on an original claim is inconceivable due to the claim being substantially the same as the new claim. In addition, a change in claim scope required for creating intervening rights is not limited to textual claim language changes because disavowals and other admissions during the prosecution history can substantially change the scope, too.[52]

C. The Scope of Patent Reexamination

The reexam process is limited to the ground(s) of rejection proposed by the requestor and those ground(s) available to the USPTO.

1. Requestor-Proposed Grounds of Rejection

First, the SNQ to initiate the reexam must be based on prior art in the form of a printed reference or patent.[53] During the reexam, the specialist examiners are only permitted to reject original patent claims based on: (1) prior art in the form of patents, printed publications, affidavits or declarations explaining the content or date of the prior art, and 2) admissions by the applicant of record in the file wrapper or a judicial proceeding.[54]

The only grounds of rejection available are those based on the eligible evidence mentioned above and are limited primarily to rejections for: (1) lack of novelty under § 102, (2) obviousness under § 103, and (3) obviousness-type double patenting.[55] This statutory limitation precludes grounds of rejection under § 101 for lack of utility or eligibility and § 112 for failure to meet the disclosure requirements. In addition, examiners in a reexam proceeding will not consider some grounds of rejection under § 102, such as issues of

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51. *Marine Polymer*, 672 F.3d at 1363 (citing Kaufman Co. v. Lantech, Inc. 807 F.2d 970, 977 (Fed. Cir. 1986)); Bloom Eng'g Co. v. N. Am. Mfg. Co., 129 F.3d 1247, 1250 (Fed. Cir. 1997) ("Unless a claim granted or confirmed upon reexamination is identical to an original claim, the patent cannot be enforced against infringing activity that occurred before issuance of the reexamination certificate. 'Identical' does not mean verbatim, but means at most without substantive change."); Engineered Data Products, Inc. v. GBS Corp., 506 F. Supp. 2d 461, 467-68 (D. Colo. 2007) ("[T]he Federal Circuit has routinely applied the intervening rights defense to narrowing amendments.").

52. *Marine Polymer*, 672 F.3d at 1362-65.

53. 35 U.S.C. §§ 303-304, 312-313 (2011).

54. MPEP, *supra* note 30, §§ 2217, 2258.

55. *In re* Lonardo, 119 F.3d 960, 966 (Fed. Cir. 1997); MPEP, *supra* note 30, § 804 & form paras. 8.33-8.34, 8.36.

fraud, abandonment, derivation, suppression, concealment or "prior use or sale" occurring more than one year prior to the patent's priority date, except if such occurrences are sufficiently described in an eligible printed reference.

However, once a patent claim is amended or a new patent claim is added, all patentability requirements must be reexamined.[56] With regard to those claims, the reexam includes the patentability requirements under § 101, the full ambit of § 102, and § 112.[57] In addition, rejections based on any of these requirements may be proposed by the TPR during an IP Reexam with respect to any new or amended patent claim.[58]

2. Examiner-Proposed Grounds of Rejection

Although initiated by a SNQ, a reexam proceeding's inquiries into patentability are not limited to any requestor-identified SNQ. The USPTO can search for new prior art and issue rejections *sua sponte*. Section 303 of Title 35 states that "the Director may determine whether a substantial new question of patentability is raised by patents and publications discovered by him or cited under the provisions of section 301 [of this title]."[59] If the reexam request is for fewer than all of the patent claims, the examiner will generally review only those claims that raise concern about the SNQ. However, the examiner has discretion to reexamine any claim where the expenditure of added resources is deemed justified.[60]

Despite these apparent limitations in the scope of the reexam proceeding, reexams often do not seem limited. Judge Nies explained that "[i]n a very real sense, once reexamination is ordered . . . , the patent holder 'starts over' under the PTO view on all § 102 and § 103 issues with respect to all claims, amended or unamended, whether or not related to" a SNQ.[61]

D. Burden of Proof and Claim Construction

In federal court, a granted patent is presumed valid so when a

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56. 35 U.S.C. § 305; MPEP, *supra* note 30, § 2671.02.

57. Rules to Implement Optional *Inter Partes* Reexamination Proceedings, 65 Fed. Reg. 76,756, 76,759 (Dec. 7, 2000) (to be codified at 37 C.F.R. pt. 1).

58. MPEP, *supra* note 30, § 2672.

59. 35 U.S.C. § 303.

60. Notice of Clarification of Office Policy to Exercise Discretion in Reexamining Fewer Than All the Patent Claims, 1311 Off. Gaz. Pat. Office 197 (2006); *see* Sony Computer Entm't. Am. Inc. v. Dudas, 85 U.S.P.Q.2d (BNA) 1594, 1602-04 (E.D. Va. 2006).

61. *In re* Etter, 756 F.2d 852, 863 (Fed. Cir. 1985) (en banc) (Nies, J., concurring).

party challenges its validity, it must prove invalidity by clear and convincing evidence.[62] During either the original examination or the reexam, no presumption of validity exists and, thus, no clear and convincing evidentiary standard applies.[63] The USPTO must merely establish a prima facie case, based on the preponderance of evidence, that a claim is invalid to properly reject it.[64] However, the PO can successfully rebut this prima facie evidence by a preponderance of additional evidence that the claim is valid.

In federal court, a patent claim is presumed to be valid and construed to preserve validity, if possible.[65] During examination, there is no presumption of validity and, thus, no goal to construe claims so as to preserve validity. Instead, the USPTO's examining corps construes claims with the "broadest reasonable interpretation" (BRI) in light of the present disclosure and prior art when considering patentability because patent claims can be amended.[66] During reexams, the examiners of the CRU also use this BRI approach, unless the patent term has expired.[67] If the patent term has expired, then CRU examiners discard the BRI approach and construe patent claims so as to preserve claim validity because the POs cannot amend any expired patent claims.[68]

E. Patent Reexamination from the Practitioner's Point of View

Patent reexam was intended by Congress to be a litigation

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62. 35 U.S.C. § 282 (2011); Microsoft Corp. v. i4i Ltd. P'ship, 131 S. Ct. 2238, 2242 (2011).

63. *In re* NTP, Inc., 654 F.3d 1268, 1276 (Fed. Cir. 2011); *In re Etter,* 756 F.2d at 858 (stating that during reexamination, the patent claims no longer carry the statutory presumption of validity).

64. *In re* Oetiker, 977 F.2d 1443, 1445 (Fed. Cir. 1992); *see* MPEP, *supra* note 30, § 706.1.

65. 35 U.S.C. § 282; *see* Becton, Dickinson & Co. v. Tyco Healthcare Grp., LP, 616 F.3d 1249, 1255 (Fed. Cir. 2010); Phillips v. AWH Corp., 415 F.3d 1303, 1327 (Fed. Cir. 2005) (en banc); Whittaker Corp. v. UNR Indus., Inc., 911 F.2d 709, 712 (Fed. Cir. 1990).

66. *In re NTP*, 654 F.3d at 1287; *In re* ICON Health & Fitness, Inc., 496 F.3d 1374, 1379 (Fed. Cir. 2007); *In re* Am. Acad. of Sci. Tech. Ctr., 367 F.3d 1359, 1364 (Fed. Cir. 2004) (stating that the USPTO generally gives claims "their broadest reasonable interpretation consistent with the specification" (quoting *In re* Bond, 910 F.2d 831, 833 (Fed. Cir. 1990))); MPEP, *supra* note 30, §§ 2100–2106.

67. *In re ICON*, 496 F.3d at 1379 ("During reexamination, as with original examination, the PTO must give claims their broadest reasonable construction consistent with the specification.").

68. *Ex parte* Neefe, No. 2007-1366, 2007 WL 2211337 (B.P.A.I. July 31, 2007); *Ex parte* Papst-Motoren, No. 650-04, 1986 WL 83328, 1 U.S.P.Q.2d (BNA) 1655 (B.P.A.I. Dec. 23, 1986); 37 C.F.R. § 1.121(j) (2012); MPEP, *supra* note 30, § 2211.

alternative that would be expeditious, less expensive, and performed by agency experts instead of a judge and jury.[69] However, many of the patents in reexam are concurrently litigated (33% of EP Reexams and 70% of IP Reexams). In particular, the IP Reexam has become an integral part of patent litigation strategy.[70]

The reexam is used primarily as a defensive strategy for accused infringers. The grant of a reexam can have a promising impact on: (1) stays of patent infringement litigation, (2) forestalling court-ordered injunctions, (3) findings of patent infringement, such as cancellation or amendment of patent claims, patent claim scope disavowal, intervening rights, (4) calculation of patent infringement damages (e.g., willfulness, intervening rights), and (5) negotiation of litigation settlements, for example to weaken the patent or increase doubt about the patent's validity. For these reasons, the reexam is now a staple of strategic objectives and considerations by any defense counsel representing an accused infringer.[71]

The most significant among these strategic reasons is the potential of a reexam to secure a litigation stay thereby forestalling an injunction against the accused infringer. This could force the patentee to amend the issued claims thereby affecting infringement claims and damages and create intervening rights.

A party can file a motion to stay litigation based merely on the grant of a patent reexam of any patent at issue in litigation.[72] However, a litigation stay is by no means automatic because district courts have broad discretion in granting or denying stays. Pursuant to

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69. *See* 145 Cong. Rec. H6929, H6944 (daily ed. Aug. 3, 1999) (statement of Rep. Dana Rohrabacher) ("This title was an attempt . . . to further encourage potential litigants to use the PTO as a [sic] avenue to resolve patentability issues without expanding the process into one resembling courtroom proceedings."); *see also* 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, 263–64 (2006); Joseph Farrell & Robert P. Merges, *Incentives to Challenge and Defend Patents: Why Litigation Won't Reliably Fix Patent Office Errors and Why Administrative Patent Review Might Help*, 19 BERKELEY TECH. L.J. 943, 944 (2004); Kristen Jakobsen Osenga, *Rethinking Reexamination Reform: Is It Time for Corrective Surgery, or Is It Time to Amputate?*, 14 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 217, 218 (2003).

70. Roger Shang & Yar Chaikovsky, Inter Partes *Reexamination of Patents: An Empirical Evaluation*, 15 TEX. INTELL. PROP. L.J. 1, 19-26 (2006). However, "few anticipated such protracted *concurrent* litigation." Wayne B. Paugh, *The Betrayal of Patent Reexamination: An Alternative to Litigation, Not a Supplement*, 19 FED. CIRCUIT B.J. 177, 222 (2010).

71. *See* Robert Greene Sterne et al., *Reexamination Practice with Concurrent District Court or USITC Patent Litigation*, 982 PLI/PAT 603, 606 (2009).

72. 35 U.S.C. § 318 (2011); *see* Procter & Gamble Co. v. Kraft Foods Global, Inc., 549 F.3d 842, 846-49 (Fed. Cir. 2008); Le Duc, *supra* note 32, at 15-16.

35 U.S.C. § 318, federal courts can issue a stay of litigation when equitably employing a three-factor test: (1) the balance of prejudice to either party; (2) the potential to simplify the issues; and (3) whether discovery or a trial date has been scheduled.

If a reexam invalidates a patent claim at issue, then the reexam simplifies the issues as stated as second factor. But this potential must be balanced by how far litigation has progressed as implicated by the third factor. Often the stay decision turns on timing—how far has the litigation progressed when the motion to stay is considered.[73] If the litigation has not progressed to the case management conference or to the start of discovery, then the motion to stay will more likely be granted.

Motions to stay patent litigation until the conclusion of a reexam are granted about half of the time.[74] One article reported that in the 2004-2007 time period, an accused patent infringer had requested a patent reexamination more than 75% of the time and moved to stay more than 80% of the time.[75] It also reported that a stay was granted more than 50% of the time during the same period.[76] But the frequency of granting litigation stays varies considerably by federal district and even by judge within a district.[77]

Certain district courts grant litigation stays in light of pending patent reexam more often than others. For example, from June 2005 to February 2008 the Northern District of California granted stays 69% of the time while the Eastern District of Texas granted stays only 44% of the time.[78] In 2008-2009, the Northern District of Illinois granted litigation stays because of a reexam 85% of the time.[79] On the other hand, the Eastern District of Texas's grant of litigation stays for reexam frequency was only 20% (over the same period).[80] Judge John Love of the Eastern District of Texas, wary of the potential for reexams being used as a dilatory tactic, has stated that "there exists no

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73. Jack B. Blumenfeld & Leslie A. Polizoti, *Stays Pending Reexamination*, 908 PLI/PAT 91, 97-98 (2007).

74. *See* Blumenfeld & Polizoti, *supra* note 73, at 98; Gregory V. Novak, *Concurrent Reexaminations as a Strategic Patent Litigation Defense Tool*, 982 PLI/PAT 661, 673-74 (2009); Matthew Smith, *Stays Pending Reexamination*, PATENTLY-O (Nov. 1, 2009, 8:52 PM), http://www.patentlyo.com/patent/2009/11/the-following-guest-post-is-by-matthew-smiththe-grant-rate-of-motions-to-stay-is-highly-judge-dependent-and-somewhat-less-ob.html.

75. Blumenfeld, *supra* note 73, at 98.

76. *Id.*

77. *See* Novak, *supra* note 74, at 673-74.

78. *Id.* at 673.

79. Smith, *supra* note 74.

80. *Id.*

policy [in this district] to routinely grant such motions."[81] Similarly, Judge Robinson of the District of Delaware argues for not granting stays of patent litigation based merely on concurrent patent reexam "absent extraordinary circumstances."[82]

On the other side, a PO may seek to suspend a patent reexamination proceeding "for good cause."[83] For example, a suspension may be granted by the USPTO if the patent reexamination proceeding has just begun while litigation has already reached the appellate stage.[84]

In summary, Congress created two procedures for checking the quality of a patent: the EP Reexam and IP Reexam. Both are granted based on establishing a SNQ within the period of enforceability of the patent. The scope of a reexam generally is limited to SNQ's for issues of novelty and/or obviousness based on patents and/or printed references. During a reexam, the CRU uses the BRI approach for patent claim construction without any presumption of validity. The PO can amend their patent during the reexam, but this opens up the scope of reexam to the full gauntlet of patentability issues with regard to the new or amended claims and might give rise to intervening rights. Reexams are often used preemptively by POs and potential infringers in the absence of concurrent litigation; however once litigation has begun, reexams have become a staple part of any accused infringer's defense strategy to forestall patent litigation and preliminary injunctions.

II. THE OPTIONAL *INTER PARTES* PATENT REEXAMINATION

The main difference between the EP Reexam and the IP Reexam is that TPRs can participate throughout the IP Reexam proceeding and appeal any decision unfavorable to them. Because of TPR participation, IP Reexams are more successful than EP Reexams in forcing changes to patent claims. In addition, an IP Reexam request must identify the real party in interest, not just an attorney or law firm representing the requestor. In EP Reexams, this approach is acceptable and can result in anonymity of the real party in interest.[85]

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81. Nidec Corp. v. LG Innotek Co., 6:07cv108, 2009 WL 3673433, at *6 (E.D. Tex. Apr. 3, 2009).

82. Blumenfeld, *supra* note 73, at 99-100.

83. 35 U.S.C. § 314(c) (2011).

84. Sony Computer Entm't. Am. Inc. v. Dudas, 85 U.S.P.Q.2d (BNA) 1594, 1600 (E.D. Va. 2006).

85. 35 U.S.C. § 311.

The IP Reexam statute contains strong estoppel provisions, which are not present for EP Reexams, as well as other unique procedural aspects.

A. The Inter Partes *Patent Reexamination Procedure*

Inter Partes Reexam proceedings follow this main sequence:

(1) Third Party Request;
(2) SNQ Determination;
(3) Ordered/Denied;
(4) Non-Final Office Action;
(5) Action Closing Prosecution;
(6) Right of Appeal Notice;
(7) Reexamination Certificate.

After the Non-Final Office Action, the PO can file a Response of up to 50 pages in length.[86] In turn, the TPR can file Comments up to 50 pages in length in response to anything raised by either the Non-Final Office Action or the PO's Response.[87] The examiners take everything into account and issue a second office action, which includes claim rejections and/or allowances. The PO is allowed to file amendments to the patent claims, and the cycle can repeat.[88]

Once the examiner considers all the claims at issue and reaches a decision on the merits, then that Office Action is called an Action Closing Prosecution (ACP).[89] This is a misnomer because the ACP does not close prosecution unless there is no response by the PO. If the PO responds to the ACP, then the TPR can respond to both the ACP and the PO's Response.[90] The next office action will be final, unless the PO amends the claims. If the PO does not respond or does not amend the claims, then the examiner issues a Right of Appeal Notice (RAN). A RAN is a final office action that closes prosecution and starts the time period available for appeals by either the PO or TPR.[91]

A final office action might include decisions favorable and/or unfavorable to patentability (e.g., it might reject or allow patent

86. 37 C.F.R. § 1.943 (2012).
87. *Id.* § 1.947; MPEP, *supra* note 30, § 2666.05(II); *see* 35 U.S.C. § 314(b)(2).
88. *See* 35 U.S.C. §§ 305, 314; 37 CFR §§ 1.941, 1.121.
89. 37 C.F.R. § 1.949; MPEP, *supra* note 30, § 2671.02.
90. 37 C.F.R. § 1.947; MPEP, *supra* note 30, § 2672.
91. 37 C.F.R. § 1.953; MPEP, *supra* note 30, § 2673.02.

claims at issue).[92] Participation in the reexam proceeding ends with the examiner issuing a Notice of Intent to Issue Reexamination Certificate (NIRC), which is followed by the Reexamination Certificate, thereby closing the reexam proceeding.[93] The NIRC should contain the examiners' reasons for allowance of any amended or new patent claims.[94]

B. Estoppel Effects Based on Inter Partes *Patent Reexamination*

An IP Reexam can result in estoppel effects.[95] First, one estoppel provision prevents the abuse of the IP Reexam procedure by filing multiple reexams. A TPR, or its privies, cannot file a IP Reexam Request or maintain an IP Reexam: (1) while a first IP Reexam is ongoing; (2) after a final decision has been entered against the TPR in a civil action based on the same issue; or (3) after a final decision has been entered against the TPR in an IP Reexam that is favorable to the PO based on the same issue.[96] The USPTO may refuse to grant an IP Reexam request after determining which issues could have been raised during previous litigation that were finally decided.[97]

However, a second administrative estoppel provision is more troubling to potential TPRs.[98] A TPR will be administratively estopped in a subsequent civil action from: (1) reasserting grounds of invalidity against patent claims challenged by the TPR in a previous IP Reexam, (2) asserting grounds of invalidity that could have been raised in a previous IP Reexam, and (3) challenging facts established in a reexam proceeding.[99] This means that a TPR participating in concurrent litigation can challenge invalidity in an IP Reexam and in litigation at the same time, regardless of the outcome of the IP Reexam. However, once all appeals are exhausted in the litigation, the TPR cannot reassert any failed ground of rejection from the IP Reexam.[100] For this estoppel to attach, the concurrent litigation must

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92. *See* 37 C.F.R. § 1.953; MPEP, *supra* note 30, § 2673.02.

93. MPEP, *supra* note 30, § 2687.

94. *Id.*

95. 35 U.S.C. § 315, 317 (2011). *See* 37 C.F.R. § 1.907 (2012).

96. *See* 35 U.S.C. § 317(a)-(b).

97. *See* MPEP, *supra* note 30, § 2686.04.

98. *See* Joseph D. Cohen, *What's Really Happening in* Inter Partes *Reexamination*, 87 J. PAT. & TRADEMARK OFF. SOC'Y 207, 207–08 (2005); Farrell & Merges, *supra* note 69, at 967; Knowles et al., *supra* note 18, at 627; Susan Perng Pan, *Considerations for Modifying* Inter-Partes *Reexam and Implementing Other Post-Grant Review*, 45 IDEA 1, 9-13 (2004).

99. *See* 35 U.S.C. § 315(c).

100. Bettcher Indus., Inc. v. Bunzl USA, Inc., 661 F.3d 629, 642-48 (Fed. Cir. 2011).

have resulted in a final determination of validity by a court in a civil action under 28 U.S.C. § 1338 where all appeals have been exhausted.[101]

The classification of grounds that could have been raised is an unpredictable "grey" area. The district courts, by evaluating all the facts and circumstances, may determine which issues could have been raised on a case-by-case basis.[102] These estoppels provisions incentivize TPRs to raise any and all issues during the reexam proceeding.

Other estoppel effects can work in the TPR's favor. The reexam becomes part of a patent's file wrapper and prosecution history. To defend the validity of patent claims, the PO might make numerous statements about his or her patent claims that might later result in prosecution history estoppel or otherwise be used against the PO in court.[103]

C. Relationship Between Patent Reexamination and the Judiciary

The judiciary is never bound by any USPTO decision, such as the result of a reexam or a determination of validity by the Board of Patent Appeals and Interferences (BPAI).[104] If a federal court holds a patent claim to be valid, this holding might vacate a reexam regarding the same claim but otherwise has no legally binding effect on any pending reexam.[105] The issuance by the USPTO of a Reexamination

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101. 35 U.S.C. § 315 ("in any civil action arising in whole or in part under" 28 U.S.C. § 1338); Sony Computer Entm't. Am. Inc. v. Dudas, 85 U.S.P.Q.2d (BNA) 1594, 1598-1604 (E.D. Va. 2006). This administrative estoppel does not apply to International Trade Commission Section 337 investigations.

102. *Bettcher Indus., Inc.*, 661 F.3d at 642-48.

103. *See, e.g.*, Marine Polymer Techs., Inc. v. HemCon, Inc., 672 F.3d 1350, 1363-65 (Fed. Cir. 2012) (en banc decision by an equally divided court); Am. Piledriving Equip., Inc. v. Geoquip, Inc., 637 F.3d 1324, 1326 (Fed. Cir. 2011); CIAS, Inc. v. Alliance Gaming Corp., 504 F.3d 1356, 1362 (Fed. Cir. 2007); C.R. Bard, Inc. v. U.S. Surgical Corp., 388 F.3d 858, 867-69 (Fed. Cir. 2004).

104. Jacobs Vehicle Equip. Co. v. Pac. Diesel Brake Co., 829 F. Supp. 2d 11, 37 (D. Conn. 2011) ("A patent examiner's finding in an ex parte proceeding, although accorded deference in district court litigation, is never binding on the court." (citing Fromson v. Advance Offset Plate, Inc., 755 F.2d 1549, 1555 (Fed. Cir. 1985)).

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

> "[C]ourts do not find patents 'valid,' only that the patent challenger did not carry the 'burden of establishing invalidity in the *particular case* before the court.'" *Ethicon*, 849 F.2d at n. 3 (internal citations omitted) (emphasis in original). Therefore, "a prior holding of validity is not necessarily inconsistent with a subsequent holding of invalidity," *Stevenson v. Sears Roebuck & Co.*, 713 F.2d

Certificate declaring a patent claim valid has no legally binding effect on any court considering patent validity.[106] Conversely, a final, non-appealable holding of invalidity by the judiciary is binding on the USPTO.[107] However, if the USPTO cancels a patent claim, then any concurrent judicial proceeding must dismiss any claim based solely on patent rights conferred by the now canceled claim.

Another issue is how claim constructions in reexam proceedings and in civil litigation affect each other. A *Markman* order has no effect on the USPTO.[108] This is because of the different approaches to claim construction: the USPTO uses the BRI with the opportunity for amendment, but the federal courts must presume validity.[109] This allows the USPTO to cancel a patent claim that was previously held valid and infringed by a court because the USPTO can construe the identical claim more broadly.[110]

D. Inter Partes *Patent Reexamination Statistics Reported by the U.S. Patent and Trademark Office*

After the first IP Reexam proceeding was initiated in 2001, the number of IP Reexams requested has steadily risen each year, from only a few requests in 2002 to 374 in 2011.[111] As of the third quarter of 2011, a total of 1,389 IP Reexams had been requested, nine of which were initiated by the Director of the USPTO.[112] Ninety-five percent of all IP Reexam requests were granted based on the SNQ

705, 710 (Fed. Cir. 1983), and is not binding on subsequent litigation or PTO reexaminations. *See Ethicon*, 849 F.2d at 1429 & n. 3 (rejecting the PTO's argument that it was bound by a court's decision upholding a patent's validity); *Mendenhall v. Cedarapids*, 5 F.3d 1557, 1569-70 (Fed. Cir. 1993) ("A prior decision that a patent has previously survived an attack on its validity serves only to inform the district court . . . ."); *cf. In re Trans Texas Holdings Corp.*, 498 F.3d 1290, 1296-97 (Fed. Cir. 2007) (holding that the PTO during reexamination is not bound by a district court's claim construction).

Id.; *see supra* note 1.

106. *Jacobs Vehicle Equip. Co.*, at 37 ("[T]he Federal Circuit has made it clear that the presumption of validity is the same for a patent confirmed through reexamination and a patent issued through the normal process. In both cases, a challenger must prove invalidity by clear and convincing evidence." (citing Superior Fireplace Co. v. Majestic Prods. Co., 270 F.3d 1358, 1367 (Fed. Cir. 2001))).

107. Sony Computer Entm't. Am. Inc. v. Dudas, 85 U.S.P.Q.2d (BNA) 1594, 1598 (E.D. Va. 2006).

108. *In re* Trans Tex. Holdings Corp., 498 F.3d 1290, 1297 (Fed. Cir. 2007).

109. Microsoft Corp. v. i4i Ltd. P'ship, 131 S. Ct. 2238, 2245 (2011).

110. *In re* Constr. Equip. Co., 665 F.3d 1254, 1254-56 (Fed. Cir. 2011).

111. *Inter Partes Filing Data*, *supra* note 25.

112. *Id.*

standard.[113] Of the 1,187 IP Reexams granted, 305 IP Reexam Certificates were issued.[114] In the first three quarters of 2011, the CRU issued 88 IP Reexam Certificates.[115] The mean pendency for all IP Reexams since its inception to the third quarter of 2011 was 36.2 months.[116]

Probably the most useful statistic is the percentage of patent claim challenges that were successful. Of the completed IP Reexams as of the 2011 fiscal year, 44% (133 of 305) resulted in the cancellation or disclaimer of all challenged patent claims.[117] Only 11% of IP Reexams (35 of 305) resulted in the confirmation of all the patent claims that were challenged.[118] In the middle of these extremes, 45% (137 of 305) resulted in an amendment to at least one claim.[119] Therefore from the TPR's point of view, 44% of all IP Reexams are completely successful and another 45% are partially successful in narrowing the scope of the claimed invention, but to label this as a "win" to the requestor is difficult to judge.

In general, IP Reexams had the highest success percentage for any procedure challenging patent validity, especially as compared to either litigation or EP Reexam. For example, recent litigation-based patent challenges are estimated to result in a finding of patent claim invalidity in 23%-50% of the cases where validity was challenged, without indication as to which involved all the claims in the patent(s)-in-suit.[120] TPR-initiated EP Reexams resulted in the cancellation of all

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113. *Id.*

114. *Id.*

115. *Reexamination Operational Statistics*, U.S. PATENT & TRADEMARK OFFICE, http://www.uspto.gov/patents/stats/Reexamination_Information.jsp (follow "Reexamination operational statistics" hyperlink) (last visited Feb. 4, 2013).

116. *Inter Partes Filing Data, supra* note 25.

117. *Id.*

118. *Id.*

119. *Id.*

120. John R. Allison & Mark A. Lemley, *Empirical Evidence on the Validity of Litigated Patents*, 26 AIPLA Q.J. 185, 212 (1998) (noting that from 1989 to 1996 patent validity was held in 57%-67% of trial court cases); Kimberly A. Moore, *Judges, Juries, and Patent Cases—An Empirical Peek Inside the Black Box*, 99 MICH. L. REV. 365, 392 (2000) (noting that from 1983 to 1999 patent validity was held in 64%-71% of trial court cases); *see also* GLORIA K. KOENIG, PATENT INVALIDITY: A STATISTICAL AND SUBSTANTIVE ANALYSIS § 4.02, n.35.2 (rev. ed. 1980) (noting that from 1953 to 1977 patent validity was held in 35% of the appellate and district court cases); *Patent Office Study of Court Determinations of Validity/Invalidity, 1968-1972*, 144 PAT. TRADEMARK & COPYRIGHT J. (BNA), Sept. 13, 1973, at F-1 (noting that between 1968-1972, patent validity was held in 50% of cases); P.J. Federico, *Adjudicated Patents, 1948-54*, 38 J. Pat. Off. Soc'y 233, 236 (1956) (noting that from 1948-1954, patent validity was held in 30%-40% of the trial court cases). *See also* Carter-Wallace, Inc. v. Davis-Edwards Pharmacal Corp., 443 F.2d. 867, 872 (2d Cir. 1971) ("[T]he bald fact is that more than

patent claims in 12% and narrowing amendments in 58% of the proceedings.[121]

Furthermore, TPRs historically are successful at forcing some changes to the patent claims at issue in 89% of the proceedings (thus creating intervening rights or disclaimer of rights) because only 11% of all issued IP Reexam Certificates contained all of the original patent claims. By comparison, EP Reexams are successful at changing at least one patent claim in 77% of the proceedings because all the original patent claims without alterations were maintained in only 23% of the proceedings.[122]

However, it is not necessarily fair to compare these "apples and oranges" because IP Reexams are always initiated by the challenger stemming exclusively from published prior art and patents that raise an SNQ, whereas litigation may be forced upon the accused. Reexams generally might be biased to the challenging of weaker patents, and some POs may not defend patents that do not, or potentially will never, provide any economic advantage. TPR participation in IP Reexams may favor the rejection of claims as compared to EP Reexams, although in a minority of IP Reexam proceedings, the TPR stops participating.

The impact of narrowing amendments to the claims in a reexam is not clear—from the TPR's point of view, it could be positive, negative, or neutral. The amended claims could be irrelevant to any ongoing litigation or potentially infringing conduct or, on the other hand, might have created intervening rights that protect the TPR's past conduct. Often a narrowing amendment or a disavowal induced by reexam counts as a "win" for the TPR. On the other hand, the PO may utilize a narrowing amendment to survive the validity challenge while maintaining a claim scope broad enough to encompass the infringing activities of the TPR and others.

III. APPEALING *INTER PARTES* PATENT REEXAMINATION DECISIONS

In an IP Reexam, both the PO and TPR have an opportunity to appeal any adverse decision to the BPAI. The PO has the right to

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80% of patent infringement actions on appeal result in a determination that the patent sued upon is invalid." (citing Roger M. Milgrim, *Sears to Lear to Painton: Of Whales and Other Matters*, 46 N.Y.U. L. Rev. 17, 31 & n.62 (1971))).

121. Paul Morgan & Bruce Stoner, *Reexamination vs. Litigation—Making Intelligent Decisions in Challenging Patent Validity*, 86 J. PAT. & TRADEMARK OFF. SOC'Y 441, 461 (2004).

122. *Ex Parte Filing Data*, *supra* note 17.

appeal any decision unfavorable to patentability, and the TPR has the right to participate in any appeal by the PO.[123] The TPR has the right to appeal any decision favorable to patentability, such as the non-adoption of any proposed grounds of rejection; the PO has the right to participate in the appeal.[124] Non-adopted grounds of rejection include both grounds proposed by the TPR and by examiner that were proposed grounds of rejection that were later withdrawn. During an appeal, claims are construed according to the broadest reasonable interpretation standard.[125] Like the reexam itself, any appeal is to be conducted with special dispatch.[126]

A. Methodology

Every appeal of an *Inter Partes* Reexam as of July 27, 2011 (the ten-year anniversary of the filing of the first IP reexam request) was examined by extracting data from the USPTO's public Patent Application Information Retrieval database (PAIR). To do so, a database of completed IP reexam appeals was created. The database contained the results of each appeal, which were categorized as affirmed, reversed or affirmed-in-part; also, each appeal was labeled by which party (PO or TPR) had appealed. For each appeal, the BPAI decision was compared to the CRU examiners' grounds of rejection in the RAN. Then more detailed information was recorded in the database for each appeal, such as dates and types of patented technology. The prosecution history was also searched for any appeals to the Federal Circuit and to determine whether the patent was involved in concurrent litigation. In addition, to both double check concurrent litigation and to determine subsequent litigation, each patent number was entered into Westlaw Next's KeyCite Patent.

In order to understand the outcome of each appeal, several approaches and metrics were used. The **case approach** is based on the overall BPAI decision and was used to calculate two metrics: (1) appellate case results, and (2) appellate case results minus PO appeals in which all the patent claims-at-issue remained rejected (reduced for when "all remained rejected"). The **appeals approach** is based on

123. 35 U.S.C. § 315(a) (2011).

124. *Id.* § 315(b).

125. *In re* Buszard, 504 F.3d 1364, 1368 (Fed. Cir. 2007) ("[T]he Board gives claim language its broadest reasonable interpretation consistent with the specification." (citing *In re* Am. Acad. of Sci. Tech Ctr., 367 F.3d 1359, 1364 (Fed. Cir. 2004); *In re* Morris, 127 F.3d 1048, 1053-54 (Fed. Cir. 1997); *In re* Zletz, 893 F.2d 319, 321 (Fed. Cir. 1989); *In re* Yamamoto, 740 F.2d 1569, 1571-72 (Fed. Cir. 1984))).

126. 35 U.S.C. § 305; MPEP, *supra* note 30, § 2286.

individual party appeals within the cases, which better handles cases with cross-appeals and merged-appeals. The appeals approach was used to calculate the following two metrics: (1) individual party appeal results; and (2) individual party appeal results minus PO appeals where all the patent claims-at-issue remained rejected (reduced for when "all remained rejected"). These four metrics were used for evaluating each appeal.

In addition, an individual **ground-of-rejection approach** was used. This approach also produces two metrics: (1) unadjusted grounds of rejection, and (2) grounds of rejection reduced for when all the patent claims-at-issue remained rejected. Thus, six main metrics were used to answer the broad questions: (1) What percentage of appeals successfully resulted in the BPAI's reversal of examiners' decisions, or, similarly, (2) what is percentage of appealed examiners' decisions that were reversed?

Statistical testing was used to determine if a difference was either likely, i.e. random, or unlikely, i.e. systematic, by chance. Chi square statistical tests were used to compare observed and expected frequencies in one-, two- or three-sample cases. The probability (P) that any difference between observed and expected values had occurred by chance was determined after calculating the chi square (χ^2) test statistic and the degrees of freedom (df). A probability value (P) of less than 0.05 was regarded as statistically significant, because this implied having a 1 in 20 (alpha=0.05) chance of falsely assuming a systematic effect existed when the data was merely random (See Appendix I).

B. Empirical Data

As of July 27, 2011, there were 101 IP Reexam proceedings that had led to appeals to the BPAI and been decided on the merits. Three of these proceedings involved the same patents because multiple IP Reexam proceedings can be merged together as a single BPAI decision per patent. Thus, these 101 proceedings represented 98 different patents. However, three proceedings involved two consecutive appeals, and thus these 101 proceedings involved 101 appeals, three of which were second appeals in the same proceeding. Thus, an empirical study was conducted of these 101 IP Reexam proceedings to answer how often the specialist examiners of the CRU were reversed by the BPAI.

1. The Case Approach: Affirmed/Reversed Percentages by Case

The majority of appellate cases (82% or 83 of 101, Table 1.1) resulted in the BPAI agreeing with the examiners' patentability decisions (45.5% affirmed, 46 of 101; 36.6% affirmed-in-part, 37 of 101). The BPAI completely reversed examiners in only 17.8% of the cases. The data are presented in several large tables to allow efficient comparison of different approaches and metrics, rather than dividing the results into smaller tables. For clarity, the following analysis will refer to subparts of these tables.

Table 1. Total Affirmed/Reversal Percentages for *Inter Partes* Patent Reexaminations

CATEGORY	NUMBER (N)	PERCENTAGE (%)
1. All Cases (101 Proceedings Involving 98 Patents)		
Total Cases	101	100
Affirmed	46	45
Affirmed-in-Part	37	37
Reversed	18	18
2. All Appeals (Including Dissected Cross-Appeals and Merged-Appeals)		
Total Appeals	124	100
Affirmed	59	48
Affirmed-in-Part	34	27
Reversed	31	25
3. All Cases Reduced for When All Patent Claims Remained Rejected		
Total Cases	101	100
Affirmed	51	50
Affirmed-in-Part	32	32
Reversed	18	18
4. All Appeals Reduced for When All Patent Claims Remained Rejected		
Total Appeals	124	100
Affirmed	72	58
Affirmed-in-Part	23	19
Reversed	29	23
5. All Grounds of Rejection		
Total Grounds of Rejection	744	100
Affirmed	526	71
Reversed	218	29
6. All Grounds of Rejection Reduced for When All Patent Claims Remained Rejected		
Total Grounds of Rejection	689	100
Affirmed	513	74
Reversed	176	26

Types of Cases

Each case was categorized as being brought: (1) solely by the PO, (2) solely by a TPR, or (3) involved two opposing parties due to presence of either a cross-appeal or merged-appeal (Table 2.1). More than half of all appealed IP Reexam cases (55%) were brought solely by POs; whereas TPRs solely appealed only 21 percent of the cases, and the remaining 24 percent of cases involved cross-appeals or merged-appeals.

Table 2. *Inter Partes* Patent Reexamination Appeal Types

CATEGORY	NUMBER (N)	PERCENTAGE (%)
1. All Types of Cases		
Total Cases	101	100
Appeals Solely by Patent Owners	56	55
Appeals Solely by Third Party Requestors	21	21
Cases with a Cross-Appeal or Merged-Appeal	24	24
2. Cases with Cross-Appeal or Merged-Appeal		
Results of Appeals with a Cross-Appeal or Merged-Appeal	24	100
Affirmed for Both	3	13
Affirmed and Affirmed-in-Part	4	16
Affirmed-in-Part for Both	4	16
Affirmed and Reversed	7	29
Affirmed-in-Part and Reversed	3	13
Reversed for Both	3	13

Appealing Party Affirmed/Reversal Percentages by Case

The affirmed/reversal percentage was broken down by which party filed the appeal (Table 3.1 and 3.2). The case affirmed/affirmed-in-part/reversal percentages were 61%/25%/14% for POs and 43%/24%/33% for TPRs, respectively. Comparing cases appealed solely by POs versus cases appealed solely by TPRs revealed that TPRs apparently more successfully maintained and/or gained at least one patent claim rejection (57%, 12 of 21 composed of 5 affirmed-in-part and 7 reversed) than POs won reversals of at least one patent claim rejection (39%, 22 of 56 composed of 14 affirmed-in-part and 8 reversed). However, this difference is not statistically significant as shown in Appendix I, Part A.1.

Table 3. Appealing Party Affirmed/Reversal Percentages for *Inter Partes* Reexaminations

CATEGORY	NUMBER (N)	PERCENTAGE (%)
1. Cases Appealed Solely by Patent Owners		
Total Appeals	56	100
Affirmed	34	61
Affirmed-in-Part	14	25
Reversed	8	14
2. Cases Appealed Solely by Third Party Requestors		
Total Appeals	21	100
Affirmed	9	43
Affirmed-in-Part	5	24
Reversed	7	33
3. Appeals by Patent Owners (Including Dissected Cross-Appeals and Merged-Appeals)		
Total Appeals	80	100
Affirmed	40	50
Affirmed-in-Part	23	29
Reversed	17	21
4. Appeals by Third Party Requestors (Including Dissected Cross-Appeals and Merged-Appeals)		
Total Appeals	44	100
Affirmed	19	43
Affirmed-in-Part	11	25
Reversed	14	32
5. Cases by Patent Owners Reduced for When All Patent Claims Remained Rejected		
Total Appeals	56	100
Affirmed	39	70
Affirmed-in-Part	9	16
Reversed	8	14
6. Appeals by Patent Owners Reduced for When All Patent Claims Remained Rejected		
Total Appeals	80	100
Affirmed	50	62
Affirmed-in-Part	14	17
Reversed	16	20
7. Appeals by Third Party Requestors Reduced for When All Patent Claims Remained Rejected		
Total Appeals	44	100
Affirmed	22	50
Affirmed-in-Part	9	20
Reversed	13	30

2. Complications Caused by Cross-Appeals or the Merger of Appeals by Opposing Parties

Cases with cross-appeals or merged-appeals are difficult to summarize because the majority of cases (75%, 18 of 24) represent a mixture of affirmed, reversed and/or affirmed-in-part decisions because appeals by opposing parties were decided in a single decision

(Table 2.2) with 24 appeals being categorized among six classes of outcomes. The remaining quarter of these cases resulted in a "pure" affirmed or reversed decision. This complexity led to devising a re-categorization of the appellate outcomes in an attempt to separate out opposing appeals decided in a single decision.

Imagine a hypothetical IP Reexam of a patent with six claims. The TPR requests reexamination based on four different grounds of rejection: First, a 102(a) rejection of claims 1, 2 and 5 based on reference X; second, a 103(a) rejection of claims 1 and 3 based on reference Y in light of reference Z; third, a 103(a) rejection of claims 4-5 based on reference Z in light of reference X; and fourth, a 103(a) rejection of claim 6 based on reference A in light of reference B.

During the IP Reexam, the panel of specialist examiners of the CRU finally rejects three of the six patent claims by adopting the first two grounds of rejection but not the third and fourth. The third and fourth grounds of rejection proposed by the TPR are labeled as a non-adopted ground of rejection. The result is that patent claims 1-3 are rejected and claims 4-6 are patentable.

The PO can appeal any final decision unfavorable to patentability. Thus, the PO appeals the two adopted grounds of rejection that threaten to cancel 3 of the 5 patent claims. Conversely, the TPR can appeal any final decision favorable to patentability. Thus, the TPR can appeal the non-adoption of both the third and fourth grounds of rejection. This would create what is categorized in the dataset as a cross-appeal or merged-appeal situation. There are nine possible BPAI decision outcomes for this hypothetical IP reexam (Table 4).

Table 4. Possible Outcomes for a Hypothetical IP Reexam Appeal with a Cross-Appeal or a Merged-Appeal

	Possible BPAI Decisions	Claim 1	Claim 2	Claim 3	Claim 4	Claim 5	Claim 6
1	Both Appeals Affirmed	**NO**	**NO**	**NO**	**YES**	**YES**	**YES**
2	Both Appeals Reversed	**YES**	**YES**	**YES**	**NO**	**NO**	**NO**
3	PO Affirmed and TPR Reversed	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**
4	PO Reversed and TPR Affirmed	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**
5	PO Affirmed and TPR Affirmed-in-Part (3rd ground reversed)	**NO**	**NO**	**NO**	**NO**	**NO**	**YES**
6	PO Affirmed-in-Part (1st ground reversed) TPR Affirmed	**YES**	**YES**	**NO**	**YES**	**YES**	**YES**
7	PO Reversed and TPR Affirmed-in-Part (3rd ground reversed)	**YES**	**YES**	**YES**	**NO**	**NO**	**YES**
8	PO Affirmed-in-Part (1st ground reversed) TPR Reversed	**YES**	**YES**	**NO**	**NO**	**NO**	**NO**
9	PO Affirmed-in-Part (1st ground) TPR Affirmed-in-Part (3rd ground)	**YES**	**YES**	**NO**	**NO**	**NO**	**YES**

Legend: "**NO**" means the claim stands rejected and "**YES**" means the claim is allowable.

First, all the appealed decisions could be affirmed (Table 4, row 2). This means that the first three patent claims remain rejected and claims 4-6 remain patentable.

Second, all the appealed decisions could be reversed (Table 4, row 3). This means that the two adopted grounds of rejection are reversed and claims 1-3 are now allowable. However, the non-adoption of the third and fourth grounds of rejection are reversed and claims 4-6 now are rejected under new grounds. If the BPAI reverses the non-adoption of a ground of rejection, this is considered a new ground of rejection.[127] This happened in 23 appeals (23%, 23 of 101) in the dataset.[128] The entry of a new ground of rejection is not yet twice rejected; thus, the PO has the opportunity to argue with the CRU examiners and/or to amend the claim.[129]

127. 37 C.F.R. § 41.77(b) (2012).

128. In four of the appeals (4%; 4 of 101), the BPAI issued new grounds of rejection *sua sponte* that were not based on grounds proposed by the TPR or ever adopted by the examiners.

129. 35 U.S.C. §§ 134-315 (2011). A new ground of rejection made by the BPAI is not

Third, the PO-appealed grounds of rejection could be affirmed and the TPR's appealed non-adoption of two grounds of rejection could be reversed. This means that claims 1-3 remain rejected and claims 4-6 stand rejected under new grounds.

Fourth, all the PO-appealed grounds of rejection could be reversed and the TPR's appealed grounds of rejection could be affirmed. This means that claims 1-6 are patentable.

Fifth, the PO-appealed grounds of rejection could be affirmed and the TPR's appealed non-adoption of grounds of rejection could be affirmed-in-part. This means that claims 1-3 remain rejected and either claims 4-5 or claim 6 would stand rejected under new grounds, depending which non-adopted ground of rejection is affirmed. (Table 4, row 5 shows the result if the fourth ground of rejection is affirmed.)

Sixth, the PO-appealed grounds of rejection could be affirmed-in-part and the TPR's appealed ground of rejection could be affirmed. If the first ground of rejection is reversed, then claims 1-2 and 4-6 would be allowable but claim 3 would remain rejected (Table 4, row 6). Alternatively, if the second ground of rejection is reversed, then claims 1, 3 and 4-6 would be patentable, while claim 2 would remain rejected.

Seventh, the PO-appealed grounds of rejection could be reversed and the TPR's appealed grounds of rejection could be affirmed-in-part. This means that claims 1-3 remain patentable, but claims 4-6 would be rejected under new grounds, depending which non-adopted ground of rejection is affirmed. (Table 4, row 7 shows the result of the fourth ground of rejection being affirmed.)

Eighth, the PO-appealed grounds of rejection could be affirmed-in-part and both of the TPR's appealed ground of rejection could be reversed. If the first ground of rejection is reversed, then claims 1-2 would be allowable, claim 3 would remain rejected, and claims 4-6 would stand rejected under new grounds (Table 4, row 8). Alternatively, if the second ground of rejection is reversed, then claims 1 and 3 would be patentable, while claims 2 and 4-6 would stand rejected.

Ninth, both appeals could be affirmed-in-part, resulting in four possibilities. If the first and third grounds of rejection are reversed, then claims 1-2 and 6 would be patentable, claim 3 would remain rejected, and claims 4-5 would stand rejected under new grounds

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ripe for appeal to Federal Circuit. *In re* Stepan Co., 660 F.3d 1341, 1344-46 (Fed. Cir. 2011) (holding that BPAI-made grounds for rejection must be remanded to the examiner to give the PO an opportunity to address the new issue).

(Table 4, row 9). Alternatively, if the second and third grounds of rejection are reversed, then claims 1, 3 and 6 would be allowable, claim 2 would remain rejected, and claims 4-5 would stand rejected under new grounds. In a second alternative, the first and fourth grounds of rejection are reversed resulting in claims 1-2 and 4-5 being patentable, while claims 3 and 6 stand rejected. Finally, if the second and fourth grounds of rejection are reversed, then claims 1 and 3-5 would be allowable, while claims 2 and 6 would stand rejected.

This hypothetical IP Reexam scenario demonstrates how a TPR might benefit from filing a cross-appeal for any available nonadopted grounds of rejection that, if reversed, would lead to a rejection of any patent claims that the BPAI might otherwise decide to be allowable based solely on a PO-originated appeal.[130]

3. The Appeals Approach: Compensating for Cross-Appeals and Merged-Appeals

The complications caused by a cross-appeal or a merged-appeal are eliminated by extracting out individual appeals from those cases and treating those appeals as individual appeals. Table 1.2 shows the affirmed percentage for all appeals, including the 24 proceedings involving appeals with cross-appeals. This data includes the parsed results of 24 more appeals and the 23 cross- and merged-appeals decided on the merits. Consequently, this approach increases the sample size by 23%, from 101 to 124.

Affirmed/Reversal Percentages by Appeal

After compensating for cross-appeals and merged-appeals, the affirmed appeals percentage increased slightly, from 45% (Table 1.1) to 48% (Table 1.2). The affirmed-in-part percentage dropped from 37% to 27%, and the reversal percentage rose from 18% to 25%. However, comparison of the affirmed/reversal percentages from this appeals approach with the case approach did not reveal statistically significant differences as shown in Appendix I, Part B.1.

Tables 3.3 & 3.4 show the affirmed/reversal percentages broken down by which party filed the appeal following the appeals approach, which compensates for cross-appeals and merged-appeals. The appeals affirmed/affirmed-in-part/reversal percentages were

130. This happened in 10 of the appeals (10%; 10 of 101) in the reported dataset of this article.

50%/29%/21% for POs and 43%/25%/32% for TPRs, respectively. The comparison of appeals brought by POs versus appeals brought by TPRs revealed again that TPRs appear to have been slightly more successfully in maintaining and/or gaining at least one patent claim rejection (57%, 25 of 44 composed of 11 affirmed-in-part and 14 reversed) than POs who won reversals of at least one patent claim rejection (50%, 40 of 80 composed of 23 affirmed-in-part and 17 reversed). But again, this difference is not statistically significant as shown in Appendix I, Part A.2.

4. Situations When All Patent Claims-At-Issue Remained Rejected by the BPAI Decision

A case becomes complicated if any appealed adopted and non-adopted grounds of rejection overlap in rejecting the same patent claim. For example, claim 1 is rejected by the examiner on the basis of the first ground of rejection but not rejected under the second proposed ground of rejection. In a cross-appeal, where the PO appeals the first ground of rejection and the TPR appeals the non-adoption of the second ground of rejection, the BPAI might reverse both appeals resulting in claim 1 remaining rejected. This would be considered a new ground of rejection. If the BPAI affirms the PO appeal and the claim remains finally rejected, then the TPR appeal generally is not considered.[131]

In this dataset, all patent claims remained rejected by the BPAI in five of the cross-appeal or merged-appeal cases. In addition, a sole PO appeal can be affirmed-in-part or reversed and yet all patent claims can remain finally rejected. This situation also occurred in five of the sole PO appeals. Thus, ten of the cases (10%, n=101) displayed this complication that all of the patent claims-at-issue remained rejected. These situations could affect conclusions based on the raw affirmed/reversal percentage because the PO might have obtained a reversal or partial reversal, and yet did not successfully get any patent claim into a condition of allowance as a result of the appeal.

Reducing the Case Dataset for When All Patent Claims-at-Issue Remained Rejected

In order to compensate for these situations, all sole PO appellate cases where all of the patent claims at issue remained rejected despite the examiner being reversed at least in-part on one or more adopted

131. This occurred in 16 appeals (16%, 16 of 101) in the reported dataset of this article.

grounds of rejection were eliminated from the analysis. After the "all claims remained rejected" reduction, the affirmed rate increased from 45% (Table 1.1) to 50% (Table 1.3). The affirmed-in-part percentage decreased by a compensatory five percentage-points, and the reversed percentage remained unchanged. The three "all claims remained rejected" frequencies did not differ statistically from the unreduced case approach frequencies as shown in Appendix I, Part B.1.

Table 3.5 shows the affirmed/reversal percentage by PO filed appeals based on the case approach reduced for "all claims remained rejected." The "all claims remain rejected" reduction does not affect sole TPR cases and, thus, the results are not shown in Table 1 because they are identical to the unreduced results for cases appealed solely by TPRs (Table 3.2).

The PO lost 70% of their appeals by this metric, as compared to losing 50% for the unreduced metric (affirmed percentage). This suggests that the "all claims remained rejected" compensation is important for considering PO appeal success rates and affirmed/reversed percentages.

Again, a comparison of cases brought by POs versus those brought by TPRs revealed that TPRs appear to more successfully in maintained and/or gained at least one patent claim rejection (57%, 12 of 21 composed of 5 affirmed-in-part and 7 reversed) than POs won reversals of at least one patent claim rejection (30%, 30 of 56 composed of 16 affirmed-in-part and 14 reversed). Unfortunately, the frequencies were too few for chi square statistical analysis as shown in Appendix I, Part A.3.

Reducing the Appeals Dataset for When All Patent Claims-at-Issue Remained Rejected

The appeals approach dataset was also reduced for cases when all of patent claims at issue remained rejected (Table 1.4). After this reduction, the reversed appeals percentage is 23% (29 of 124), the affirmed-in-part percentage is 19% and the affirmed percentage is 58%. Although the result of this reduction is not statistically different from the results for the unreduced appeals approach or the results of the case approach reduced for when "all claims remained rejected," it is statistically different (χ^2=9.32, df=2 and P=0.0095) from the results for the unreduced case approach as shown in Appendix I, Part B. This might suggest that this reduced appeals metric of affirmed/affirmed-in-part/reversal percentages of 58%/19%/23% is more accurate than the unreduced case metric of affirmed/affirmed-in-part/reversal

percentages of 45%/37%/18%.

Tables 3.6 & 3.7 show the affirmed/reversal percentage by POs and TPRs, respectively, based on the appeals approach reduced for "all claims remained rejected." If the case involved a TPR appeal, then the result for the dissected TPR appeal was retained. Within the reduced appeals dataset, a comparison of appeals brought solely by POs versus by TPRs revealed again that TPRs apparently more successfully won patent claim rejections (50%, 22 of 44 composed of 9 affirmed-in-part and 13 reversed) than POs won reversals of patent claim rejections (37%, 30 of 80 composed of 14 affirmed-in-part and 16 reversed). However, this apparent difference by the appealing party is not statistically significant as shown in Appendix I, Part A.4.

Comparison of appeals brought solely by POs, as indicated by the four different metrics mentioned so far in this article (Tables 3.1-3.7) revealed that POs might less successfully win appeals than it appeared from the unreduced data. By reducing the case approach dataset for "all claims remain rejected," POs lost appeals 70% of the time, whereas PO's lost appeals 61%, 50%, and 62% of the time by the unreduced case approach, unreduced appeals approach and reduced appeals approach, respectively (affirmed percentages). Although this range is 20 percentage-points at its largest, this difference between appeals by POs and appeals by TPRs is not statistically significant as shown in Appendix II, row 24. However, the 11 percentage-point difference between the unreduced case metric and the unreduced appeals metric is statistically significant (χ^2=6.57, df=2 and P=0.037, see Appendix II, row 21).

The results from the four appeal metrics do not substantially affect the TPR percentages or conclusions: the maximum difference here is a much lower 7 percentage-point one, and statistically there are no differences between the observed measurements for these metrics as shown in Appendix II, rows 27-31.

5. The Simplicity of Breaking-Down Appeals by Individual Ground of Rejection

The three categories of affirmed, affirmed-in-part and reversed are used to describe the entire appeal or case. However, when looking at individual grounds of rejection, each ground can be categorized as either affirmed or reversed, i.e. if any single ground of rejection is reversed in any way, then that ground was categorized as reversed.

Affirmed/Reversal Percentages by Ground of Rejection

The dataset reviewed involved 761 different grounds of rejection, where 744 of these grounds (Table 5.1) were decided by the BPAI while the BPAI did not consider 17 grounds of rejection. On average, there were 7.54 grounds of rejection per appeal.

Overall, 71% (526 of 744) of all the grounds of rejection appealed were affirmed by the BPAI (Table 1.5). There are few statistically significant differences between the affirmed percentages based on metrics using appeals as compared to metrics using grounds of rejection (see Appendix I, Part B.2 and B.3).

Table 5. *Inter-Partes* Patent Reexamination Appeals by Ground of Rejection

CATEGORY	GROUNDS (N)	PERCENTAGE (%)
1. All Grounds of Rejection (761 Grounds of Rejection Appealed)		
Total Grounds of Rejection Appealed and Decided	744	100
Grounds of Rejection Appealed by POs	586	79
Grounds of Rejection Appealed by TPRs	158	21
2. Grounds of Rejection by Appealing Party		
PO-Appealed Grounds of Rejection	586	100
PO-Appealed Affirmed	425	73
PO-Appealed Reversed	161	27
TPR-Appealed Grounds of Rejection	158	100
TPR-Appealed Affirmed	101	64
TPR-Appealed Confirmed	57	36
3. Grounds of Rejection by Appealing Party Reduced for All Claims Remained Rejected		
PO-Appealed Grounds of Rejection	531	100
PO-Appealed Affirmed	412*	78
PO-Appealed Reversed	119*	22
TPR-Appealed Grounds of Rejection	158	100
TPR-Appealed Affirmed	101*	64
TPR-Appealed Reversed	57*	36

CATEGORY	GROUNDS (N)	MEAN GROUNDS
4. Mean Grounds per Appellate Case (101 Cases Total)		
Total Grounds of Rejection Appealed	761	7.54
Grounds of Rejection Appealed by POs	589	5.83
Grounds of Rejection Appealed by TPR	172	1.70

* Statistically significant difference - $\chi^2 = 12.0$, df = 1 and $P < 0.001$

Appealing Party Affirmed/Reversal Percentages by Ground of Rejection

The majority of appeals (Table 5.1) involve POs or TPRs appealing examiner-adopted grounds of rejection (79%) versus the alternative of TPR appealing the non-adoption of proposed grounds of rejection (21%).

TPRs more successfully (Table 5.2) won patent claim rejections (36%) than POs won reversals of patent claim rejections (27%). However, this nine percentage-point difference is not statistically significant as shown in Appendix I, Part A.5.

Affirmed/Reversal Percentages by Ground of Rejection Reduced for When All Claims Remained Rejected

It is important to note that in some cases where the BPAI reversed only adopted grounds of rejection, all the patent claims at issue remained rejected. If these appealed grounds of rejection are removed, then 74% of all the grounds of rejection appealed were affirmed by the BPAI (Table 1.6). There is no statistically significant difference between the scores based on the reduction for when all claims remain rejected as compared to the unreduced scores as shown in Appendix I, Part B.2.

Comparing appeals brought solely by POs versus solely by TPRs (Table 5.3) revealed again that TPRs apparently more successfully, by 14 percentage-points, maintained or gained at least one patent claim rejection (36%, 57 of 158) than POs won reversals of at least one patent claim rejection (22%, 119 of 531). This difference of 14 percentage-points is statistically significant (χ^2=12.0, df=1, and P<0.001).

6. Overall Success Rate, Regardless of Participation

A final way to view the dataset is to calculate the sum of how often at least one ground of rejection on appeal was reversed in favor of the appealing party, regardless of the opposing party's participation, and how often participating opposing parties failed to have reversed a decision on at least one ground. By this approach, PO appeals were successful 34%-48% of the time while TPRs were successful 52%-66% of the time (Table 6). When the data were reduced for when "all patent claims remained rejected," POs were successful only 34% of the time whereas TPRs were successful 66%

of the time (Table 6.3). This 32 percentage-point difference is statistically significant (χ^2=7.17, df=1, and P=0.0074). There are no statistically significant differences between observed and expected values when comparing POs with TPRs based on the other three metrics as shown in Appendix I, Part A.7.

Table 6. Appealing Party Overall Success of *Inter-Partes* Patent Reexamination Appeals

CATEGORY	APPEALS (N)	PERCENTAGE (%)
1. Successful Cases by Party		
Total Success	77	100
Patent Owners	31	40
Third Party Requestors	46	60
2. Successful Appeals by Party		
Total Success	124	100
Patent Owners	59	48
Third Party Requestors	65	52
3. Successful Cases by Party Reduced for When All Patent Claims Remained Rejected		
Total Success	77	100
Patent Owners	26*	34
Third Party Requestors	51*	66
4. Successful Appeals by Party Reduced for When All Patent Claims Remained Rejected		
Total Success	124	100
Patent Owners	52	42
Third Party Requestors	72	58

* Statistically significant difference - χ^2 = 7.17, df = 1 and P = 0.0074

C. Miscellaneous Observations

Aside from the affirmed/reversal percentages, there are other aspects of IP Reexam appeals were examined, such as appealed IP Reexam pendency and BPAI reversal rate.

1. All Appealed BPAI Decisions Regarding *Inter Partes* Reexaminations Were Affirmed

In an IP Reexam, either party may appeal any final decision made by the BPAI to the Federal Circuit; furthermore, the opposing party has the opportunity to participate in the judicial appeal.[132] As of July 2011, nineteen proceedings (19%; n=101) in the dataset involved appeals to the Federal Circuit.[133] The Federal Circuit dismissed

132. 35 U.S.C. § 315 (2011).

133. U.S. Patent Reexamination Application Nos. 95/000,008; 95/000,015; 95/000,017; 95/000,020; 95/000,034; 95/000,136; 95/000,138; 95/000,310; 95/000,371; 95/000,429;

fourteen (74%) of these proceedings, and decided five (26%) on the merits. The Federal Circuit affirmed all five PO appeals (100%, n=5) that were decided on the merits. In four of these affirmed appeals, the Federal Circuit affirmed the BPAI's affirmation of the CRU examiners' rejections of all the appealed claims.[134] In the other affirmed appeal, the Federal Circuit affirmed the BPAI's reversal of the CRU examiners' rejection of patent claims.[135] These sample sizes are too small for statistical analysis.

2. Concurrent Litigation

Sixty-nine percent (68 of 98) of all the patents in the dataset were involved in concurrent litigation as of July 2011. This result is very similar to the 70% of patents reported by the USPTO to be in concurrent litigation for all IP Reexam proceedings.[136] However, only 39% of the patents in the dataset were noted as being in concurrent litigation by the TPR upon transmittal of their IP reexam request application.[137]

3. Merger of Patent Reexamination Proceedings

If the same patent is involved in multiple reexams, the USPTO may merge the proceedings.[138] In the dataset, five patents (5%, 5 of 98) were in IP Reexams proceedings merged with EP Reexams and five patents (5%, 5 of 98) were in IP Reexam proceedings merged with other IP Reexams. These mergers were ignored because the appeal of the proceedings was treated as a single unit by the BPAI despite the opportunity for participation by multiple TPRs.

95/000,430; 95/001,278.

134. Melvino Techs. Ltd. v. Kappos, 464 F. App'x. 877 (Fed. Cir. 2012) (per curiam); *In re* NTP, Inc., 654 F.3d 1268 (Fed. Cir. 2011); Chemi Dietrich v. Kappos, 423 F. App'x. 993 (Fed. Cir. 2011) (per curiam); S.P.A. v. Kappos, 423 F. App'x 992 (Fed. Cir. 2011) (per curiam).

135. Vanguard Identification Sys., Inc. v. Kappos, 407 F. App'x. 479 (Fed. Cir. 2011) (per curiam).

136. *Inter Partes Filing Data*, *supra* note 25.

137. Sterne et al., *supra* note 71, at 610 ("The rules require patent owners to notify the Office of prior or concurrent proceedings and the CRU has dedicated paralegals that search litigation databases for case status periodically during the pendency of the reexamination proceeding.") (footnote omitted).

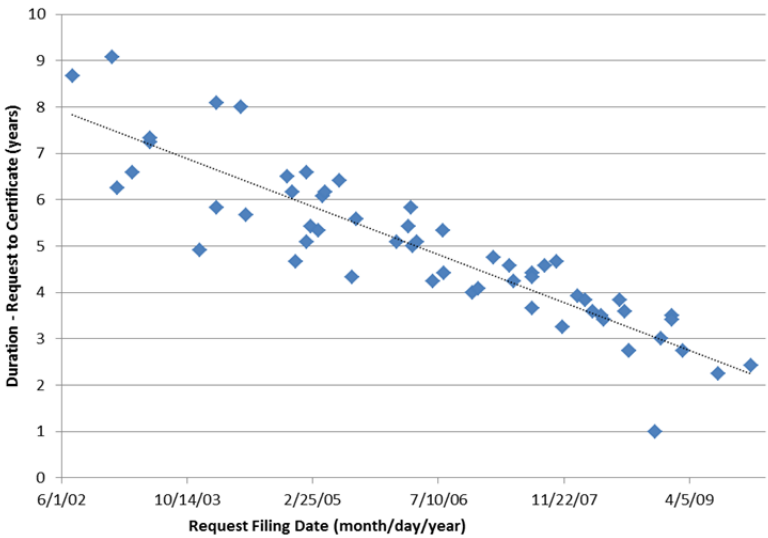
138. 37 C.F.R. § 1.989(a) (2012) ("[T]he merged examination will normally result in the issuance and publication of a single reexamination certificate under § 1.997.").

4. Pendency of *Inter Partes* Patent Reexaminations with Appeals

Only 57% (58 of 101) of the proceedings in the dataset resulted in the issuance of a Reexamination Certificate. Of this subset, the mean pendency (filing to certificate date) was over 58 months (4 years and 10 months) with a standard deviation of 20 months. The median pendency was 56 months (4 years and 8 months). The shortest proceeding lasted one year, and the longest just over nine years.

Although long in duration, the pendency of appealed IP Reexams has decreased. In 2009, the expected pendency for appealed IP Reexam was estimated to last at least 6.5 years.[139] When the current dataset is graphed by request date, there is a clear downward trend from over six years before 2005 toward around three years by 2009 (Figure 1). Statistically, the correlation coefficient (r) is 0.90, which is highly significant ($P < 0.001$ with df=56, based on 58 paired data points of filing and approval date). When IP Reexam was first implemented, it probably took some time for both the UPSTO and for participants to make the proceeding run more smoothly and quickly.

Figure 1. Appealed *Inter Partes* Reexamination Proceeding Pendency over Time

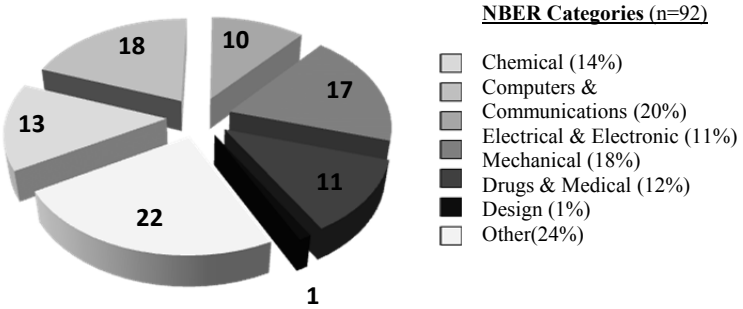


139. INSTITUTE FOR PROGRESS, REEXAMINING *INTER PARTES* REEXAM 5 (Apr. 2008), *available at* http://www.iam-magazine.com/blog/IAMBlogInterPartesReexamWhitepaper.pdf.

5. Technological Classifications

Finally, each patent in the dataset was assigned to a technology category based on the National Bureau of Economic Research's classification system (Figure 2).[140] Unfortunately, six of the 98 patents in the dataset did not fit into any category and were excluded.

Figure 2. Appealed *Inter Partes* Reexamined Patents by Technology Categories



The USPTO reported a technology breakdown for all IP Reexams into four categories: 52% electrical, 29% mechanical, 18% chemical and 1% design.[141] According to those categories, the patents involved in appealed IP reexam proceedings are categorized roughly as 36% electrical, 30% mechanical, 33% chemical and 1% design.[142] Another article reported that in 2008 IP Reexams primarily involved "Surgery," "Data processing: database and file management or data structures," and "Data Processing: financial, business practice, management, or cost/price determination."[143]

140. Bronwyn H. Hall, Adam B. Jaffe & Manuel Trajtenberg, *The NBER Patent Citations Data File: Lessons, Insights and Methodological Tools* (Nat'l Bureau of Econ. Research, Working Paper No. 8498, 2001), *available at* http://www.nber.org/papers/w8498.pdf.

141. *Inter Partes Filing Data*, *supra* note 25.

142. The USPTO classification system might be flawed. John R. Allison & Mark A. Lemley, *Who's Patenting What? An Empirical Exploration of Patent Prosecution*, 53 VAND. L. REV. 2099, 2114 (2000).

143. Sterne et al., *supra* note 71, at 653.

D. Conclusion

The overall reversal percentages in IP Reexams reported in this article, over the period from July 2001 to July 2011, of 18%-29% (depending on metric, Table 1.1-1.5) overlap with the lower end of the range of overall BPAI *Ex Parte* appeals' reversal percentage of 24%-39% reported over the fiscal years 2003-2012.[144] The reversal percentage is both a gauge of the accuracy of rejections by specialist examiners and the success of appeals. The examiners tend to be fairly accurate by the most direct metric, which is the ground of rejections. Furthermore, the actual accuracy is even higher because more than 10% of the cases involved partial reversals of ground of rejections; yet, a claim-by-claim analysis was not reported here.

However, when broken down by appealing party, the observed reversal percentage differed from 14%-27% for POs to 30%-36% for TPRs (Table 3.1-3.7, and Table 5.2 and 5.4). TPRs' appeals received the most reversals at 30% to 33%, while PO appeals received reversals in only 14% to 21% of their appeals; but these differences are not statistically significant (Table 3.1-3.7). Similarly, TPRs' appeals received the most reversals of grounds of rejection at 36%, while PO appeals received reversals of grounds of rejection in only 22 to 27% of their appeals.

Based on the empirical data presented, the CRU examiners' determinations in IP Reexam proceedings generally are treated consistently by the BPAI except that TPRs tend to achieve more reversals of grounds of rejection, by about 14 percentage-points, than POs (Table 5.2 and 5.4). Although there are not general differences between PO and TPR appeal results regarding any of the metrics, it seems that IP Reexam appeals have been tilted against POs, because the PO reversal percentage for IP Reexam appeals of 14%-21% is much lower than the mean and median reversal percentage of 32% (standard deviation of six percentage-points) for all *Ex Parte* appeals from 2003 to 2012;[145] whereas, the TPR reversal percentage for IP Reexam appeals of 30%-33% is a close match to the overall appellate reversal rate.

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144. *PTAB Statistics—Receipts and Dispositions by Technology Center*, U.S. PATENT & TRADEMARK OFFICE, http://www.uspto.gov/ip/boards/bpai/stats/receipts/index.jsp (last visited Feb. 7, 2013). Using a single year as a comparison is not optimal because the BPAI *Ex Parte* appeals' reversal percentage has varied over time, from a 2005 high of 39.6% (with only 36.7% affirmed) to a 2008 low of 23.9% (with 56.5% affirmed).

145. *Id.* The reported reversal percentage was recorded for each year from 2003 to 2012 in order to calculate the mean, median and standard deviation based on the USPTO's metric.

IV. *INTER PARTES* PATENT REEXAMINATION FROM THE PRACTITIONER'S POINT OF VIEW

The IP Reexam option provides many advantages to TPRs. At a glance, the success percentage of 89% at forcing some change to at least one patent claim suggests that IP Reexam has been the most promising procedure available to challenge the validity of a patent based on printed prior art.[146] However, the raw numbers do not reveal whether the TPR was actually successful, because the cancellation and/or amendment of patent claims resulting from the proceeding might be immaterial to accusations of patent infringement raised against the TPR. Despite this opacity, IP Reexam is clearly a successful method with which to attack the validity of a patent. But IP Reexam also is fraught with disadvantages, such as lack of speed and potential estoppel effects. In particular, the analysis of appealed IP Reexams supports the notion that reexams are currently too slow.

A. Inter Partes *Patent Reexam for Competitors, Licensees and Potential Infringers*

IP Reexam is a form of post-issuance patent review that can be used by competitors or potential infringers to challenge the validity of another party's patent claims and/or as leverage in licensing negotiations.

1. Patent Challenge

IP Reexam provides a promising and relatively inexpensive way to successfully challenge the validity of a patent claim with the possibilities of it being canceled, having its scope narrowed by amendment, disavowal and/or prosecution history estoppels, and creating intervening rights.[147] In addition, the PO's conduct during reexam proceedings might establish the unenforceability of a patent based on an inequitable conduct defense in litigation. If the CRU initiates a reexam based on a new prior art reference, then this is strong evidence of the materiality of that reference.

2. Patent Litigation Settlement

The threat of reexam by an accused infringer, such as by a

146. *See* Part II.D.

147. Cordis Corp. v. Medtronic Ave, Inc., 511 F.3d 1157, 1176-79 (Fed. Cir. 2008); CIAS, Inc. v. Alliance Gaming Corp., 504 F.3d 1356, 1363-64 (Fed. Cir. 2007); Fresenius Med. Care Holdings, Inc. v. Baxter Int'l, Inc., No. C 03-1431 SBA, 2006 WL 1330003, at *3 (N.D. Cal. May 15, 2006).

pocket reexam request, can induce settlement.[148] A "pocket reexam request" is a request that has been prepared but has not been filed at the USPTO and is used to coerce or threaten a potential licensor or PO. Once a reexam is initiated, the requestor cannot automatically stop it. Thus, the threat of reexam may provide a driving force to settlement by providing a time deadline.

3. Patent Licensing Negotiations

The possibility of a reexam can be used as leverage in licensing negotiations. The potential licensee could threaten to initiate a reexam in order to obtain a lower royalty percentage in return for not filing a reexam. Also, the potential licensees' counsel could prepare a pocket reexam request to spring on opposing counsel during patent licensing negotiations.

Once a reexam is initiated, potential licensees might try to negotiate a reexam uncertainty discount or just wait for the results of the proceeding. If the patent claims of interest survive the reexam, then the patentee could demand a certainty premium for future licenses.

In addition, a licensee may request a reexam or file a declaratory judgment action asserting invalidity in hope of escaping royalty payments.[149] To prevent this, licensors can demand contract terms that include a license's termination clause upon the licensee initiating a patent validity challenge, such as a reexam.[150]

B. Advantages of Inter Partes *Patent Reexamination*

Historically, IP Reexam resulted in a 44%-89% chance of success for the TPR, the highest likelihood of any procedure by which a patent claim's validity can be challenged. Additional advantages of the IP Reexam procedure include TPR participation, the BRI approach to claim construction, USPTO expertise and relatively low costs. In principle, an IP Reexam is more likely than litigation on the same issue to result in the killing of a patent claim because of the BRI claim construction standard. Although the PO has an opportunity to

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148. *See* Novak, *supra* note 74, at 669-70.

149. *See* MedImmune, Inc. v. Genentech, Inc., 549 U.S. 118, 137 (2007) (holding that declaratory judgment jurisdiction exists for patent licensees against licensors even while the license agreement has not been breached, such as while royalties are being paid).

150. Lynn E. Hvalsoe, Perkins Coie, LLP, *A Survey of Licensing Strategies: One Year After MedImmune,* American Intellectual Property Law Association Mid-Winter Meeting 4-5 (Jan. 24, 2008) (proposing sample patent license provisions that terminate the license in the event of a validity challenge).

amend claims before cancellation, the ensuing creation of intervening rights might be enough to classify the IP Reexam result as a "win" for the TPR.

The advantage of low cost helps TPRs to challenge patents, even if they cannot afford the cost of patent litigation or cannot justify the risk of patent litigation when the commercial profitability is small in comparison to the probable cost of millions of dollars in litigation. The cost of an IP Reexam is typically more than one hundred thousand dollars.[151] Although not cheap, this is still considerably less expensive than patent litigation, which averages around $6 million for cases with more than $25 million at risk.[152]

IP Reexam might also have the advantage of applying an USPTO examiner's expertise to the issue, instead of the judgment of a lay judge or jury.[153] Some commentators have argued that the CRU examiners are more likely to correctly apply legal standards to claims than jurors, especially the "person of ordinary skill in the art" standard.[154]

In addition, IP Reexam is available to requestors when the same challenge could not be mounted in the judicial system. For example, IP Reexam is available to challenge a patent when the requestor lacks an actual case or controversy to confer jurisdiction.[155] In addition, IP Reexam is available to challenge a patent when the requestor would be estopped in court under the doctrine of assignor estoppel.[156]

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151. *See* AM. INTELL. PROP. LAW ASS'N, REPORT OF THE ECONOMIC SURVEY I-173 to -76 (2011) (reporting the mean cost of IP reexam was $128,000 and the cost of an IP reexam with an appeal to the BPAI was $161,000). *See also* Petition for Writ of Certiorari at 5 n.3, Lockwood v. Sheppard, Mullin, Richter & Hampton, LLP, 132 S. Ct. 97 (2011) (No. 10-1339) (mem.).

152. AM. INTELL. PROP. LAW ASS'N, *supra* note 151, at 36, I-153 to -56. It is estimated that for a post-grant patent review procedure to be a viable alternative to litigation, the entire procedure must cost around $60,000 (two orders of magnitude less than the cost of patent litigation per side at $6 million) or less than $180,000-$600,000 (3%-10% of the cost of patent litigation at $6 million per side). *See* Lance G. Johnson, Inter Partes *Reexamination: The USPTO Alternative to Patent Litigation*, 1 SCITECH LAW., Fall 2004, at 14; Stephen G. Kunin & Anton W. Fetting, *The Metamorphosis of* Inter Partes *Reexamination*, 19 BERKELEY TECH. L.J. 971, 979 (2004).

153. *See* Order of March 10, 2012 at 1, Apple, Inc. v. Motorola, Inc., 869 F. Supp. 2d 901 (2012) ("There is no point in giving jurors stuff they won't understand. The jury (actually juries) will not consist of patent lawyers and computer scientists or engineers unless the parties stipulate to a 'blue ribbon' jury . . . .").

154. Karshtedt, *supra* note 24, at 330.

155. 28 U.S.C. § 2201(a) (2011).

156. Diamond Scientific Co. v. Ambico, Inc., 848 F.2d 1220, 1225-26 (Fed. Cir. 1988). *See* Q.G. Prods., Inc. v. Shorty, Inc., 992 F.2d 1211, 1212 (Fed. Cir. 1993); Vitronics Corp. v. Conceptronic, Inc., 36 F. Supp. 2d 440, 442 (D.N.H. 1997); Total Containment, Inc. v. Environ Prods., Inc., 34 U.S.P.Q.2d (BNA) 1254, 1256 (E.D. Pa. 1995).

Reexam, particularly IP Reexam, might represent an effective counter-attack to the rise of litigious entities commonly referred to as "patent trolls" and/or non-practicing entities (NPEs).[157] Even more so, EP Reexam may represent the most cost effective preemptive strike against patent trolls. However, if an NPE's patent portfolio is large, then successful patent challenges via patent reexam might do little to stop aggregate "patent trolling" or to protect from widespread contingency-fee-based and investor-funded patent infringement claims.[158]

C. Disadvantages of Inter Partes *Patent Reexamination*

Despite its advantages, the IP Reexam procedure has many disadvantages, such as limitations of scope, potential estoppel effects and lack of speed. Patent reexams are limited in scope by SNQ's implicating only §§ 102 and 103, when much of patent claim invalidity argued during litigation involves §§ 112 and 102 that are based on unprinted, prior art.[159]

The possibility of estoppel effects often is used to argue against the use of IP Reexams.[160] The mere request of an IP Reexam can preclude some arguments and/or prior art from later use in litigation.

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157. *See* Colleen V. Chien, *Of Trolls, Davids, Goliaths, and Kings: Narratives and Evidence in the Litigation of High-Tech Patents*, 87 N.C. L. REV. 1571, 1608-11 (2009) (reporting that non-practicing entities own the majority of the most litigated patents); J. Jason Williams, Mark V. Campagna & Olivia E. Marbutt, *Strategies for Combating Patent Trolls*, 17 J. INTELL. PROP. L. 367, 371-74 (2010). There is no satisfactory definition of "patent troll." *See, e.g.*, Mark A. Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEX. L. REV. 1991, 2009 (2007); Jennifer Kahaulelio Gregory, Comment, *The Troll Next Door*, 6 J. MARSHALL REV. INTELL. PROP. L. 292, 305-09 (2007); Marc Morgan, Comment, *Stop Looking Under the Bridge for Imaginary Creatures: A Comment Examining Who Really Deserves the Title* Patent Troll, 17 FED. CIR. B.J. 165, 166 (2007). Licensing patent rights benefits society, so the so-called "patent troll" problem is mainly one of suing a party for infringement of a patent that is not being practiced by anyone, i.e. neither licensed nor practiced by the owner. This problem is compounded by the intent of bringing a patent litigation lawsuit to bully/blackmail the accused infringer into a settlement for under the cost of defending patent litigation, which is near $6 million. The problem of "patent trolling" is not new; it stems from the sheer complexity and cost of patent litigation in general. Since the early 1990s, it has been noticed that problems were being created as a result of the "spiraling cost and complexity associated with enforcement of patent rights." ADVISORY COMM'N ON PATENT LAW REFORM, A REPORT TO THE SECRETARY OF COMMERCE 117-23, 175 (1992). The mere cost and burden of defending an accusation of patent infringement gives rise to the capitalization of settlement for less than the cost to complete the claim construction and/or the discovery phases of patent litigation.

158. Williams et al., *supra* note 157, at 372.

159. *See* Allison & Lemley, *supra* note 120,at 208. For an example of an appealed IP Reexam decision involving mainly § 112 issues, see Request for IP Reexam 95/000,452 of U.S. Patent No. 7,500,796 (Dec. 6, 2011).

160. Karshtedt, *supra* note 24, at 323.

Despite this risk, patent litigators might rationalize the fear of estoppel effects due to their desire to stick to what they know best and/or to what provides them greater profitability.[161] Estoppel effects can be avoided by starting litigation first, perhaps by filing a declaratory judgment action. However, the TPR creates the risk that the reexam will be completed first and opposing counsel can then point out to the court that the USPTO has already considered a particular issue and decided it to the contrary.[162]

The USPTO reported, as of the third quarter of 2011, the mean pendency of IP Reexams was over three years with an ever-increasing backlog.[163] For example, the BPAI received over 9,084 appeals in fiscal year 2011, but disposed of only 4,681 appeals.[164] The BPAI backlog as of the end of 2011 was 22,356 appeals, whereas in 2010 it was 17,754.[165] In 2006, that figure was 1,357 pending appeals.[166] This is an incredible increase of over 1,600 percent in just five years. In 2009, there was no backlog of reexamination appeals to the BPAI;[167] however, by January 2011, the BPAI had a backlog of 86 cases.[168] In 2011, the BPAI received 64 appeals of IP Reexams and disposed of 43, while 44 appeals of IP Reexams remained pending.[169] The BPAI is quickly falling behind, which is compounded by the steady increase in the number of appeals filed per year.

Despite these disadvantages, the patent claim challenge success rate probably weighs in favor of IP Reexam;[170] however, the IP

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161. *See id.* at 328 ("Perhaps a more subtle reason for the fact that the procedure has been slow to catch on is a cultural divide between patent litigators and prosecutors.").

162. *See* Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1467 (Fed. Cir. 1990) ("[T]he burden of showing, by clear and convincing evidence, the invalidity of the claims . . . is especially difficult when the prior art was before the PTO examiner during prosecution of the application.").

163. *Reexamination Operational Statistics, supra* note 115.

164. *Id.*

165. *Id.*

166. *BPAI Statistics—Process Production Report FY 2006*, U.S. PATENT & TRADEMARK OFFICE, http://www.uspto.gov/ip/boards/bpai/stats/process/fy2006.pdf (last visited Feb. 9, 2013).

167. David L. McCombs, *Patent Reexamination: Earning Its Keep in the Litigator's Toolbox*, 964 PLI/PAT 685, 707 (2009).

168. *BPAI Statistics—Process Production Report FY 2011*, U.S. PATENT & TRADEMARK OFFICE, http://www.uspto.gov/ip/boards/bpai/stats/process/fy2011_sep_b.pdf (last visited Feb. 9, 2013).

169. *Id.*

170. Novak, *supra* note 74, at 688 ("[T]he potential advantages to *inter partes* reexamination will usually outweigh the yet unjustifiable fears spawned by the specter of *inter partes* reexamination estoppel.").

Reexam proceeding's biggest flaw is most likely the lack of expediency in its current implementation.

1. Pendency

The empirical data suggest that a critical flaw in the IP Reexam proceeding today is the long pendency of appealed IP Reexams.[171] Congress intended IP Reexam to be an alternative to litigation, suggesting a reexam proceeding should be less than (or perhaps equal to) litigation in duration. Congress recognized the need for speed when drafting the language of the reexam statute, stating that "all *inter partes* reexamination proceedings . . . , including any appeal to the Board of Patent Appeals and Interferences, shall be conducted with special dispatch."[172]

The mean pendency of completed IP Reexams in the dataset was 4.9 years. This strongly suggests that the goal of patent reexamination as a faster alternative to litigation has not been achieved, at least whenever one or more PTO decisions are appealed to the BPAI.

It seems POs might be well served in the aggregate by appealing any decision unfavorable to patentability, merely to increase the mean pendency of reexams, thereby adding further support for the argument against the staying of district court litigation, because it is faster. Similarly, TPRs using IP Reexam strategically to delay patent litigation might wish to appeal all unfavorable reexam decisions so as to enter the growing BPAI backlog.

Furthermore, although the dominant justification for granting a stay is to simplify the issues, the increasing pendency of reexams (more than two years for EP Reexams and more than three years for IP Reexams) confirms that granting a stay creates a delay that is increasingly prejudicial against the PO, especially because the stay can delay injunctive relief.[173]

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171. INSTITUTE FOR PROGRESS, *supra* note 139, at 4-5.

172. 35 U.S.C. § 314 (2011) (italics added); *see also* Ethicon, Inc. v. Quigg, 849 F.2d 1422, 1426 (Fed. Cir. 1988) ("'Special dispatch' is not defined in the statute."); MPEP, *supra* note 30, § 2286 (stating that the proceedings are *expedited* by taking the case up for action at the earliest possible time, setting up shorter response times, and permitting extensions of the time *only* upon a strong showing of sufficient cause).

173. There is a recent trend favoring stays pending *Inter Partes* reexamination, as opposed to *Ex Parte* reexamination, because the administrative estoppel associated with *Inter Partes* reexamination may be viewed as a simplifying factor for issues in litigation. *See, e.g.*, Ceiva Logic Inc. v. Frame Media Inc., No. SACV 08-00636-JVS (RNBx), 2009 WL 7844245 (C.D. Cal. June 9, 2009); Wall Corp. v. Bonddesk Group, LLC, No. 07-844 GMS, 2009 WL 528564 (D. Del. Feb. 24, 2009); Anascape, Ltd. v. Microsoft Corp., 475 F. Supp. 2d. 612, 615-17 (E.D. Tex. 2007).

2. Remands and Appealed Issues Left Undecided

Not only do appeals slow down an unfinished proceeding, but repeated remands that return the reexamination to the CRU often result in the slowest reexams. The examining corps and CRU specialist examiners are guided by an efficiency philosophy called "compact prosecution," which means multiple, overlapping and alternative grounds of rejection are presented up-front. On the other hand, the BPAI and the judiciary in general are designed on an efficiency philosophy of parsimony, where the least number of issues are decided to dispose of the appeal and/or to reject all the claims at issue under the least number of grounds. While possibly efficient overall, this approach is not efficient in instances where the BPAI is reversed by the Federal Circuit and a claim is held allowable, despite the TPR already raising and appealing alternative grounds of rejection.

The result might be iterative appeals going over previously argued grounds that the BPAI avoided during the previous cycle. If the BPAI decided appeals as an examination panel, then the philosophy of "compact prosecution" might shorten the overall pendency of appealed reexams. Commentators have noted that cyclical remands make the appealed reexam very slow and may represent a fundamental flaw in the design of the IP Reexam procedure.[174]

D. Conclusion

Overall, the availability of patent reexam procedures bolsters the presumption of patent validity in court and improves the public notice function of patent claims. IP Reexam successfully obviates some patent litigation; however, it more commonly coincides with duplicative litigation. To become a true alternative to patent litigation, a post-grant review procedure must cost less and be faster than litigation.

V. THE AMERICA INVENTS ACT AND THE FUTURE OF *INTER PARTES* PATENT REEXAMINATION

The Leahy-Smith America Invents Act (AIA) was enacted on September 16, 2011, and will significantly change the proceedings for

174. Sterne et al., *supra* note 71 at 623 ("It is the specter of multiple remands that has created the concern that *inter partes* reexamination may be fundamentally flawed.").

post-issuance patent review.[175] These changes include overhauling the *Inter Partes* patent review options and procedures with the goal of enhancing patent quality.[176] The AIA creates a new post-grant patent review (PGR) option available after March 16, 2013, which expands the scope of review to §§ 101 and 112. The AIA amendments to the Patent Statute require that the request be filed within nine months of the patent's issuance.[177] This review will be conducted by the new Patent Trial and Appeal Board (PTAB) and will have a more trial-like procedure with discovery of evidence related to factual assertions.[178] In addition, the AIA creates a new version of the IP Reexam called *Inter Partes* Review (IPR) that will also be conducted by the PTAB was implemented on September 16, 2012.[179] The IP Reexam proceeding will eventually disappear, because no new IP Reexam will be granted after September 16, 2012,[180] and any unfinished IP Reexam proceedings will be completed by the PTAB.[181]

A. Inter Partes *Patent Review*

Inter Partes Patent Reexam is converted by the AIA into *Inter Partes* Patent Review. IPR is an "adjudicative" proceeding instead of an "administrative" proceeding and, hence, is given the name "review" instead of "reexamination."[182] Like IP Reexam, IPR is limited to printed publications or patents that qualify as prior art.[183] An IPR can only be requested following nine months after patent issuance or after the completion of any pending post-grant review created by the AIA.[184] An accused infringer must petition for an IPR within 12 months of being served.[185] In addition, an IPR cannot be initiated by a party that has filed a civil action contesting the validity

175. Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011).

176. 157 CONG. REC. E1182 (daily ed. June 23, 2011) (remarks of Hon. L. Smith on H.R. 1249).

177. 35 U.S.C. § 321 (West, Westlaw through Pub. L. No. 112-207 approved Dec. 7, 2012) (effective Sept. 16, 2012); Leahy-Smith America Invents Act § 6(d), 125 Stat. at 306.

178. 35 U.S.C. § 315 (West, Westlaw through Pub. L. No. 112-207 approved Dec. 7, 2012) (effective Sept. 16, 2012).

179. *Id.* §§ 311-315 (same).

180. *See* 37 C.F.R. 1.913(b) (2012).

181. Leahy-Smith America Invents Act § 6(e), 125 Stat. at 311.

182. 157 CONG. REC. S1375 (daily ed. Mar. 8, 2011) (statement of Sen. Jon Kyl).

183. 35 U.S.C. § 311(b) (West, Westlaw through Pub. L. No. 112-207 approved Dec. 7, 2012) (effective Sept. 16, 2012).

184. *Id.* § 311(c) (same).

185. *Id.* § 315(b) (same).

of the same patent, i.e. a complaint that alleges patent invalidity.[186] However, an IPR can be initiated by a party that has already asserted an invalidity defense in court.

The Director of the USPTO will decide whether or not an IPR is granted. The Director has discretion whether to grant the IPR based on "a reasonable likelihood that the petitioner would prevail with respect to at least one of the claims challenged," and the PO is given the opportunity to argue why granting the request is unwarranted.[187] IPRs will be conducted and decided by administrative law judges instead of the CRU's specialist examiners.[188] The IPR proceeding will be more like a trial—with the availability of discovery, a hearing with oral testimony by witnesses, and the option of settlement. The new statutory language limits the length of IPR proceedings to 12 months, with a 6-month extension possible for appropriate circumstances.[189] This is an important goal, because some appealed IP Reexams in the dataset have lasted for more than nine years, and the mean pendency was almost five years. However, the PTAB will have difficulty meeting this goal based on the past performance of the USPTO and BPAI.

IPRs will be conducted by the PTAB, the new version of the BPAI. This new board will use a panel of at least three administrative patent judges per proceeding. Therefore, Mr. Kappos, the former Director of the USPTO, predicts that the Department of Commerce needs to hire hundreds of new administrative patent judges to fulfill this requirement.[190] The burden of proof is on the TPR instead of the USPTO examiners to prove unpatentability by a preponderance of the evidence. The introduction of discovery into IPR will make it a more expensive proceeding: some predict it might cost on average about $600,000 using interference proceedings as a guide.[191] However, this is still relatively inexpensive compared to the cost of patent litigation,

186. *Id.* § 315(a) (same).

187. *Id.* § 314(a) (same). In addition, during the first four years of implementation of IPR, the Director of the USPTO may limit the number of IPR requests that are granted, perhaps to allow agency flexibility in handling the dramatic changes created by the AIA. *Id.* § 314 (same).

188. *Id.* § 316(c) (same).

189. *Id.* § 316(a) (same).

190. Scott A. McKeown, *USPTO Prepares for Patent Reform*, PATENTS POST-GRANT (July 13, 2011), http://www.patentspostgrant.com/lang/en/2011/07/uspto-prepares-for-patent-reform.

191. *See* AM. INTELL. PROP. LAW ASS'N, *supra* note 151, at I-171 to -72 (reporting the mean cost for a two-party interference was $631,000).

averaging $6 million per side.[192]

In addition, the IPR can be settled like a trial, something not available for EP or IP Reexams, which cannot be terminated without a final decision of invalidity by a federal court.[193] A settlement prevents any estoppel effect from attaching to the TPR.[194] A confidential settlement might lead to speculation of a reverse-payment settlement, meaning the patent at issue contains invalid claims and the TPR was paid-off, at least by the cost of IPR proceeding to drop the validity challenge.

Although this might be economically efficient for the parties involved, the public remedy envisioned by patent reeexam would be ignored. The curative mechanism of any post-grant review, like IPR, serves the public interest by redefining the public domain in better accordance with the law. The mere existence of invalid patents might hinder technological progress, disrupt economic competition and add inefficient social costs.[195] On the other hand, individual economic actors might have little incentive to complete a challenge to a patent claim, because all their other competitors could free-ride on their efforts.

The AIA indicates that if the petitioner files a civil action to allege a patent is invalid after petitioning for an IPR, then the district court shall automatically stay litigation unless the PO opts out.[196] The stay is automatically lifted, if the PO moves to lift the stay or if the requestor moves to dismiss the civil action.[197] The AIA is silent as to what happens to a litigation stay once the IPR is concluded.

After the conclusion of an IPR with a written decision by the PTAB, the requestor is estopped in any USPTO, federal court or the International Trade Commission proceeding from asserting the invalidity of any related patent claims or any ground that was raised or reasonably could have been raised in the concluded IPR

192. Id. at 36, I-153 to -56.

193. 35 U.S.C. § 317(a) (2011); *see* MPEP, *supra* note 30, § 2686.04; Alan W. Kowalchyk & Joshua P. Graham, *Patent Reexamination: An Effective Litigation Alternative?*, 3 LANDSLIDE no. 1, Sept.-Oct. 2010, at 47.

194. 35 U.S.C. § 317(a) (West, Westlaw through Pub. L. No. 112-207 approved Dec. 7, 2012) (effective Sept. 16, 2012).

195. Christopher R. Leslie, *The Anticompetitive Effects of Unenforced Invalid Patents*, 91 MINN. L. REV. 101, 113-39 (2006).

196. 35 U.S.C. §§ 315(a)(2), 325(a)(2) (West, Westlaw through Pub. L. No. 112-207 approved Dec. 7, 2012) (effective Sept. 16, 2012).

197. *Id.* §§ 315(a)(2), 325(a)(2) (same).

proceeding.[198]

In the future, the cost and speed of the implementation of IPR and PGR are critical to their success. To be a viable alternative to litigation, the entire proceeding should cost less than $600,000.[199] As for speed, any proposed alternative proceeding must be resolved at least as quickly as litigation; this should be true even with participant-induced delays, such as appeals to the PTAB, and agency-induced delays, such as iterative remands by the PTAB. Otherwise, litigation might consistently end before the administrative or adjudicative patent review procedures, possibly with results similar to as occurred in *In re Construction Equipment Co.*, where the judicial system's determination was discordant with the USPTO's.[200]

CONCLUSION

The appeal affirmed or reversed percentages for *Inter Partes* Reexamination can be measured by: (1) overall case result, (2) an independent appeals approach based on parsing out the cross-appeals and merged-appeals, (3) deconstructing the case into grounds of rejection, and (4) reducing any of the above datasets for when all the patent claims at issue remained rejected. These four metrics were used to determine the percentage of *Inter Partes* Reexamination decisions affirmed and reversed on appeal.

How accurate are the specialist patent examiners of the Central Reexamination Unit of the U.S. Patent and Trademark Office? By some metrics, it appears the examiners are reversed frequently (43%-78% of the time, depending on the party bringing the appeal and the metric used). However, many of these metrics overestimate the true frequencies of examiner error because examiners' determinations are upheld more than three fourths of the time (76%-78% of decisions), according to the most direct metrics based on the ground-of-rejection approach.

Do patent owners or third party requestors fare better in *Inter Partes* patent reexam appeals? The overall reversal percentages of decisions in *Inter Partes* Reexamination proceedings varies depending on the metric. However, in general, it is not very different from the general *Ex Parte* appeals' reversal percentage of about one third of all appeals. However, third party requestors obtained a

198. *Id.* § 315(e) (same).

199. AM. INTELL. PROP. LAW ASS'N, *supra* note 151, at I-171 to -72.

200. *In re* Constr. Equip. Co., 665 F.3d 1254, 1257-63.

statistically significant greater percentage of reversals than patent owners. Third party requestors tend to be more successful, by about 14 percentage-points, in maintaining patent claim rejections and adding new grounds of rejection as compared to patent owners' successfully having patent claim rejections reversed. In addition, metrics based on the "total success" approach showed that third party requestors "win" 52%-60% of all *Inter Partes* Reexamination appeals, whereas patent owners "win" only 34%-48% of their appeals, yielding a difference of as a little as four percentage-points to as great as 26 percentage-points. This might be caused by a systemic disadvantage to patent owners, whose reversal rate is depressed compared to the general reversal rate, rather than any special advantage to third party requestors, whose reversal rate is equivalent to the general reversal rate.

If history predicts the future, then appeals of decisions by the new Patent Trial and Appeal Board in *Inter Partes* Review proceedings will follow the same trend as past appeals of decisions in *Inter Partes* Reexaminations to the Board of Patent Appeals and Interferences. Thus, appeals of *Inter Partes* Reviews are likely to favor third party requestors successfully maintaining patent claim rejections and adding new grounds of rejection over patent owners successfully receiving reversal of patent claim rejections. Like appeals of *Inter Partes* Reexaminations, appeals of *Inter Partes* Review decisions will have probable reversal rates of around one third of all appeals with patent owners successfully getting reversal percentages closer to 15% and third party requestors successfully getting reversal percentages closer to 35%.

APPENDIX I. STATISTICAL ANALYSES OF THE APPEALED IP REEXAM DATASET

Given that the basic data (examiners' decision was affirmed or reversed) were nominal, rather than ordinal or interval, the non-parametric statistic, chi square (χ^2), was used. This test was not used on the descriptive data, such as percentages. Microsoft Excel was used to calculate each χ^2 in a series of transparent steps, and, then, the Excel function "chi square statistic" was used to calculate the probability (P) that any difference between observed and expected values had occurred by chance. The P value was double-checked using a χ^2 statistical look-up table to obtain an approximate value. The degrees of freedom (df) were determined using the number of rows minus one times the number of columns minus one. Conventionally, if the expected value is less than five for more than 20% of the cells, then the χ^2 statistic is invalid. This rule was followed here.

A. Comparison of Affirmed/Reversal Percentage by Appealing Party

In general, there are not statistically significant differences between affirmed/reversal percentages for POs and TPRs in the dataset. However, by using different metrics and approaches, two statistically significant differences were observed. Appendix II summarizes the statistical results for all comparisons mentioned in this article.

1. Case Approach by Appealing Party—"Unreduced"

At a glance, the reversal percentage of 14% for cases appealed solely by POs versus 33% cases solely appealed by TPRs looks different; similarly, the 61% affirmed percentage for POs appears to be different from the 43% affirmed percentage for TPRs (Table 3.1 and 3.2). Comparing percentages, TPRs were 2.4 times more successful at getting a reversal than were POs were. However, there is no statistical support (χ^2=3.73, df=2 and P=0.16) for the idea that outcomes differed for appeals filed solely by POs versus solely by TPRs (Appendix II, row 1).

2. Appeals Approach by Appealing Party—Compensating for "Cross-Appeals"

To compensate for cross-appeals and merged appeals, an appeals

approach was used where cross-appeals and merged appeals were dissected into independent appeal results by appealing party and combined with the sole party appeals. The results from this approach seemed to be different from the case approach (Table 3.1-3.4). The PO appeal reversal percentage increased from 14% to 21%, but the TPR appeal reversal percentage was steady at 32%-33%. Similarly, the PO appeal affirmed percentage decreased to 50%, but this percentage was 1.2 times higher than the unchanged TPR appeal affirmed percentage of 43%. However, statistical analysis of the appeal approach by appealing party supported the conclusion that there is no difference (χ^2=1.69, df=2 and P=0.43) in appellate decision percentages between POs and TPRs in IP Reexams (Appendix II, row 2).

3. Case Approach by Appealing Party—"Reduced for All Claims Remained Rejected

Although only a minority of appeals by POs involved a BPAI decision, where all of the patent claims at issue remained rejected (10%), this situation skewed the results by making POs look more successful, when in fact, no claim stood in condition of allowance after their appeal. In this approach, cases where all patent claims at issue remained rejected but the BPAI decision was either reversed or affirmed-in-part were removed from the case approach dataset. This reduction has no effect on sole TPR cases. After reducing the case approach dataset for "all claims remained rejected," the PO affirmed-in-part percentage decreased from 25% to 16%, whereas the PO affirmed percentage rose a corresponding nine percentage-points, from 61% to 70% (Table 3.1, 3.2, and 3.5). The reversal percentage remained unchanged at 14%. Statistical analysis of the reduced-for-all-rejected cases was not possible because the χ^2 test is invalid, when the expected value is less than five for more than 20% of the cells.

4. Appeals Approach by Appealing Party—Compensating for Cross-Appeals and "All Claims Remained Rejected"

Reducing the appeals approach dataset for when "all claims remain rejected" resulted in some noticeable differences by comparison to the other metrics, such as the unreduced case approach. Reducing the appeals approach dataset decreased the PO affirmed-in-part percentage from 25% to 17%; whereas, the reversed percentage

rose from 14% to 20% (Table 3.1, 3.2, 3.6, and 3.7). Statistical analysis of this approach's scores by appealing party supports the conclusion that there is no difference (χ^2=2.00, df=2 and P=0.37) in appellate decision percentages between POs and TPRs in IP Reexams.

5. Ground of Rejection by Appealing Party—"Unreduced" and "Reduced"

When each appeal case is broken down into the individual grounds for rejection, the affirmed-in-part category disappears. This is a more direct way of analyzing the dataset and, thus, the ground of rejection metrics might produce the most useful and easily understood scores. By an unreduced ground-of-rejection approach, there is a 9 percentage-point difference between the PO reversal percentage of 27% of grounds of rejection compared to the TPR reversal percentage of 36% of grounds of rejection (Table 5.2). However, there is no statistical support (χ^2=2.43, df=1 and P=0.12) for the idea that grounds of rejection appealed by POs differs from those appealed by TPRs.

Just as for the appeals approach, the grounds of rejection dataset can be reduced for appeals when "all claims remained rejected" (Table 5.3). Again, this reduction has no effect on TPR grounds of rejection. Compared to the unreduced ground-of-rejection approach, the reduction of the data for "all claims remained rejected" resulted in no statistically significant difference from the unreduced.

Although, this reduction had only a slight effect on PO affirmed/reversal percentages, the comparison of POs to TPRs revealed a statistically significant difference (χ^2=12.0, df=1 and P<0.001) (Appendix II, row 6).

6. The Appeal Success Rate Approach by Party

The appealing party is successful either if the BPAI reverses the examiners on all issues or reverses the examiners on at least one ground of rejection despite affirming others, i.e. the appeal is affirmed-in-part. The success rate approach did not produce statistically significant differences between POs and TPRs using any of the four appeal metrics: case approach, reduced case approach, appeals approach and reduced appeals approach.

7. The Overall Success Rate Approach by Party Regardless of Participation

The appealing party is successful if the BPAI reverses the examiner on at least one ground of rejection. Similarly, the non-appealing party can be considered successful if the BPAI affirms the examiner on all issues appealed by the opposing party regardless of their participation in the appeal. These data are presented in Table 6. The overall success rate does not differ statistically between POs and TPRs when measured by the unreduced case approach, the appeals approach, or the appeals approach reduced for when "all claims remained rejected." However, the case approach reduced for when "all claims remained rejected" showed that TPRs were statistically (χ^2=7.17, df=1 and P=0.0074) more likely to be successful than POs (Appendix II, row 13). This metric showed TPRs had a 1.9 fold higher success rate (66% total success for TPRs versus 34% total success by POs, see Table 6.3).

8. Summary: Appeals by Party

In summary, examination of these data suggests that BPAI decisions are generally consistent in their treatment of POs and TPRs. This appears to be true statistically for: (1) the unreduced case approach; (2) appeals approach; and (3) appeals approach reduced "for all claims remained rejected." This is not to say that the BPAI does not have any biases; rather it indicates that the BPAI generally tends to consistently decide appeals by POs as compared to appeals by TPRs. Exceptions to this generalization were found by reducing the dataset for when all patent claims at issue remained rejected and when discarding the complication of the affirmed-in-part category by looking at individual grounds of rejection.

B. Comparison of Different Metrics

In order to understand the results of different IP Reexam appeals, six main metrics are used to measure affirmed/reversed percentages and success percentages. For example, the BPAI appellate decision label for the entire case was mentioned first: (1) the case approach, which can be considered the "raw" or unreduced score, and (2) this "raw" case approach score can be reduced to a smaller dataset by eliminating all the PO appeals where all the patent claims-at-issue remained rejected. Then, a second approach was used to consider the

appeals within these cases using two metrics: (3) the "raw" appeals approach, which compensates for cross-appeals and merged-appeals, and (4) the reduced appeals approach dataset, reduced for when all the patent claims-at-issue remained rejected. In addition, an individual ground-of-rejection approach was used. This approach is further divided into two metrics: (5) the "raw" grounds of rejection; and (6) the grounds of rejection dataset reduced for when all the patent claims-at-issue remained rejected.

Other approaches based on definitions of success are used as well. The total success rate approach attempts to measure differences between PO and TPR success in general, regardless of party participation. This approach is sub-divided into four metrics based on the underlying dataset used from the four appeal metrics mentioned above: (1) unreduced cases, (2) unreduced appeals, (3) cases reduced for when "all claims remained rejected," and (4) appeals reduced for when "all claims remained rejected."

1. Comparison of the Four Appeal Metrics

The overall appeal results are measured by four metrics based on two approaches. The comparison of the affirmed/reversal percentage by each of the four metrics compared to each other revealed no statistically significant differences, except when the appeals approach dataset reduced for when "all claims remained rejected" were compared to the unreduced case approach. In this comparison, there is a statistically significant difference (χ^2=9.32, df=2 and P=0.0095) between unreduced case approach affirmed/in-part/reversal percentages of 51%/32%/18% and the appeals approach reduced for when "all claims remained rejected" 58%/19%/23% obtained by both teasing apart the affirmed-in-part category and eliminating the false signal of PO success when all claims remained rejected (Appendix II, row 18).

2. Comparison of Appeal Metrics to Ground of Rejection Metrics: Total

The total reversal percentage for all appeals was measured as 18-25% by the case and appeals approach-based metrics (Table 1.1-1.4). When the individual ground of rejection was measured, then the total reversal percentage was 26%-29% (Table 1.5 and 1.6). Much of this one to 11 percentage-point difference probably is accounted for by the affirmed-in-part category in the appeals approach that is lacking in the

ground of rejection approach. These approaches were compared to each other by analyzing the reversed score to the total score. In general, there are no statistically significant differences between these two approaches when comparing totals, except for when comparing the results from the metrics of the case approach reduced for when "all claims remained rejected" with the ground-of-rejection approach reduced when "all claims remained rejected (χ^2=94.3, df=1 and P<0.000001) (Appendix II, row 40). These two metrics showed a difference of eight percentage-points for the reversed category (18% by the reduced case approach metric and 26% by the reduced grounds approach metric).

3. Comparison of Appeal Metrics to Ground of Rejection Metrics: By Party

The results for the appeals approach metrics were compared to the results for the ground-of-rejection approach metrics broken-down by appealing party. There are no statistically significant differences between the unreduced grounds scores by appealing party as compared to the results from the four metrics for the appeals approach by appealing party. Similarly, when comparing the reduced grounds scores to the results for the appeals approach metrics there are no statistically significant differences, except for when comparing PO grounds of rejection reduced for "all claims remained rejected" versus unreduced PO appeals by the case approach (χ^2=87.0, df=1 and P<<0.0001) (Appendix II, row 47). These two metrics showed a difference of eight percentage-points for the reversed category (14% by the unreduced case approach metric, see Table 1.1, and 22% by the reduced grounds approach metric, see Table 5.3).

4. Summary: Related Metrics Tend to Produce Similar Results, with Some Exceptions

In summary, the various metrics used in this analysis do not produce drastically different results. However, there is some evidence suggesting that the ground of rejection approach is different enough from the case approach to argue for considering them separately.

APPENDIX II. SUMMARY OF STATISTICS

ROW #	COMPARISON OF GROUND-OF-REJECTION APPROACH-BASED METRICS TO OTHER METRICS	CHI SQUARE (χ^2)	DEGREES OF FREEDOM (df)	P VALUE (P)
	1. Patent Owners versus Third Party Requestors by the Case Approach or Appeal Approach			
1	Cases by Party, PO vs. TPR	3.73	2	0.16
2	Appeals by Party (Cross-Appeals), PO vs. TPR	1.69	2	0.43
3	Cases by Party (Reduced for All Rejected), PO vs. TPR	invalid	2	N/A
4	Appeals by Party (Reduced for All Rejected), PO vs. TPR	2.00	2	0.37
	2. Patent Owners versus Third Party Requestors by the Ground of Rejection Approach			
5	Grounds by Party, PO vs. TPR	2.43	1	0.12
6	Grounds by Party (Reduced for All Rejected), PO vs. TPR	12.0	1	<0.001*
	3. Patent Owners versus Third Party Requestors by at Least One Ground Reversed Success Rate			
7	Case Success by Party, PO vs. TPR	0.726	1	0.39
8	Appeal Success by Party (Cross-Appeal), PO vs. TPR	0.163	1	0.69
9	Case Success by Party (Reduced for All Rejected), PO vs. TPR	1.96	1	0.16
10	Appeal Success by Party (Reduced for All Rejected), PO vs. TPR	0.728	1	0.39
	4. Patent Owners versus Third Party Requestors by Total Success Rate			
11	Total Case Success by Party, PO vs. TPR	3.64	1	0.051
12	Total Appeal Success by Party (Cross-Appeal), PO vs. TPR	0.291	1	0.59
13	Total Case Success by Party (Reduced for All Rejected), PO vs. TPR	7.17	1	0.0074*
14	Total Appeal Success by Party (Reduced for All Rejected), PO vs. TPR	1.28	1	0.26

Appendix II. Table 1. (*continued*)

ROW #	COMPARISON OF GROUND-OF-REJECTION APPROACH-BASED METRICS TO OTHER METRICS	CHI SQUARE (χ^2)	DEGREES OF FREEDOM (df)	P VALUE (P)
	5. Comparison of Four Metrics from the Case or Appeals Approaches			
15	Total Cases vs. Total Appeals (Cross-Appeals)	2.86	2	0.24
16	Total Cases vs. Total Cases (Reduced for All Rejected)	0.620	2	0.73
17	Total Cases vs. Total Appeals (Reduced for All Rejected)	3.48	2	0.18
18	Total Appeals (Cross-Appeals) vs. Total Cases (Reduced for All Rejected)	9.32	2	0.0095*
19	Total Appeals (Cross-Appeals) vs. Total Appeals (Reduced for All Rejected)	1.76	2	0.42
20	Total Appeals vs. Total Cases (Both Reduced for All Rejected)	5.34	2	0.069
	6. Comparison of Four Metrics from the Case or Appeals Approaches by Party			
21	Cases by POs vs. Appeals by POs (Cross-Appeals)	6.57	2	0.037*
22	Cases by POs vs. Cases by POs (Reduced for All Rejected)	1.43	2	0.49
23	Cases by POs vs. Appeals by POs (Reduced for All Rejected)	3.33	2	0.19
24	Appeals by POs (Cross-Appeals) vs. Cases by POs (Reduced)	5.31	2	0.070
25	Appeals by POs (Cross-Appeals) vs. Appeals by POs (Reduced)	1.53	2	0.47
26	Appeals by POs vs. Cases by POs (Both Reduced for All Rejected)	0.906	2	0.64
27	Cases by TPRs vs. Appeals by TPRs (Cross-Appeals)	0.0186	2	0.99
28	Cases by TPRs vs. Appeals by TPRs (Reduced for All Rejected)	0.457	2	0.80
29	Cases by TPRs (Reduced)** vs. Appeals by TPRs (Cross-Appeals)	0.0186	2	0.99
30	Appeals by TPRs (Cross-Appeals) vs.	0.293	2	0.86

Appendix II. Table 1. (*continued*)

ROW #	COMPARISON OF GROUND-OF-REJECTION APPROACH-BASED METRICS TO OTHER METRICS	CHI SQUARE (χ^2)	DEGREES OF FREEDOM (df)	P VALUE (P)
	Appeals by TPRs (Reduced)			
31	Appeals by TPRs vs. Cases by TPRs (Both Reduced for All Rejected)**	0.293	2	0.86
	7. Comparison of the Two Metrics from the Ground of Rejection Approach			
32	Total Grounds vs. Total Grounds (Reduced for All Rejected)	2.02	1	0.16
33	Grounds by POs, Unadjusted vs. Adjusted All Rejected	3.94	1	0.047
34	Grounds by TPRs, Unadjusted vs. Adjusted All Rejected	0.149	1	0.70
	8. Approaches: Ground of Rejection versus Appeals			
35	Total Grounds vs. Total Cases	0.0173	1	0.90
36	Total Grounds vs. Total Appeals (Cross-Appeals)	1.19	1	0.28
37	Total Grounds vs. Total Cases (Reduced for All Rejected)	0.244	1	0.62
38	Total Grounds vs. Total Appeals (Reduced for All Rejected)	0.00153	1	0.97
39	Total Grounds (Reduced for All Rejected) vs. Total Cases	0.204	1	0.65
40	Total Grounds (Reduced for All Rejected) vs. Total Appeals (Cross-Appeals)	94.3	1	<<0.0001*
41	Total Grounds vs. Total Cases (Both Reduced for All Rejected)	3.23	1	0.072
42	Total Grounds vs. Total Appeals (Cross-Appeals) (Both Reduced for All Rejected)	0.460	1	0.50
	9. Approaches: Ground of Rejection by PO versus Appeals by PO			
43	Grounds by POs vs. Cases by POs	1.44	1	0.23
44	Grounds by POs vs. Appeals by POs (Cross-Appeals)	0.132	1	0.72
45	Grounds by POs vs. Cases by POs	2.47	1	0.12

Appendix II. Table 1. (*continued*)

ROW #	COMPARISON OF GROUND-OF-REJECTION APPROACH-BASED METRICS TO OTHER METRICS	CHI SQUARE (χ^2)	DEGREES OF FREEDOM (df)	P VALUE (P)
	(Reduced for All Rejected)			
46	Grounds by POs vs. Appeals by POs (Reduced for All Rejected)	0.565	1	0.57
47	Grounds by POs (Reduced for All Rejected) vs. Appeals by POs	87.0	1	<<0.0001*
48	Grounds by POs (Reduced for All Rejected) vs. Appeals by POs (Cross-Appeals)	0.331	1	0.57
49	Grounds by POs vs. Cases by POs (Both Reduced for All Rejected)	0.732	1	0.39
50	Grounds by POs vs. Appeals by POs (Both Reduced for All Rejected)	0.113	1	0.74
	10. Approaches: Ground of Rejection by TPR versus Appeals by TPR			
51	Grounds by TPRs vs. Cases by TPRs	0.608	1	0.44
52	Grounds by TPRs vs. Appeals by TPRs (Cross-Appeals)	0.844	1	0.36
53	Grounds by TPRs vs. Cases by TPRs (Reduced for All Rejected)	0.368	1	0.54
54	Grounds by TPRs vs. Appeals by TPRs (Reduced for All Rejected)	0.0667	1	0.80
55	Grounds by TPRs (Reduced for All Rejected) vs. Appeals by TPRs	invalid	1	N/A
56	Grounds by TPRs (Reduced for All Rejected) vs. Appeals by TPRs (Cross-Appeals)	0.0667	1	0.80
57	Grounds by TPRs vs. Cases by TPRs (Both Reduced for All Rejected)	0.368*	1	0.54
58	Grounds by TPRs vs. Appeals by TPRs (Both Reduced for All Rejected)	0.0141	1	0.91

* Statistically significant difference.

** When the "Cases by TPRs" dataset is reduced for all rejected, there is no effect. Thus, line 29 is identical to line 27, and line 31 is identical to line 30.

*** When the "Grounds by TPRs" dataset is reduced for all rejected, there is no effect. Thus, line 57 is identical to line 53.