

**REVIEW OF THE 1999 PATENT LAW
DECISIONS OF THE UNITED STATES
COURT OF APPEALS FOR
THE FEDERAL CIRCUIT**

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INTRODUCTION

The Federal Circuit was established in part to review the decisions of the Federal District Courts and the Patent Appeals Board regarding issues of patent law. Some believe that the goal of Congress was to develop consistency in the decisions and inject the insight of patent practitioners into interpretations of patent law.

Twenty years into its existence, the success of the Court of Appeals for the Federal Circuit in achieving Congress' goals is unclear. What is clear, however, is the profound influence the Federal Circuit's decisions have had on patent law and, in turn, on the business and technology sector.

This Article reviews the court's decisions in a snapshot of time. Many of these decisions have been superceded by later cases and decisions by the Supreme Court. Nevertheless, they are instructive to understand the operation of the Federal Circuit.

I. PROCEDURAL ASPECTS OF FEDERAL CIRCUIT PRACTICE

A. *Subject Matter Jurisdiction*

Federal courts require subject matter jurisdiction over a claim before adjudicating the case.¹ Congress limits the subject matter jurisdiction of federal courts by requiring either a federal question, including patent jurisdiction, or diversity between the parties.²

1. See 28 U.S.C. § 1331 (1994) ("The district courts shall have original jurisdiction of all civil actions arising under the Constitution, laws, or treaties of the United States.").

2. See *id.* § 1332 (a) (listing various grounds for federal diversity jurisdiction).

Alternatively, when a case involves both a federal question and a state law cause of action, federal courts may exercise supplemental jurisdiction to address both claims.³ Since 1982, the Federal Circuit has exercised exclusive appellate jurisdiction over all patent appeals.⁴

In *Scherbatskoy v. Halliburton Co.*,⁵ the Federal Circuit agreed with the Fifth Circuit affirmation of the district court's denial of appellant's motion to remand to Texas state court.⁶ The Fifth Circuit transferred the appeal to the Federal Circuit honoring its exclusive jurisdiction over appeals arising under the patent laws.⁷ The Federal Circuit decided that appellant's state law contract claim implicating a patent license gives rise to a substantial question of patent law; namely, whether the accused activity infringes the underlying patent contemplated in the license.⁸

The Federal Circuit in *Connaught Laboratories, Inc. v. SmithKline Beecham P.L.C.*⁹ dismissed for lack of appellate jurisdiction an appeal filed by the United States Food and Drug Administration ("FDA") based on its unsuccessful motion to quash third-party subpoenas requiring testimony from its employees.¹⁰ The Federal Circuit explained that its appellate jurisdiction excludes the review of district court discovery orders. "[The] nonappealability of orders requiring the production of evidence from witnesses has long been established" and applies both to discovery orders on parties as well as nonparties.¹¹

3. *See id.* § 1367 ("[T]he district courts shall have supplemental jurisdiction over all other claims that are so related to claims in the action within such original jurisdiction that they form part of the same case or controversy under Article III of the United States Constitution.").

4. *See* Federal Courts Improvement Act of 1982, Pub. L. No. 97-164, 96 Stat. 25; *see also* *Atari, Inc. v. JS & A Group, Inc.*, 747 F.2d 1422, 1431, 223 U.S.P.Q. (BNA) 1074, 1081 (Fed. Cir. 1984) (declaring that under 28 U.S.C. § 1338, the Federal Circuit has exclusive jurisdiction over patent appeals from the district courts).

5. 52 U.S.P.Q.2d (BNA) 1461 (Fed. Cir. 1999) (unpublished opinion).

6. *See id.* at 1464 (affirming that plaintiff's contract claim turned on the resolution of a patent law question, giving the Federal Circuit jurisdiction over the appeal).

7. *See id.* at 1463 (acknowledging the Fifth Circuit was correct in determining that appellant's claim included allegations that patent laws were violated).

8. *See id.* at 1464 (noting appellant claimed a violation of the contract because Halliburton purchased a company that violated a valid patent owned by appellant).

9. 165 F.3d 1368, 49 U.S.P.Q.2d (BNA) 1540 (Fed. Cir. 1999).

10. *See id.* at 1369, 49 U.S.P.Q.2d (BNA) at 1541 (describing facts in which SmithKline served subpoenas on three FDA employees to elicit their testimony and filed a motion to compel compliance with the subpoenas). The Federal Circuit held in part that because only final decisions of district courts may be considered, a non-final court order to compel must be dismissed. *See id.* (relying on 28 U.S.C. § 1291, which limits jurisdiction "to review of final decisions of district courts") (citation omitted).

11. *Id.* at 1369-70, 49 U.S.P.Q.2d (BNA) at 1541 (quoting *Micro Motion, Inc. v. Exac Corp.*, 876 F.2d 1574, 1575-76, 11 U.S.P.Q.2d (BNA) 1070, 1072 (Fed. Cir. 1989) (citation omitted)).

In dicta, the court ruminated that parties and nonparties alike “may secure review of a discovery order by refusing to comply with it and appealing a consequent contempt order, which is considered final.”¹²

In *DSC Communications Corp. v. Pulse Communications, Inc.*,¹³ the Federal Circuit expanded its appellate jurisdiction to include nonfrivolous counterclaims raising patent issues.¹⁴ Previously, the court held that it had appellate jurisdiction over cases raising nonfrivolous compulsory counterclaims of patent infringement.¹⁵ For purposes of its jurisdictional mandate, however, the court found no difference between compulsory and permissive patent counterclaims, giving it proper appellate jurisdiction of this copyright infringement case.¹⁶

In *In re Cambridge Biotech Corp.*,¹⁷ the Federal Circuit exercised appellate jurisdiction over a district court’s review of a bankruptcy court decision.¹⁸ The court affirmed the bankruptcy court’s resolution of a patent cross-license agreement because the bankruptcy constituted the core proceeding.¹⁹ However, the raising of patent infringement claims during a bankruptcy proceeding gives rise to sufficient grounds for Federal Circuit appellate jurisdiction.²⁰

In *Puerta v. California Institute of Technology*,²¹ the Federal Circuit agreed with the district court’s determination that 28 U.S.C.

12. *Id.* at 1370, 49 U.S.P.Q.2d (BNA) at 1541 (citing *Micro Motion*, 876 F.2d at 1577-78).

13. 170 F.3d 1354, 50 U.S.P.Q.2d (BNA) 1001 (Fed. Cir. 1999).

14. *See id.* at 1359, 50 U.S.P.Q.2d (BNA) at 1004 (concluding that 28 U.S.C. § 1295(a) (1) gives the Federal Circuit exclusive jurisdiction over an appeal from final judgment of a district court if the jurisdiction was based in whole or in part on 28 U.S.C. § 1338).

15. *See id.* (citing *Aerojet-Gen. Corp. v. Mach. Tool Works*, 895 F.2d 736, 739-45, 13 U.S.P.Q.2d (BNA) 1670, 1672-78 (Fed. Cir. 1990)) (noting that Congress intended for § 1295(a) (1) to guarantee uniformity for all non-frivolous patent law claims).

16. *See id.* (stating that the plain language of section 1295(a) (1) and the intent of the statute to guarantee uniformity in patent law appeals gives the Federal Circuit appellate authority over non-frivolous claims of patent infringement).

17. 186 F.3d 1356, 51 U.S.P.Q.2d (BNA) 1321 (Fed. Cir. 1999).

18. *See id.* at 1369, 51 U.S.P.Q.2d (BNA) at 1330 (relying on *Christianson v. Colt Indus. Operating Corp.*, 486 U.S. 800, 809, 7 U.S.P.Q.2d (BNA) 1109, 1113 (1998), which defines § 1338(a) as expanding the Federal Circuit’s jurisdiction over cases in which patent law creates the cause of action or when the resolution of a patent law question must take place in order to grant relief).

19. *See id.* at 1371, 51 U.S.P.Q.2d (BNA) at 1331 (noting that the filing of a proof of claim is a core proceeding of bankruptcy, irrespective of the patent infringement claim).

20. *See id.* at 1370, 51 U.S.P.Q.2d (BNA) at 1330 (determining that appellant’s complaint and the district court’s decision were based on 28 U.S.C. § 1338, which triggers appellate authority for the Federal Circuit under 28 U.S.C. § 1295(a) (1)).

21. No. 99-1282, 1999 WL 592007 (Fed. Cir. Aug. 5, 1999) (unpublished opinion).

§ 1498(a) provides the Court of Federal Claims with exclusive jurisdiction over patent infringement claims against alleged infringing work performed “for the government.”²² The court recognized that such was the case even though 28 U.S.C. § 1338(a) gives district courts exclusive original jurisdiction over patent infringement claims.²³ The court went on to find that to avoid such Federal Claim jurisdiction, a party must clearly show the work was not done expressly for the government.²⁴

B. Personal Jurisdiction

Personal jurisdiction allows federal courts to exercise their power over particular parties, based on the party’s relationship to the forum state.²⁵ Patent suits present interesting issues of personal jurisdiction as a result of the national enforcement of patents and the international manufacturers that supply products to the United States.

In *Precor Inc. v. Keys Fitness Products*,²⁶ the Federal Circuit applied the Supreme Court’s personal jurisdiction analysis in *Burger King Corp. v. Rudzewicz*²⁷ to a Taiwanese corporation.²⁸ The court stressed that a foreign corporation cannot evade personal jurisdiction solely because of its status as a foreign entity forced to defend itself in an inconvenient United States forum.²⁹ Instead, a foreign defendant must present a “compelling” case that the district court’s exercise of personal jurisdiction is “unreasonable” as a result of a balancing test.³⁰

22. *Id.* at *1 (ruling that work performed under contract with NASA was work performed “for the government” under 28 U.S.C. § 1498(a)).

23. *See id.* (dismissing plaintiff’s contention because 28 U.S.C. § 1498(a) gives the Federal Claims Court exclusive jurisdiction when it is alleged that the federal government infringed a patent).

24. *See id.* at *2 (finding evidence showing that contract funds were used even though work on project was terminated).

25. *See, e.g.,* *World-Wide Volkswagen Corp. v. Woodson*, 444 U.S. 286, 297 (1980) (holding that, among other factors, personal conduct and connection with the forum state determine which court has personal jurisdiction over a case).

26. No. 98-1408, 1999 WL 55298 (Fed. Cir. Feb. 5, 1999) (unpublished opinion).

27. 471 U.S. 462 (1985).

28. *See Precor*, 1999 WL 55298, at *3 (holding that the particular conditions from *Burger King* apply to a foreign company as long as the company’s activities were targeted at the residents of the forum state and the litigation results from alleged injuries that arise out of or relate to those activities).

29. *See id.* at *4 (distinguishing *Asahi Metal Indus. Co. v. Superior Court*, 480 U.S. 102, 114 (1987), and finding no per se rule that it is unduly burdensome for a foreign corporation to defend itself in federal court).

30. *Id.* at *3 (noting that the Washington District Court had been asked to decide whether a Taiwanese corporation that had allegedly sold its products through distributors in Washington to Washington customers had infringed a U.S. patent exclusively licensed by a corporation principally operating in Washington) (citing *Burger King*, 471 U.S. at 477).

The test factors include balancing the burden on the foreign company to defend in the U.S. forum (*i.e.*, small company, lack of financial resources, or no experience in dealing with the U.S. legal system) with the forum state's interests in adjudicating the dispute.³¹ Such interests include providing efficient resolution of controversies, furthering "fundamental substantive policies," and the plaintiff's interest in obtaining convenient and effective relief.³²

In *Schwanger v. Munchkin, Inc.*,³³ the Federal Circuit reversed a district court's decision to apply Sixth Circuit law to determine the existence of personal jurisdiction.³⁴ The court mandated that the district court use the Federal Circuit's three-part test for personal jurisdiction in patent cases.³⁵ Under this test, personal jurisdiction satisfies due process when the defendant purposefully directs its activities to the forum, the claim arises out of or relates to those activities, and jurisdiction over the company is reasonable and fair.³⁶ However, when a state law claim comes before the Federal Circuit, as in *Amana Refrigeration, Inc. v. Quadlux, Inc.*,³⁷ and the state law claim is not intimately tied to the enforcement of a substantive patent right, the district court need not apply the Federal Circuit's test for personal jurisdiction.³⁸

C. Standing

Article III of the Constitution³⁹ limits federal courts to adjudicate only actual cases⁴⁰ or controversies.⁴¹ Federal courts have created the

31. *See id.*

32. *Id.* at *3 (citing *World-Wide Volkswagen*, 444 U.S. at 292).

33. No. 99-1049, 1999 WL 820449 (Fed. Cir. Oct. 7, 1999) (unpublished opinion).

34. *See id.* at *2 (concluding that the Federal Circuit may not defer to the interpretations of other regional federal and state courts in patent cases when using federal constitutional analysis to determine jurisdiction) (citing *Beverly Hills Fan Co. v. Royal Sovereign Corp.*, 21 F.3d 1558, 1564-65, 30 U.S.P.Q.2d (BNA) 1001, 1006 (Fed. Cir. 1994)).

35. *See id.* at *3 (disagreeing with the district court's interpretation of the Ohio statute as applied to the Federal Circuit personal jurisdiction test).

36. *See id.* at *5 (articulating a test that protects the rights of the defendant from being unfairly forced to try a case in the forum chosen by the plaintiff) (citation omitted).

37. 172 F.3d 852, 50 U.S.P.Q.2d (BNA) 1304 (Fed. Cir. 1999).

38. *See id.* at 857, 50 U.S.P.Q.2d (BNA) at 1307 (recognizing that established personal jurisdiction standards in patent law cases should not apply to cases in which a patent law issue does not exist).

39. U.S. CONST. art. III, § 2, cl. 1 ("The judicial Power shall extend to all Cases . . . [and] to Controversies . . ."); *see, e.g.*, *Preiser v. Newkirk*, 422 U.S. 395, 401 (1974) (noting that the ability of courts to exercise power under Article III "depends on the existence of a case or controversy").

40. *See In re Summers*, 325 U.S. 561, 566 (1944) (determining that a case must refer to a question regarding the Constitution, treaties, or laws of the United States

standing doctrine to ensure that such a case or controversy exists between the parties in the lawsuit.⁴² Standing requires evidence of injury, causation, and redressability.⁴³ The standing doctrine also requires that issues before the court are ripe⁴⁴ and not moot.⁴⁵ The Federal Circuit reviews issues of standing *de novo*.⁴⁶

In *Amana Refrigeration*,⁴⁷ the Federal Circuit held a declaratory judgment action on patent invalidity as moot where the parties had put into place a covenant not to sue.⁴⁸ The court found no actual controversy regarding the patent's validity in light of defendant's covenant not to assert patent infringement.⁴⁹ The parties entered into the covenant after the suit was filed; even so, the declaratory judgment action was not ripe to consider a possible controversy over

based on current as opposed to future rights and to an actual controversy over an issue).

41. See *Aetna Life Ins. Co. v. Haworth*, 300 U.S. 227, 240 (1936) (requiring that a controversy "must be a real and substantial controversy admitting of specific relief through a decree of conclusive character, as distinguished from an opinion advising what the law would be upon a hypothetical state of facts") (citations omitted).

42. See, e.g., *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560 (1991) (describing standing as an essential component to the case or controversy requirement of Article III of the Constitution); *Whitmore v. Arkansas*, 495 U.S. 149, 155 (1989) (stating the doctrine of standing is used to determine whether a dispute should be decided through the judicial process).

43. See *Lujan*, 504 U.S. at 560-61 ("The irreducible constitutional minimum of standing contains three elements. First, the plaintiff must have suffered an 'injury in fact' Second, there must be a causal connection between injury and conduct complained of Third, it must be likely . . . that the injury will be redressed by a favorable decision.").

44. See *North Carolina v. Rice*, 404 U.S. 244, 246 (1971) (noting that ripeness under Article III requires that a case involve a real controversy seeking specific relief through an actual law, as opposed to an abstract debate over what the law should be); see also *Hinrichs v. Whitburn*, 975 F.2d 1329, 1333 (7th Cir. 1992) (stating "[c]ases are unripe when the parties point only to hypothetical, speculative, or illusory disputes as opposed to actual, concrete conflicts").

45. See *Lewis v. Cont'l Bank Corp.*, 494 U.S. 472, 477-78 (1990) (stating that courts cannot exercise jurisdiction when awarding relief would be moot since the controversy would no longer be live or ongoing); *Powell v. McCormack*, 395 U.S. 486, 496 (1969) (observing that mootness occurs when issues are no longer live or when parties lack an interest in the outcome); see also *United States v. Shenberg*, 90 F.3d 438, 440 (11th Cir. 1996) (noting that when subsequent events render issues moot, federal courts no longer have Article III jurisdiction).

46. See *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1551, 35 U.S.P.Q.2d (BNA) 1065, 1074 (Fed. Cir. 1995) (en banc) (recognizing standing as a jurisdictional requirement to be reviewed in the Federal Circuit *de novo*).

47. *Amana Refrigeration, Inc.*, 172 F.3d at 852, 50 U.S.P.Q.2d (BNA) 1304.

48. See *id.* at 855, 50 U.S.P.Q.2d (BNA) at 1306 (holding that by enacting a covenant not to sue, Quadlux removed Amana's reasonable apprehension of facing a suit based on activities prior to the filing date and thus rendered the controversy moot).

49. See *id.* (concluding that even though a controversy may have existed prior to filing, the covenant ensured Quadlux was prevented from claiming liability against Amana during the times in question, thus resolving the controversy).

future products.⁵⁰

In *Mackay v. Commissioner of Patents and Trademarks*,⁵¹ the Federal Circuit ruled that standing to bring an action against the U.S. Patent and Trademark Office (“PTO”) under either the Federal Tort Claims Act⁵² or the Administrative Procedure Act⁵³ requires an exhaustion of administrative remedies.⁵⁴ Specifically, the PTO provides the administrative remedy of filing a petition with the Commissioner of Patents and Trademarks to contest a particular office action.⁵⁵ In this case, the PTO failed to assign a priority date.⁵⁶ Because the petitioner failed to pursue this administrative remedy prior to filing a complaint, the district court lacked jurisdiction over the claim.⁵⁷

D. Clarification of Prior Decisions

In *Scaltech v. Retec/Tetra, LLC*,⁵⁸ the Federal Circuit clarified its prior decision of September 10, 1998 to conform with the Supreme Court decision in *Pfaff v. Wells Electronics, Inc.*⁵⁹ The *Pfaff* decision set forth an analysis for the on-sale bar under 35 U.S.C. § 102(b).⁶⁰ The Federal Circuit interpreted the *Pfaff* analysis to require the district court to determine whether the activities met each claim limitation, and thus amounted to an embodiment of the claimed invention.⁶¹ Specifically, a process patent requires analysis of the process offered

50. See *id.* (rejecting Amana’s apprehension of being sued over new products as a present controversy since future acts are too speculative to serve as a basis for jurisdiction).

51. No. 99-1305, 1999 WL 955907 (Fed. Cir. Oct. 18, 1999) (unpublished opinion).

52. 28 U.S.C. §§ 1346(b), 2671-6780 (1994).

53. 5 U.S.C. §§ 701-706 (1994).

54. See *Mackay*, 1999 WL 955907, at *1 (finding Mackay had no standing because he failed to petition for a priority date and therefore had not exhausted his administrative remedies).

55. See 37 C.F.R. § 1.530 (2000) (outlining the procedure required for a patent owner to request reexamination by the PTO).

56. See *Mackay*, 1999 WL 955907, at *1.

57. See *id.* at *2 (stating “[b]ecause Mr. Mackay did not pursue administrative remedies before filing his complaint in the district court, the district court has no jurisdiction.”).

58. 178 F.3d 1378, 51 U.S.P.Q.2d (BNA) 1055 (Fed. Cir. 1999), *modifying* 156 F.3d 1193, 48 U.S.P.Q.2d (BNA) 1037 (Fed. Cir. 1998).

59. 525 U.S. 55, 48 U.S.P.Q.2d (BNA) 1641 (1998).

60. See *id.* at 67 (holding that when a product is the subject of a commercial offer for sale and the invention is ready for patenting, the invention is “on sale” within the meaning of the statute and cannot be patented).

61. See *Scaltech*, 178 F.3d at 1383, 51 U.S.P.Q.2d (BNA) at 1058-59 (requiring the district court to determine whether the process offered for sale to Chevron and Champlin would meet the claim limitations regarding particle size and solid concentration in order to determine whether an embodiment of the claimed invention was offered for sale).

for sale in its normal use.⁶²

E. Vacatur and Remand

The Federal Circuit in *Novamax Technologies, Inc. v. Southern Industrial Chemicals, Inc.*⁶³ vacated a district court judgment that *sua sponte* dismissed the parties' claims for both abuse of the judicial process and waste of the court's time.⁶⁴ The court decided that a district court cannot, without notice, punish parties so extremely in order to effectuate a timely resolution of the litigation.⁶⁵

In *TransLogic Corp. v. Tele Engineering, Inc.*,⁶⁶ the Federal Circuit ruled that the district court misunderstood its previous decision regarding a motion on validity and therefore allowed the lower court to grant a new trial on that issue.⁶⁷ The court vacated the district court's ruling based on the earlier remand to rule on the motion for a new trial in order to address the question of validity.⁶⁸

F. Preemption

The preemption doctrine allows federal law to supplant state law in areas where the Constitution allows and Congress decides to legislate.⁶⁹ In patent law, preemption comes into play when federal and state laws encroach into the purview of patent statutes and case law.⁷⁰

62. *See id.* at 1384, 51 U.S.P.Q.2d (BNA) at 1059 (“[I]f the natural result flowing from the operation of the process offered for sale would necessarily result in achievement of each of the claim limitations, then the invention was offered for sale.”).

63. Nos. 98-1285, 98-1410, 1999 WL 197207 (Fed. Cir. Mar. 31, 1999) (unpublished opinion).

64. *See id.* at *2 (stating the dismissal was an abuse of discretion since the parties were given no warning that their behavior would be sanctioned so severely).

65. *See id.* (stating by failing to give parties a chance to modify their behavior, the district court improperly disregarded the parties' due process rights).

66. No. 98-1392, 1999 WL 282731 (Fed. Cir. Apr. 30, 1999) (unpublished opinion).

67. *See id.* at *1 (noting that the Federal Circuit improperly stated in the clarifying order that a new trial had been previously denied based on the validity issue because the district court in fact never addressed this particular motion).

68. *See id.* at *1-2 (realizing that although the district court granted TransLogic's motion for a new trial on the question of damages, it did not address the motion for a new trial on the issue of validity).

69. *See, e.g.,* California Fed. Sav. & Loan Ass'n v. Guerra, 479 U.S. 272, 280 (1987) (describing three different ways that federal law can preempt state law, each of which focuses on congressional intent).

70. *See* Midwest Indus., Inc. v. Karavan Trailers, Inc., 175 F.3d 1356, 1358-59, 50 U.S.P.Q.2d (BNA) 1672, 1674 (Fed. Cir. 1999) (noting that the issue of preemption is raised when “patent law preempts particular state law causes of action or conflicts with rights created by other federal law”); *see also* Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc., 75 F.3d 1568, 1574-75, 37 U.S.P.Q.2d (BNA) 1626, 1631 (Fed. Cir. 1996) (discussing the Federal Circuit's jurisdiction over patent claims and non-

In *Midwest Industries, Inc. v. Karavan Trailers, Inc.*,⁷¹ the *en banc* Federal Circuit overruled its previous decisions of *Cable Electric Products, Inc. v. Genmark, Inc.*,⁷² and *Harmonic Design, Inc. v. Hunter Douglas, Inc.*⁷³ The court ruled that Federal Circuit precedent, as opposed to that from regional circuits, would be used to resolve conflicts between patent law and other federal and state laws.⁷⁴ Specifically, the court stated:

In order to fulfill our obligation of promoting uniformity into the field of patent law, it is equally important to apply our construction of patent law to the questions whether and to what extent patent law preempts or conflicts with other causes of action. Otherwise, we will be forced into the awkward posture of holding that, with respect to cases coming to us from district courts in some circuits, patent law forecloses certain other causes of action, but with respect to cases coming to us from district courts in other circuits, it does not.⁷⁵

G. Summary Judgment Standard

Federal Rule of Civil Procedure 56 provides for summary judgment adjudication of issues before trial.⁷⁶ The general standard for summary judgment requires the lack of genuine issues of material fact.⁷⁷ If there is no genuine issue of material fact, the district court may resolve the claim before presenting the evidence to a trier of fact.⁷⁸

patent issues arising from those claims).

71. 175 F.3d 1356, 50 U.S.P.Q.2d (BNA) 1672 (Fed. Cir. 1999) (*en banc*).

72. 770 F.2d 1015, 226 U.S.P.Q. (BNA) 881 (Fed. Cir. 1985).

73. 153 F.3d 1318, 417 U.S.P.Q.2d (BNA) 1769 (Fed. Cir. 1998), *cert. denied*, 525 U.S. 1143 (1999).

74. *See Midwest Indus.*, 175 F.3d at 1359, 50 U.S.P.Q.2d (BNA) at 1675 (holding that Federal Circuit law should apply to all conflicts of law regarding patent issues since the court was specifically created to promote uniformity in patent law).

75. *Id.* at 1360, 50 U.S.P.Q.2d (BNA) at 1676.

76. *See* FED. R. CIV. P. 56(a) ("A party seeking to recover upon a claim, counterclaim, or cross-claim or to obtain a declaratory judgment may . . . move . . . for a summary judgment in the party's favor upon all or any part thereof."); *see also* FED. R. CIV. P. 56(b) (applying rule similar to Rule 56(a) to defendants).

77. *See* FED. R. CIV. P. 56(c) (stating "if there is no genuine issue as to any material fact," the moving party is entitled to judgment as a matter of law); *see also* Celotex Corp. v. Catrett, 477 U.S. 317, 322 (1986) (noting summary judgment is proper when a party fails to sufficiently prove an element essential to the case and the burden of proof is on that party at trial); Anderson v. Liberty Lobby, 477 U.S. 242, 248-49 (1986) (defining a genuine issue as one that can only be resolved by the trier of fact because it could be resolved in either party's favor, and a material fact is one that affects the outcome of the suit under the substantive law).

78. *See* FED. R. CIV. P. 56(e) advisory committee's note (1963 Amendment) ("The very mission of the summary judgment procedure is to pierce the pleadings and assess the proof in order to see whether there is a genuine need for trial.").

In *Oney v. Ratliff*,⁷⁹ the Federal Circuit held that the summary judgment standard on the issue of patent validity required a quantum of clear and convincing evidence.⁸⁰ The court decided that if a trier of fact, applying the clear and convincing evidence standard, could find for either party, summary judgment would be inappropriate.⁸¹ Specifically, uncorroborated oral testimony of close associates to show prior use did not meet the clear or convincing standard necessary to find summary judgment on validity.⁸²

II. PATENTABILITY AND VALIDITY

A. Patentable Subject Matter

The first hurdle an invention must cross is set out by 35 U.S.C. § 101, patentable subject matter.⁸³ Not all inventions or discoveries amount to patentable subject matter. The statute makes patentable “any new and useful process, machine, manufacture, or composition of matter”⁸⁴ This criteria had traditionally been the gate keeper forbidding biotechnological, software, and business methods out of the realm of patentable subject matter due to their existence in nature or algorithmic nature.⁸⁵

79. 182 F.3d 893, 51 U.S.P.Q.2d (BNA) 1697 (Fed. Cir. 1999).

80. *See id.* at 895, 51 U.S.P.Q.2d (BNA) at 1699.

81. *See id.*

82. *See id.* at 896-97, 51 U.S.P.Q.2d (BNA) at 1700 (discussing whether the conflict between the documentary evidence and the oral testimony of Ratliff presented a genuine issue of material fact).

83. 35 U.S.C. § 101 (1994) (specifying which inventions or discoveries “may obtain a patent . . . subject to the conditions and requirements of this title”); *see also* *State St. Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368, 1372 n.2, 47 U.S.P.Q.2d (BNA) 1596, 1600 n.2 (Fed. Cir. 1998), *cert. denied*, 525 U.S. 1093 (1999) (“The first door which must be opened on the difficult path to patentability is § 101” (quoting *In re Bergy*, 596 F.2d 952, 960, 201 U.S.P.Q. (BNA) 352, 360 (C.C.P.A. 1979))).

84. 35 U.S.C. § 101 (1994).

85. *See* *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980) (holding that under 35 U.S.C. § 101, a living organism may be patentable only if it is a “product of human ingenuity”). *See generally* ROBERT L. HARMON, *PATENTS AND THE FEDERAL CIRCUIT* 38 (1994) (stating that “computer software and mathematical algorithms are not eligible subject matter for patents”); *see also* *State St. Bank*, 149 F.3d at 1368. The *State Street Bank* decision explicitly extended patent protection to business methods which had been patentable in practice for many years. This decision has opened the flood gates of business method patents related to the Internet and software related solutions. Business methods in this context are a set of instructions to complete a business goal such as e-commerce, banking, investment, or other modes of operation within a particular business sector. Some examples of business method patents are Amazon.com’s One-Click patent (U.S. Pat. No. 5,960,411) (issued Sept. 28, 1999), and Priceline.com’s Reverse Auction patent (U.S. Pat. No. 5,794,207) (issued Aug. 11, 1998).

In *AT&T Corp. v. Excel Communications, Inc.*,⁸⁶ the Federal Circuit affirmed its landmark decision in *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*⁸⁷ to allow business methods into the realm of patentable subject matter.⁸⁸ The court held an invention employing a mathematical algorithm patentable subject matter when the algorithm is applied “to produce a useful, concrete, tangible result.”⁸⁹ Even though the patent holder asserted only method claims, the court found that the lack of physical representations did not disqualify the algorithm from patentable subject matter.⁹⁰ The Federal Circuit seems eager to conform with the changing needs of computer-related inventions in our “modern world.”⁹¹

In *Juicy Whip, Inc. v. Orange Bang, Inc.*,⁹² the Federal Circuit held that the utility requirement of patentable subject matter does not exclude a product modified to imitate another product.⁹³ The court found that the ability to imitate a feature satisfies the utility requirement.⁹⁴ The court compared the imitation beverage dispenser in this case to cubic zirconium, imitation gold leaf, synthetic fabrics, and imitation leather, and patents for a method of putting imitation grill marks on food, imitation wood floor laminate, and imitation hamburger.⁹⁵

In *Bloomstein v. Paramount Pictures Corp.*,⁹⁶ the Federal Circuit

86. 172 F.3d 1352, 50 U.S.P.Q.2d (BNA) 1447 (Fed. Cir. 1999).

87. 149 F.3d at 1377, 47 U.S.P.Q.2d (BNA) at 1604 (finding that the determination of patentable subject matter “should not turn on whether the claimed subject matter does ‘business’ instead of something else”).

88. See *AT&T Corp.*, 172 F.3d at 1356, 50 U.S.P.Q.2d (BNA) at 1450 (explaining that the Federal Circuit dispensed with the “‘business method’ exception” in *State Street Bank* when it noted: “[w]e take this opportunity to lay this ill-conceived exception to rest” (citing *State Street Bank*, 149 F.3d at 1375, 47 U.S.P.Q.2d (BNA) at 1602)).

89. *Id.* at 1358, 50 U.S.P.Q.2d (BNA) at 1452.

90. See *id.* (“The notion of ‘physical transformation’ can be misunderstood . . . [I]t is not an invariable requirement, but merely one example of how a mathematical algorithm may bring about a useful application.”).

91. See *id.* at 1356, 50 U.S.P.Q.2d (BNA) at 1450 (“Since the process of manipulation of numbers is a fundamental part of computer technology, we have had to reexamine the rules that govern the patentability of such technology. The sea-changes in both law and technology stand as a testament to the ability of law to adapt to new and innovative concepts, while remaining true to basic principles.”).

92. 185 F.3d 1364, 51 U.S.P.Q.2d (BNA) 1700 (Fed. Cir. 1999).

93. See *id.* at 1368, 51 U.S.P.Q.2d (BNA) at 1703 (finding “no basis in section 101 to hold that inventions can be ruled unpatentable for lack of utility simply because they have the capacity to fool some members of the public”).

94. See *id.* at 1367, 51 U.S.P.Q.2d (BNA) at 1703 (asserting that the successful imitation of a product can offer a “benefit sufficient to satisfy the statutory requirement of utility”).

95. See *id.*

96. No. 99-1051, 1999 WL 693869 (Fed. Cir. Sept. 3, 1999) (unpublished opinion).

categorized a “cinematic work” as printed matter and therefore not patentable subject matter.⁹⁷ The patent at issue involved animation used to conform a character’s lip movements to dubbed-in dialog.⁹⁸ The Federal Circuit did not find this quality sufficient to bridge Section 101,⁹⁹ and followed its earlier decision in *In re Gulack*,¹⁰⁰ “[w]here the printed matter is not functionally related to the substrate, the printed matter will not distinguish the invention from the prior art in terms of patentability.”¹⁰¹

In *Process Control Corp. v. HydReclaim Corp.*,¹⁰² the Federal Circuit considered the difference between lack of utility and enablement.¹⁰³ The court decided that the two theories of invalidity are closely related.¹⁰⁴ Utility requires usefulness and operability in patentable subject matter.¹⁰⁵ While enablement requires adequate disclosure of operability “to one skilled in the relevant art,”¹⁰⁶ according to the Federal Circuit, inoperable patents invalidated under utility requirements also fail the enablement requirement.¹⁰⁷

B. Novelty

The novelty requirement of the patent statute breaks down into two categories: (1) loss of right based on the patent applicant’s pre-filing behavior,¹⁰⁸ and (2) anticipation based on prior art that already

97. See *id.* at *1 (agreeing with the district court that a cinematic work is unpatentable under the printed matter doctrine).

98. See *id.*

99. See *id.* (finding the appellant does not adequately distinguish the ‘cinematic work’ from unpatentable printed matter).

100. 703 F.2d 1381, 217 U.S.P.Q. (BNA) 401 (Fed. Cir. 1983).

101. See *Bloomstein*, 1999 WL 693869, at *1 (determining that printed matter may be patentable where it is functionally related to the “article of manufacture” at issue (quoting *Gulack*, 703 F.2d at 1385, 217 U.S.P.Q. (BNA) at 404)).

102. 190 F.3d 1350, 52 U.S.P.Q.2d (BNA) 1029 (Fed. Cir. 1999).

103. See *id.* at 1358-59, 52 U.S.P.Q.2d (BNA) at 1034-35 (holding inoperative subject matter is unpatentable under both the utility requirement and the enablement requirement).

104. See *id.* (“Lack of enablement and absence of utility are closely related grounds of unpatentability.”).

105. See *id.* at 1359, 52 U.S.P.Q.2d (BNA) at 1035 (concluding that if the description of the subject matter in the application is “nonsensical,” the subject matter is not useful for purposes of patentability).

106. *Id.* at 1358, 52 U.S.P.Q.2d (BNA) at 1034.

107. See *id.* (“If a patent claim fails to meet the utility requirement because it is not useful or operative, then it also fails to meet the how-to-use aspect of the enablement requirement.”).

108. See 35 U.S.C. § 102 (1994) (describing ways in which patentability can be lost, including a patent applicant’s pre-filing behavior); see also *Micro Magnetic Indus. v. Advance Automatic Sales Co.*, 488 F.2d 771, 772, 180 U.S.P.Q. (BNA) 118, 120 (9th Cir. 1973) (interpreting 35 U.S.C. § 102(b) as preventing inventors from extending their rights by exploiting their invention before applying for a patent through the on-sale bar provision); *Pickering v. Holman*, 459 F.2d 403, 406-07, 173 U.S.P.Q.

exists in the public domain or the inventive activities of others.¹⁰⁹

1. *Statutory bar*

The statutory bar requirement under Section 102(b) of the patent statute prevents an inventor from obtaining a patent if the invention was “on sale” or in public use in the United States more than one year prior to the filing date of the patent application.¹¹⁰ The bar also applies to inventions that were patented or described in a printed publication anywhere more than one year before the filing date of the application.¹¹¹

In *IGT v. Global Gaming Technology, Inc.*,¹¹² the Federal Circuit held that the development of a fully operational prototype one year prior to the patent’s filing date and under the terms of a contract for sale triggers the on-sale bar.¹¹³ The court followed the Supreme Court’s recent decision in *Pfaff v. Wells Electronics, Inc.*,¹¹⁴ ruling that an invention not ready for patenting becomes so by the fact that it is offered for sale one year prior to the filing date.¹¹⁵

In *Datapoint Corp. v. PictureTel Corp.*,¹¹⁶ the Federal Circuit held that an argument asserting that a prototype device did not amount to a commercial product that could be sold fails when the prototype is shown to potential customers.¹¹⁷ In such a situation, patent law deems

(BNA) 583, 585 (9th Cir. 1972) (concluding that the on-sale bar set forth in 35 U.S.C. § 102(b) applies to any use that commercially exploits an invention whether it be exposed to the public or hidden, and setting forth other types of pre-filing behavior that may trigger the on-sale bar).

109. See 35 U.S.C. § 102(b) (1994) (outlining how already prior art or innovations by others can affect patentability); see also *In re Robertson*, 169 F.3d 743, 745, 49 U.S.P.Q.2d (BNA) 1949, 1950 (Fed. Cir. 1999) (explaining that under 35 U.S.C. § 102(b), anticipation requires that every element of the proposed claim is found in a piece of prior art either expressly or inherently); *Verdegaal Bros. v. Union Oil Co.*, 814 F.2d 628, 631, 2 U.S.P.Q.2d (BNA) 1051, 1053 (Fed. Cir. 1987) (reiterating the principle that a patent will not be granted where each element of the proposed invention can be shown in a single prior art reference).

110. See 35 U.S.C. § 102(b) (1994).

111. See *id.*

112. No. 98-1246, 1999 U.S. App. LEXIS 13336 (Fed. Cir. June 17, 1999), *reh’g denied*, 1999 U.S. App. LEXIS 19552 (Fed. Cir. July 26, 1999) (unpublished opinion).

113. See *id.* at *7-9 (explaining that the on-sale bar will apply where an invention is offered for sale before it is fully developed as long as it is substantially complete prior to the critical date).

114. 525 U.S. 55, 48 U.S.P.Q.2d (BNA) 1641 (1998).

115. See *id.* at 67-68, 48 U.S.P.Q.2d (BNA) at 1646-47 (concluding that the “on-sale bar applies” upon the satisfaction of two conditions one year prior to the filing date: (1) the product is offered for commercial sale, and (2) the product is “ready for patenting” either through a “reduction to practice” or “descriptions of the invention sufficiently specific to enable a person skilled in the art to practice the inventions”).

116. No. 98-1341, 1999 U.S. App. LEXIS 15786 (Fed. Cir. July 15, 1999) (unpublished opinion).

117. See *id.* at *4-5 (refusing to overturn the trial court’s application of the on-sale bar where evidence demonstrated that a prototype was shown to customers, thus

that the applicant offered the prototype for sale and triggers the on-sale bar under Section 102(b).¹¹⁸

In *Brasseler, U.S.A. I, L.P. v. Stryker Sales Corp.*,¹¹⁹ the Federal Circuit refused to find an exception to the on-sale bar for joint inventors employed by the applicant and the potential customer.¹²⁰ The court found a commercial sale based on the distinct nature of the corporations with no common ownership or control.¹²¹ The court ignored any consideration of special circumstances because the Supreme Court in *Pfaff*¹²² rejected the totality of the circumstances test for a more definite standard to determine what triggers the on-sale bar and starts the clock ticking for the applicant.¹²³

In *Comfort Silkie Co. v. Seifert*,¹²⁴ the Federal Circuit compared the Supreme Court's decision in *Egbert v. Lippman*,¹²⁵ which found a public use of a corset even though it was worn under clothes, to a baby playing with a blanket, observable to others, in public locations.¹²⁶ The court held that clear and convincing evidence of such a public use by the applicant more than a year before she filed the patent application triggered the statutory bar under 35 U.S.C. § 102(b).¹²⁷

In *Abbott Laboratories v. Geneva Pharmaceuticals, Inc.*,¹²⁸ the Federal Circuit rejected an exception to the on-sale bar for accidental or fraudulent sales of the invention by third parties.¹²⁹ The court found that when the applicant reduces the invention to practice, the

satisfying the requirement of a commercial offer for sale).

118. *See id.*; *see also* *Trilogy Dev. Corp. v. Teknowledge Corp.*, No. C94-4222 MHP, 1996 U.S. Dist. LEXIS 13095, at *10 (N.D. Cal. Aug. 30, 1996) (reasoning that where a prototype is sufficiently developed, demonstrations may constitute an offer for sale, triggering the on-sale bar provision in 35 U.S.C. § 102(b)).

119. 182 F.3d 888, 51 U.S.P.Q.2d (BNA) 1470 (Fed. Cir. 1999).

120. *See id.* at 890, 51 U.S.P.Q.2d (BNA) at 1472.

121. *See id.* (finding the buyer and seller involved in the sale were separate corporations based on their having different owners and no common control).

122. 525 U.S. 55, 48 U.S.P.Q.2d (BNA) 1641 (1998).

123. *See id.* at 66 n.11, 48 U.S.P.Q.2d (BNA) at 1646 n.11 (acknowledging that the totality of the circumstances test is unnecessarily vague and thus should be rejected).

124. No. 98-1476, 1999 U.S. App. LEXIS 16181 (Fed. Cir. July 16, 1999) (unpublished opinion).

125. 104 U.S. 333 (1881).

126. *See Comfort Silkie Co.*, 1999 U.S. App. LEXIS 16181, at *4-5 (noting that if the court believed wearing a corset under a person's clothes was public use, it must find that playing with a blanket in public is also a public use).

127. *See id.* (holding that use of a blanket in public places such as parks, airports, and restaurants demonstrates that the inventor had no expectation of confidentiality, and thus it was sufficient to constitute public use as set forth in 35 U.S.C. § 102(b)).

128. 182 F.3d 1315, 51 U.S.P.Q.2d (BNA) 1307 (Fed. Cir. 1999).

129. *See id.* at 1319, 51 U.S.P.Q.2d (BNA) at 1310 (rationalizing that the purpose of the on-sale bar is to prevent inventors from taking things out of the public domain through commercialization, thus finding it irrelevant who offers the product for sale).

invention is ready for patenting regardless of whether the applicant or the customer realizes all the aspects of the invention.¹³⁰ The court stated that “[i]f a product that is offered for sale inherently possesses each of the limitations of the claims, then the invention is on sale, whether or not the parties to the transaction recognize that the product possesses the claimed characteristics.”¹³¹

2. *Anticipation*

a. *Inherency*

The doctrine of inherent anticipation expands the scope of a prior art reference to anticipate more than what is explicitly taught in that prior art reference.¹³² Inherent anticipation thereby behaves like obviousness when only one prior art reference provides all the elements to anticipate a claim combined with the knowledge of one skilled in the art.¹³³

The Federal Circuit in *In re Robertson*¹³⁴ held that mere “probabilities or possibilities” cannot satisfy the requirements of inherent anticipation.¹³⁵ The court concluded that inherency requires more than a showing that a skilled artisan would know to combine the elements in the prior art reference.¹³⁶ In another case turning on inherency, *MEHL/Biophile International Corp. v.*

130. *See id.* (acknowledging that it is well-settled law that parties are not required to know all of the relevant characteristics of their product when they offer it for sale).

131. *Id.* (citations omitted).

132. *See Atlas Powder Co. v. IRECO Inc.*, 190 F.3d 1342, 1347, 51 U.S.P.Q.2d (BNA) 1943, 1946 (Fed. Cir. 1999) (holding although it is usually necessary for a prior art reference to show each limitation, it is possible that a prior art reference may anticipate when the limitations are not expressly found in the prior art but are inherently in it); *see also In re King*, 801 F.2d 1324, 1326, 231 U.S.P.Q. (BNA) 136, 138 (Fed. Cir. 1986) (explaining that inherency in prior art includes those structures in the prior art that function similarly to those limitations of the structure to be patented).

133. *See Cont'l Can Co. v. Monsanto Co.*, 948 F.2d 1264, 1268, 20 U.S.P.Q.2d (BNA) 1746, 1749 (Fed. Cir. 1991) (holding that inherency can be evidenced by extrinsic evidence that a person of ordinary skill in the art would recognize the element in question as necessarily present); *see also Rockwell Int'l Corp. v. SDL, Inc.*, 103 F. Supp. 2d 1202, 1206 (N.D. Cal. 2000) (stating that in determining whether an element is inherently disclosed, it is possible to look to whether a skilled artisan would see the element as necessarily present).

134. 169 F.3d 743, 49 U.S.P.Q.2d (BNA) 1949 (Fed. Cir. 1999).

135. *See id.* at 745, 49 U.S.P.Q.2d (BNA) at 1950-51 (explaining it is not sufficient in establishing inherency that something may result from a particular “set of circumstances”; rather, there must be evidence that the missing element is necessary to the prior art) (citations omitted).

136. *See id.* (asserting that in order to establish inherency, it is insufficient to show that the combination of two elements of a prior art would be similar to an element of the invention to be patented).

Milgraum,¹³⁷ the Federal Circuit required that the prior art reference inherently teach the limitations and their relationship to each other.¹³⁸ Certain commonly known details, such as the hairiness of guinea pigs, can be attributed to one skilled in the art once the prior art reference makes explicit the relationship between the limitations.¹³⁹ Finally, in *Atlas Powder Co. v. IRECO Inc.*,¹⁴⁰ the Federal Circuit held that a prior art reference that teaches the relationship between the limitations even though it has not recognized the key aspect of the applicant's invention, may inherently anticipate the patent-in-suit and thereby invalidate it.¹⁴¹

b. Invention by another

The patent statute under Section 102(g)¹⁴² prohibits issuing a patent when another inventor can show that the invention was made in this country and was not abandoned, suppressed, or concealed.¹⁴³ In determining priority of the inventions as between inventors, the courts look to dates of conception and reduction to practice.¹⁴⁴ Courts require corroborating evidence of each of these events.¹⁴⁵

137. 192 F.3d 1362, 52 U.S.P.Q.2d (BNA) 1303 (Fed. Cir. 1999).

138. *See id.* at 1365, 52 U.S.P.Q.2d (BNA) at 1306 (holding that because the instruction manual sold with a newly invented laser did not describe how the laser should be aligned during use, it did not teach every limitation of the invention).

139. *See id.* at 1366, 52 U.S.P.Q.2d (BNA) at 1306 (noting that the fact that a person with ordinary skill following the manual would align the laser with the hair follicle even though it does not specifically teach such alignment goes beyond mere probabilities).

140. 190 F.3d 1342, 51 U.S.P.Q.2d (BNA) 1943 (Fed. Cir. 1999).

141. *See id.* at 1348-49, 51 U.S.P.Q.2d (BNA) at 1947 (reasoning that the mere fact that the inventor of a prior art did not fully understand the inherent properties of his invention does not mean that the party who discovers such pre-existing quality should be granted patent rights because he has not discovered something novel).

142. 35 U.S.C. § 102(g) (1994) (outlining the novelty condition of patentability and the loss of right to patent an invention).

143. *See id.* (stating that a person will not be entitled to a patent if the invention existed previously and was not abandoned, suppressed, or concealed). *See generally* *Young v. Dworkin*, 489 F.2d 1277, 1280, 180 U.S.P.Q. (BNA) 388, 391 (C.C.P.A. 1977) (commenting that suppression and concealment mean withholding the idea from the public and thereby preventing the public from benefiting from the idea).

144. *See* 35 U.S.C. § 102(g) (1994) (establishing factors to consider in determining the priority of inventions: dates of conception, reduction to practice, and reasonable diligence of one "first to conceive and last to reduce to practice from a time prior to conception by the other"). *See generally* *Cooper v. Goldfarb*, 154 F.3d 1321, 1327, 47 U.S.P.Q.2d (BNA) 1896, 1901 (Fed. Cir. 1998) (defining "conception" as the time when the inventor has a definitive and permanent idea of a complete and functioning invention which could be applied thereafter in practice, and "reduction to practice" as constructive (when the patent application is filed) or actual (when the invention works for its intended purpose)).

145. *See, e.g.,* *Coleman v. Dines*, 754 F.2d 353, 359, 224 U.S.P.Q. (BNA) 857, 862 (Fed. Cir. 1985) (indicating that corroborating evidence showing that the inventor told others his "completed thought expressed in such clear terms as to enable those skilled in the art to make the invention" must be used to prove conception) (quoting

In *Thomson S.A. v. Quixote Corp.*,¹⁴⁶ the Federal Circuit noted that corroborative evidence balances the interests of the patent applicant against the self-interest of a testifying inventor.¹⁴⁷ The court held that corroboration of an inventor's testimony was unnecessary unless the inventor or her assignee is a named party asserting priority,¹⁴⁸ or the inventor stands to gain directly and substantially from a finding of priority.¹⁴⁹ The court left other situations where the level of self-interest does not rise to this high a standard to the Federal Rules of Evidence, which empower the defendant with tools to impeach the inventor.¹⁵⁰

c. Obviousness

The nonobviousness requirement under 35 U.S.C. § 103 depends on four factors that the courts have formulated: (1) the "scope and content" of teachings in the prior art;¹⁵¹ (2) the "differences between the prior art and the claims. . .";¹⁵² (3) the knowledge of one skilled in

Field v. Knowles, 183 F.2d 593, 601, 86 U.S.P.Q. (BNA) 373, 379 (C.C.P.A. 1950)); Knorr v. Pearson, 671 F.2d 1368, 1373, 213 U.S.P.Q. (BNA) 196, 200 (C.C.P.A. 1982) (stating that corroborating evidence is necessary to establish an actual reduction to practice).

146. 166 F.3d 1172, 49 U.S.P.Q.2d (BNA) 1530 (Fed. Cir.), *cert. denied*, 527 U.S. 1036 (1999).

147. *See id.* at 1176, 49 U.S.P.Q.2d (BNA) at 1532-33 (commenting that the corroboration rule is necessary only to protect the patentee from the self-interest of a testifying inventor who may manipulate facts to produce a favorable outcome for the inventor in a case determining the priority of inventions).

148. *See id.* (holding that the corroboration rule does not apply to testimony by non-party inventors because often the interests of a non-party are not significant enough).

149. *See id.* (asserting that corroborating evidence of a testifying inventor is required when the inventor will profit from a decision rewarding priority to the invention).

150. *See id.* (stating that the numerous methods in the Federal Rules of Evidence and Rules of Civil Procedure by which a party may challenge or rebut oral testimony as well as the clear and convincing standard of proof required to establish priority usually protect a patentee from an erroneous finding of invalidity).

151. *See Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 U.S.P.Q. (BNA) 459, 467 (1966) (commenting that this factor and the additional three factors are factual inquiries, although the ultimate question in determining the validity of a patent is one of law); *see also Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1568, 1 U.S.P.Q.2d (BNA) 1593, 1597 (Fed. Cir. 1987) (noting the legal standard to determine the scope and content of prior art includes a consideration of the entire prior patent; that is, the invention as a whole, including those parts of the prior invention that differ from the invention in the suit). *See generally Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1535, 218 U.S.P.Q. (BNA) 871, 876 (Fed. Cir. 1983) (defining scope as anything "reasonably pertinent to the particular problem with which the inventor was involved") (quoting *In re Wood*, 599 F.2d 1032, 1036, 202 U.S.P.Q. (BNA) 171, 174 (C.C.P.A. 1979)).

152. *See Graham*, 383 U.S. at 17, 148 U.S.P.Q. (BNA) at 467 (indicating that this factor and the other factors help determine the "obviousness or nonobviousness of the subject matter"); *Panduit*, 810 F.2d at 1566, 1 U.S.P.Q.2d (BNA) at 1595 (asserting that the differences must be considered between the entire claimed

the art;¹⁵³ and (4) secondary “indicia of obviousness or nonobviousness.”¹⁵⁴ Such secondary indicia include commercial success of the invention,¹⁵⁵ satisfying a long-felt need,¹⁵⁶ failure of others to find a solution to the problem,¹⁵⁷ and copying of the invention by others.¹⁵⁸ A prima facie case of obviousness requires that

invention and the entire prior art, and, furthermore, that facts providing what the differences allowed the entire claimed invention to achieve may be considered as well).

153. See *Graham*, 383 U.S. at 17, 148 U.S.P.Q. (BNA) at 467 (commenting that while these factors provide the correct standard for the courts to apply, the PTO holds the “primary responsibility” for excluding unpatentable material); see also *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 1050, 5 U.S.P.Q.2d (BNA) 1434, 1438 (Fed. Cir. 1988) (stating that obviousness, a legal conclusion, requires a preliminary determination of four factual inquiries including “the level of ordinary skill in the pertinent art”); *Panduit*, 810 F.2d at 1569, 1 U.S.P.Q.2d (BNA) at 1598 (acknowledging that “level of skill” is a necessary inquiry in determining obviousness).

154. See *Graham*, 383 U.S. at 17-18, 148 U.S.P.Q. (BNA) at 467 (indicating that the secondary considerations may be used to show the background circumstances regarding the origin of invention); see also *B.F. Goodrich Co. v. Aircraft Braking Sys.*, 72 F.3d 1577, 1582, 37 U.S.P.Q.2d (BNA) 1314, 1318 (Fed. Cir. 1996) (stating that secondary considerations provide evidence of nonobviousness); *Panduit*, 810 F.2d at 1569, 1 U.S.P.Q.2d (BNA) at 1598 (referring to the secondary considerations as objective evidence).

155. See *Graham*, 383 U.S. at 17, 148 U.S.P.Q. (BNA) at 467 (noting that evidence of commercial success may be relevant to determine obviousness); see also *In re Huang*, 100 F.3d 135, 140, 40 U.S.P.Q.2d (BNA) 1685, 1689 (Fed. Cir. 1996) (asserting that the patent application must provide hard evidence of commercial success to the PTO and that evidence of commercial success is relevant “only if there is proof that the sales were a direct result of the unique characteristics of the claimed invention—as opposed to other economic and commercial factors unrelated to the quality of the potential subject matter;” thus, “a nexus is required between the sales and the merits of the claimed invention”).

156. See *Graham*, 383 U.S. at 17, 148 U.S.P.Q. (BNA) at 467 (providing that the need must be long-felt, but unsolved); see also Richard L. Robbins, *Subtests of “Nonobviousness”: A Nontechnical Approach to Patent Validity*, 112 U. PA. L. REV. 1169, 1172 (1964) (“Existence of the defect creates a demand for its correction, and it is reasonable to infer that the defect would not persist were the solution ‘obvious.’ This is the rationale of longfelt [sic] demand and its justification as a test of non-obviousness.”).

157. See *id.* at 35-36, 148 U.S.P.Q. (BNA) at 474 (indicating that the failure of others is a subtest of nonobviousness that focuses attention on “economic and motivational rather than technical issues and [is] . . . more susceptible of judicial treatment than are the highly technical facts often present in patent litigation”); see also *Stratoflex Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1540, 218 U.S.P.Q. (BNA) 871, 880 (Fed. Cir. 1983) (stating that others skilled in the art must have tried to find a solution and failed).

158. See *Panduit*, 810 F.2d at 1569, 1 U.S.P.Q.2d (BNA) at 1598 (noting that copying is an event that can be proved to have occurred, which is the reason the court calls secondary indicia “objective” evidence); see, e.g., *B.F. Goodrich*, 72 F.3d at 1583, 37 U.S.P.Q.2d (BNA) at 1318 (indicating that extensive development by competitors and the ease or difficulty with which a non-infringing substitute can be designed can provide evidence of copying by others); *Huang*, 100 F.3d at 139, 40 U.S.P.Q.2d (BNA) at 1689 (stating that evidence of copying is relevant to a nonobvious inquiry). See generally *Stratoflex*, 713 F.2d at 1538-39, 218 U.S.P.Q. (BNA) at 879 (discussing the importance of secondary considerations and noting that evidence of secondary considerations “may often be the most probative and cogent

there be a suggestion or motivation to combine the teachings of prior art.¹⁵⁹

In *In re Newburger*,¹⁶⁰ the Federal Circuit found a reference from another field relevant if one skilled in the art would reasonably have sought guidance in that field to solve the problem which the inventor overcame.¹⁶¹ Alternatively, the Federal Circuit, in *Pfund v. United States*,¹⁶² agreed that in the same field there could be motivation to combine up to seven references.¹⁶³ The court stated that the lower courts must, however, avoid using hindsight in making its obviousness determination.¹⁶⁴ Similarly, the lower courts must weigh secondary indicia of nonobviousness, such as long-felt need and a government-imposed secrecy order.¹⁶⁵

In *In re Dembiczak*,¹⁶⁶ the Federal Circuit found that the Board of Patent Appeals had entered the forbidden territory of analyzing obviousness based on hindsight.¹⁶⁷ The court held that the Board did not show suggestion, teaching, or motivation to combine the six prior

evidence”).

159. See *In re Jones*, 958 F.2d 347, 351, 21 U.S.P.Q.2d (BNA) 1941, 1943-44 (Fed. Cir. 1992) (concluding that before the PTO “may combine the disclosures of two or more prior art references in order to establish *prima facie* obviousness, there must be some suggestion for doing so, found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art”); see also *ACS Hosp. Sys., Inc. v. Montefiore Hosp.*, 732 F.2d 1572, 1577, 221 U.S.P.Q. (BNA) 929, 933 (Fed. Cir. 1984) (asserting that without some teaching or suggestion to support the combination, obviousness cannot be determined by combining the teachings of prior art).

160. No. 98-1187, 1999 U.S. App. LEXIS 651 (Fed. Cir. Jan. 11, 1999) (unpublished opinion).

161. See *id.* at *7.

162. No. 98-5097, 1999 U.S. App. LEXIS 733 (Fed. Cir. Jan. 20, 1999) (unpublished opinion).

163. See *id.* at *4 (upholding the Court of Federal Claims’ finding that there can be motivation to combine prior art references).

164. See *id.* at *6-7 (commenting that a court must be aware of the dangers of hindsight because analyzing the nonobviousness of a claim using hindsight may render an invention obvious and simple to the decisionmaker, whereas at the time the invention was made, the solution may have been ingenious and complex).

165. See *id.* at *7 (finding that because the Court of Federal Claims considered these secondary factors of nonobviousness, that court did not err in reaching its decision).

166. 175 F.3d 994, 50 U.S.P.Q.2d (BNA) 1614 (Fed. Cir. 1999).

167. See *id.* at 999, 50 U.S.P.Q.2d (BNA) at 1616 (indicating that the phrase “at the time the invention was made” contained in 35 U.S.C. § 103(a) (Supp. IV 1998) protects inventors from an obviousness analysis based on hindsight); see also *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 1051-52, 5 U.S.P.Q.2d (BNA) 1434, 1438 (Fed. Cir. 1988) (noting that application of the obviousness standards requires courts to go back to the time the invention was made and that “when prior art references require selective combination by [a] court to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gleaned from the invention itself”) (quoting *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1143, 227 U.S.P.Q. (BNA) 543, 551 (Fed. Cir. 1985)).

art references to invalidate the patent application based on obviousness.¹⁶⁸ The court mandated that the finder of obviousness identify prior art, assess the knowledge of one skilled in the art, and analyze the nature of the problem solved by the inventor.¹⁶⁹ The determiner of obviousness cannot simply discuss ways to combine sets of prior art references so that they teach the claimed invention without actual evidence.¹⁷⁰ On the other hand, in *In re Oggero*,¹⁷¹ the Federal Circuit held that in a crowded art, the references do not need to suggest explicitly the combination of references to teach the invention, provided that the prior art does not teach away from the combination of such references.¹⁷²

C. Enablement

The enablement standard requires that the patent applicant specify explicitly to the public the key aspects of the invention in return for a patent-granted monopoly.¹⁷³ Section 112 of the patent statute and Federal Circuit case law have broken down enablement into the requirements of written description,¹⁷⁴ best mode,¹⁷⁵ and definiteness.¹⁷⁶

168. See *Dembiczak*, 175 F.3d at 1000, 50 U.S.P.Q.2d (BNA) at 1617 (asserting that “[c]ombining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor’s disclosure as a blueprint for piecing together the prior art to defeat patentability,” which is “the essence of hindsight”).

169. See *id.* at 999, 50 U.S.P.Q.2d (BNA) at 1617 (declaring that these factors provide evidence of a suggestion, teaching, or motivation to combine prior art references).

170. See *id.* (commenting that general statements about the teaching of multiple references, which are merely conclusory, are not evidence when standing alone).

171. No. 99-1116, 1999 U.S. App. LEXIS 18477 (Fed. Cir. Aug. 10, 1999) (unpublished opinion).

172. See *id.* at *4 (noting that the motivation to combine the teachings of the prior art arose from apparent gains in convenience; therefore, an invention using the combined teachings would have been obvious in view of prior patents).

173. See 35 U.S.C. § 112 (1994) (requiring the applicant to explain the precise subject matter that is claimed and the manner in which it can be made and used).

174. See *id.* (requiring a written description of the claimed invention); see also *Standard Oil Co. v. Am. Cyanamid Co.*, 774 F.2d 448, 452-53, 227 U.S.P.Q. (BNA) 293, 296-97 (Fed. Cir. 1985) (explaining requirements under 35 U.S.C. § 112 pertaining to the written description); *In re Dossel*, 115 F.3d 942, 944-46, 42 U.S.P.Q.2d (BNA) 1881, 1883-85 (Fed. Cir. 1997) (discussing the written description requirement and how to meet it in detail).

175. See 35 U.S.C. § 112 (1994) (mandating the applicant to explain the best mode of use of the invention that the applicant contemplates); see also *Standard Oil*, 774 F.2d at 452-53, 227 U.S.P.Q. (BNA) at 296-97 (explaining that the best mode requirement is addressed at the time of filing).

176. See 35 U.S.C. § 112 (1994) (requiring a description of the invention in full and exact terms); see also *Standard Oil*, 774 F.2d at 452-53, 227 U.S.P.Q. (BNA) at 296-97 (noting that “the descriptive part of the specification aids in ascertaining the scope and meaning of the claims in as much as the words of the claims must be based upon the description”).

1. *Written description*

The written description requirement of 35 U.S.C. § 112 (1994) forces the patent applicant to adequately describe the subject matter of the invention in the specification.¹⁷⁷ The requirement is opened in that there are no restrictions as to how the specification should describe the invention;¹⁷⁸ instead, it must convey with reasonable clarity to one skilled in the art, that the inventor has captured the invention at the time of filing the application.¹⁷⁹

The written description in the specification works to limit the claims, especially in biotech cases. In *In re Thorne*,¹⁸⁰ the Federal Circuit held that method claims for a biological purification process must recite process modifications disclosed in the written description that are essential to practice the claimed invention.¹⁸¹

In *National Recovery Technologies, Inc. v. Magnetic Separation Systems, Inc.*,¹⁸² the Federal Circuit stated “a claim is not invalid for lack of *operability* simply because the invention does not work perfectly under all conditions.”¹⁸³ If, however, a claim is broader than the enablement taught in the specification because it requires one skilled in the art to conduct undue experimentation to practice the invention, then that inoperability invalidates the claim.¹⁸⁴

177. See 35 U.S.C. § 112 (1994) (mandating the applicant to specify fully and clearly how the invention can be made and used so that anyone skilled in the relevant field can also make and use the invention).

178. See *id.* (requiring a written description but giving no suggestions that a particular form must be followed in presenting the description).

179. See *id.* (requiring applicants to explain the invention so as to allow repetition and use by someone knowledgeable in the field).

180. No. 98-1329, 1999 U.S. App. LEXIS 2108 (Fed. Cir. Feb. 10, 1999) (*per curiam*) (unpublished decision) (limiting the scope of the patent claim precisely to what is set forth in the written description).

181. See *id.* (suggesting that inclusion of such process modifications in the written description alone is insufficient enablement).

182. 166 F.3d 1190, 49 U.S.P.Q.2d (BNA) 1676 (Fed. Cir. 1999) (ruling that while there is no requirement that the invention work perfectly under all conditions, the specification in the patent application must nevertheless “enable one of ordinary skill in the art to practice the invention embodied in [the] claim without undue experimentation”).

183. *Id.* at 1196, 49 U.S.P.Q.2d (BNA) at 1676 (emphasis in original) (discussing what the specification in the patent application must contain in order to make it enabling) (citing *Hildreth v. Mastoras*, 257 U.S. 27, 34 (1921) (“The machine patented may be imperfect in its operation; but if it embodies the general principle and works . . . it is enough.”)); *Decca, Ltd. v. United States*, 544 F.2d 1070, 1077, 191 U.S.P.Q. (BNA) 439, 444 (Ct. Cl. 1976) (*per curiam*) (“The mere fact that the system has some drawbacks, or that under certain postulated conditions it may not work . . . does not detract from the operability of the disclosed equipment to perform its described function.”).

184. See *Nat'l Recovery Tech.*, 166 F.3d at 1196, 49 U.S.P.Q.2d (BNA) at 1676 (stating if someone skilled in the art cannot reproduce the new invention without the need to conduct undue experimentation, the claim will fail under 35 U.S.C. § 112 due to lack of enabling).

In *Enzo Biochem, Inc. v. Calgene, Inc.*,¹⁸⁵ the Federal Circuit reiterated that the enablement analysis set forth in *In re Wands*¹⁸⁶ applies to both *ex parte* prosecution and *inter partes* litigation.¹⁸⁷ The court held the *Wands* analytical framework for enablement analysis applied regardless of the situation.¹⁸⁸ This analysis includes consideration of the following factors:

- (1) the quantity of experimentation necessary
- (2) the amount of direction or guidance presented
- (3) the presence or absence of working examples
- (4) the nature of the invention
- (5) the state of the prior art
- (6) the relative skill of those in the art
- (7) the predictability or unpredictability of the art and
- (8) the breadth of the claims.¹⁸⁹

2. *Best mode*

The best mode requirement, under 35 U.S.C. § 112, requires that a patent's specification include the inventor's best mode for carrying out his or her invention.¹⁹⁰ This requirement applies only if the inventor has a preferred way of practicing the invention.¹⁹¹ The applicant need not identify the best mode as such.¹⁹² This requirement, however, forces the applicant to disclose the best mode

185. 188 F.3d 1362, 52 U.S.P.Q.2d (BNA) 1129 (Fed. Cir. 1999).

186. 858 F.2d 731, 737, 8 U.S.P.Q.2d (BNA) 1400, 1406 (Fed. Cir. 1988) ("Whether undue experimentation is needed is not a single, simple factual determination, but rather is a conclusion reached by weighing many factual considerations.").

187. See *Enzo Biochem*, 188 F.3d at 1372, 52 U.S.P.Q.2d (BNA) at 1136; see also *Amgen, Inc. v. Chugai Pharm. Co.*, 927 F.2d 1200, 1213, 18 U.S.P.Q.2d (BNA) 1016, 1027 (Fed. Cir. 1991) (applying *Wands* factors to *inter partes* cases).

188. See *Enzo Biochem*, 188 F.3d at 1372, 52 U.S.P.Q.2d (BNA) at 1135-36 (stating that *Wands* factors are applicable in both *ex parte* and *inter partes* contexts, and that the enablement determination is made retrospectively).

189. *Id.* at 1371, 52 U.S.P.Q.2d (BNA) at 1135-36.

190. See 35 U.S.C. § 112 (1994).

191. See *Amgen*, 927 F.2d at 1209-10, 18 U.S.P.Q.2d (BNA) at 1024 (explaining that if an inventor subjectively contemplates a best mode for the invention, that mode must be set out in the application in order to prevent the inventor from concealing it from the public. The rights gained through the grant of a patent are an exchange for public knowledge of the invention and its best mode of use.); see also *Chemcast Corp. v. Arco Indus. Corp.*, 913 F.2d 923, 927-28, 16 U.S.P.Q.2d (BNA) 1033, 1036-37 (Fed. Cir. 1990) (asserting that determination of best mode requires subjectively discerning whether the inventor contemplated a best mode, and if so, objectively determining whether the best mode was sufficiently set forth in the application); *In re Sherwood*, 613 F.2d 809, 816, 204 U.S.P.Q. (BNA) 537, 544 (C.C.P.A. 1980) ("[T]here is no objective standard by which to judge the adequacy of a best mode disclosure. Instead, only evidence of concealment (accidental or intentional) is to be considered."); *In re Gay*, 309 F.2d 769, 772, 135 U.S.P.Q. (BNA) 311, 315 (C.C.P.A. 1962) (stating that the reason inventors are required to disclose their best mode is to prevent concealment from the public).

192. See 35 U.S.C. § 112 (1994) (mandating the best mode to be explained in the application, if one is contemplated, but not requiring the applicant to state that the method described is the best mode).

in sufficient detail to allow one skilled in the art to practice it without undue experimentation,¹⁹³ as opposed to concealing it from the public.¹⁹⁴

In *Ricoh Co. v. Nashua Corp.*,¹⁹⁵ the Federal Circuit held that an inventor's un rebutted testimony may prove that the embodiment of the invention disclosed in the patent serves as the best mode of the invention.¹⁹⁶ Such is the case when the alleged best mode used to implement the commercial product, which seems better than the patent's best embodiment, simply reduces manufacturing costs.¹⁹⁷

In *Evans Medical Ltd., v. American Cyanamid Co.*,¹⁹⁸ the Federal Circuit held that an inventor discloses the best mode of a biotech invention if she can meet the requirements of access by the patent examiner to the microorganism during pendency of the application and public access to the material after issuance of the patent.¹⁹⁹ An inventor may meet these requirements by filing the preferred embodiment as a biological deposit, referring to the embodiment in the specification of the patent, and relying on the ordinary skill of the art at filing to bridge the gap of undue experimentation with knowledge of a well-established technique.²⁰⁰

193. See *Nat'l Recovery Tech., Inc. v. Magnetic Separation Sys., Inc.*, 166 F.3d 1190, 1196, 49 U.S.P.Q.2d (BNA) 1671, 1676 (suggesting that the need for undue experimentation will result in a failure to satisfy the enabling requirement of 35 U.S.C. § 112); see also 35 U.S.C. § 112 (1994) (requiring a description of the invention sufficient to enable one skilled in the art to reproduce and use the invention).

194. See *Chemcast*, 913 F.2d at 928, 16 U.S.P.Q.2d (BNA) at 1036-37 (explaining that an inventor may not conceal from the public the best way to make and use the invention); see also *Ricoh Co. v. Nashua Corp.*, No. 97-1344, 1999 U.S. App. LEXIS 2672, at *15 (Fed. Cir. Feb. 18, 1999) (unpublished decision) (discussing the best mode requirements of 35 U.S.C. § 112 and asserting that there is no need to disclose every mode of use).

195. See *Ricoh*, 1999 U.S. App. LEXIS 2672, at *15.

196. See *id.* at *14-15 (finding no evidence of clear error in the district court's conclusion that the inventors described the best mode contemplated at the time of the patent application, and upholding the district court's finding in the case).

197. See *id.* at *14 (upholding the district court's finding that "while the commercial embodiment was potentially relevant to what the inventors thought was the best mode, it was more relevant of the best and cheapest mode of manufacturing the cartridge, not necessarily of practicing the invention").

198. 215 F.3d 1347, 1999 WL 594310, 52 U.S.P.Q.2d (BNA) 1455 (Fed. Cir. Aug. 9, 1999) (unpublished decision).

199. See *Evans Med.*, 1999 WL 594310, at *6, 52 U.S.P.Q.2d (BNA) at 1460-61 (relying on the court's prior ruling in *In re Lundak*, 773 F.2d 1216, 1220-21, 227 U.S.P.Q. (BNA) 90, 93-94 (Fed. Cir. 1985) which stated that the two policy concerns involving biological patents were access to the invention by the PTO during pendency and access by the public after issuance of the patent); see also *In re Argoudelis*, 434 F.2d 1390, 168 U.S.P.Q. (BNA) 99 (C.C.P.A. 1970) (establishing that restricting access to biological material involved in a patent application to those authorized by the applicant during the pendency of the patent application but allowing full public access thereafter was acceptable).

200. See *In re Argoudelis*, 434 F.2d at 1392-94, 168 U.S.P.Q. (BNA) at 102-03

In *Calabrese v. Square D Co.*,²⁰¹ the Federal Circuit noted that the application of the best mode requirement depends on the completely subjective determination of whether at the time the inventor filed the patent application, he preferred a mode of practicing the claimed invention more than any other.²⁰² The court held that the inventor's state of mind is quite relevant to resolving the question of whether the best mode should be disclosed.²⁰³

D. Means-Plus-Function

The patent statute allows for means-plus-function claims, which provide the inventor a drafting tool to enable any means for performing a specified function.²⁰⁴ Courts often struggle with the equivalent means enabled by this type of claim and the doctrine of equivalents.²⁰⁵

In *WMS Gaming Inc. v. International Game Technology*,²⁰⁶ the Federal Circuit addressed literal infringement of a computer means-plus-function claim.²⁰⁷ The court held that when "the disclosed structure

(concluding that an applicant may withhold access by the public to the invention during the pendency of the application, provided that the patent examiner is accorded necessary access, and anyone skilled in the art can rely on the written disclosure in the application).

201. No. 98-1550, 1999 U.S. App. LEXIS 21930 (Fed. Cir. Sept. 13, 1999) (per curiam) (unpublished decision), *dismissed*, No. 00-1322, 2000 U.S. App. LEXIS 15556 (Fed. Cir. June 16, 2000).

202. *See id.* at *3-4 (referring to *Chemcast Corp.*, 913 F.2d 923, 16 U.S.P.Q.2d (BNA) 1033 (Fed. Cir. 1990), which explains the requirement that the inventor specify his or her preferred mode in the patent application).

203. *See id.* at *4-5 (stating that "the first step in determining compliance with the best mode requirement is wholly subjective and involves determining 'whether, at the time the inventor filed his patent application, he knew of a mode of practicing his claimed invention that he considered to be better than any other'" (quoting *Chemcast*, 913 F.2d at 927-28, 16 U.S.P.Q.2d (BNA) at 1036-37)).

204. *See* 35 U.S.C. § 112, ¶6 (1994) ("An element of a claim . . . may be expressed as a means or a step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claims shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.").

205. Under the doctrine of equivalents, a product or process that does not literally infringe on the express terms of a patent claim may infringe if there is substantial equivalence between the elements of the accused product or process and the patented invention. *Compare* Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17, 41 U.S.P.Q.2d (BNA) 1865 (1997) (discussing the need for a component-by-component analysis of the two products or process), *with* Al Site Corp. v. VSI Int'l, Inc., 174 F.3d 1308, 1321, 50 U.S.P.Q.2d (BNA) 1161 (Fed. Cir. 1999) (explaining that under the means-plus-function test, a device must perform the exact purpose indicated in the claim element). *See also infra* notes 220-232 (explaining that both tests typically produce the same result due to their focus on insubstantial differences between the products or process).

206. 184 F.3d 1339, 51 U.S.P.Q.2d (BNA) 1385 (Fed. Cir. 1999).

207. *See id.* at 1346-54, 51 U.S.P.Q.2d (BNA) at 1389-96 (assessing whether, despite a lack of "literal" or exact similarity between two slot machines, the functional

is a computer, or microprocessor, programmed to carry out an algorithm, the disclosed structure is not the general purpose computer, but rather the special purpose computer programmed to perform the disclosed algorithm.²⁰⁸ After finding no literal infringement, the court found infringement under the doctrine of equivalents, where the accused method had insubstantial differences such as unclaimed steps.²⁰⁹

In *Rodime PLC v. Seagate Technology, Inc.*,²¹⁰ the Federal Circuit addressed the issue of whether a claim falls within the 35 U.S.C. § 112 ¶ 6 means-plus-function analytical framework.²¹¹ The court held that, even though the word “means” in a claim element creates a presumption that 35 U.S.C. § 112 ¶ 6 applies, the patent rebuts this presumption when the claim element recites a “means” without a function, or when the claim recites sufficient structure or subject matter for performing that function.²¹² In *Rodime*, the Federal Circuit found that a detailed recitation of structure for performing the function of the means overcame the means-plus-function presumption.²¹³ The quantum of structure disclosed in the specification to avoid the presumption amounts to sufficient detail in the structure to perform the entire claimed function.²¹⁴

In *Odetics, Inc. v. Storage Technology Corp.*,²¹⁵ the Federal Circuit distinguished its *Chiuminatta* decision on the analytical framework of means-plus-function claims.²¹⁶ In *Odetics VIII*, the court held that the district court had erred, and that the means-plus-function analysis does not require a component-by-component equivalence between

similarity between the two constituted an infringement).

208. *Id.* at 1349, 51 U.S.P.Q.2d (BNA) at 1391.

209. *See id.* at 1352-54, 51 U.S.P.Q.2d (BNA) at 1394-96 (finding no literal infringement due to dissimilarities between the exact functioning of the slot machines, the district court did find that the addition of an unclaimed step in the selection of random numbers and payoff amounts in the accused slot machine was not substantially dissimilar from the patented machine under the doctrine of equivalents).

210. 174 F.3d 1294, 50 U.S.P.Q.2d (BNA) 1429 (Fed. Cir. 1999) (evaluating whether a computer hard drive manufacturer’s patent included “thermal compensation” in the “positioning means” of electromagnetic read/write heads).

211. *See id.* at 1301-06, 50 U.S.P.Q.2d (BNA) at 1434-37.

212. *See id.* at 1305-06, 50 U.S.P.Q.2d (BNA) at 1437.

213. *See id.* at 1304, 50 U.S.P.Q.2d (BNA) at 1436.

214. *See id.* at 1305, 50 U.S.P.Q.2d (BNA) at 1437.

215. 185 F.3d 1259, 51 U.S.P.Q.2d (BNA) 1225 (Fed. Cir. 1999) (“*Odetics VIII*”).

216. *See id.* at 1266-72, 51 U.S.P.Q.2d (BNA) at 1229-33 (distinguishing the district court’s reasoning in *Odetics, Inc. v. Storage Technology Corp.*, 14 F. Supp. 2d 807, 47 U.S.P.Q.2d (BNA) 1923 (E.D. Va. 1998) (“*Odetics VII*”), wherein the *Chiuminatta* decision was believed to require “component-by-component” equivalence between the relevant structure identified in the patent and the portion of the accused device asserted to be structurally equivalent).

the structure identified in the patent and relevant portion of the accused device.²¹⁷ The *Odetics VIII* court ruled: “[t]he individual components, if any, of an overall structure that corresponds to the claimed function are not claim limitations. Rather, the claim limitation is the overall structure corresponding to the claimed function.”²¹⁸ Thus, the *Odetics VIII* court broadened the reach of means-plus-function claims, which had been severely limited by its *Chiuminatta* decision.²¹⁹

In *Al-Site Corp. v. VSI International, Inc.*,²²⁰ the Federal Circuit utilized the doctrine of equivalents to assess the sufficiency of a finding of equivalence in a means-plus-function claim.²²¹ The court found several differences between 35 U.S.C. § 112 ¶ 6 and the doctrine of equivalents.²²² The Federal Circuit held that “an equivalent structure or act under § 112 for literal infringement must have been available at the time of patent issuance while an equivalent under the doctrine of equivalents may arise after patent issuance and before the time of infringement.”²²³

Hence, the court leaves open the possibility that an “after-arising” technology could infringe under the doctrine of equivalents, without literally infringing as an equivalent under a means-plus-function claim.²²⁴ Though such disparity exists, the Federal Circuit also

217. *See id.* at 1267-68, 51 U.S.P.Q.2d (BNA) at 1434-37.

218. *Id.* at 1268, 51 U.S.P.Q.2d (BNA) at 1230.

219. *See id.* at 1266-72, 51 U.S.P.Q.2d (BNA) at 1229-33 (“The appropriate degree of specificity is provided by the statute itself; The relevant structure is that which ‘corresponds’ to the claimed function. Further deconstruction or parsing is incorrect.”).

220. 174 F.3d 1308, 50 U.S.P.Q.2d (BNA) 1161 (Fed. Cir. 1999).

221. *See id.* at 1322, 50 U.S.P.Q.2d (BNA) at 1169 (finding that though the statute requires a finding of “literal infringement” under the means-plus-function test, the jury’s finding of “equivalence” in the accused structure would suffice for the means-plus-function analysis).

222. *See id.* at 1319-22, 50 U.S.P.Q.2d (BNA) at 1167-68. Among these differences, the court found: (1) 35 U.S.C. § 112 is restrictive, limiting equivalence to the “structure, material, or acts described in the specification . . .,” while the doctrine of equivalents “extends enforcement of claim terms beyond their literal reach in the event” of ‘equivalence’ of “elements”; (2) under § 112, a structural equivalent “must have been available at the time of the issuance of the claim” (i.e., cannot incorporate ‘after-arising’ technology), whereas “‘after-arising equivalent’ infringes . . . under the doctrine of equivalents”; and (3) under § 112, “the accused device must perform the identical function as recited in the claim element while the doctrine of equivalents may be satisfied” if such functions are “substantially” similar. *Id.*

223. *Id.* at 1320, 50 U.S.P.Q.2d (BNA) at 1168.

224. *See id.* (explaining that one difference between § 116 and the doctrine of equivalents is “temporal” (citing *Chiuminatta Concrete Concepts v. Cardinal Indus. Inc.*, 145 F.3d 1303, 1310 (Fed. Cir. 1998) (stating that “the doctrine of equivalents is necessary because one cannot predict the future”))). In *Chiuminatta*, the court explained that an element may not be an infringement under § 112 because it “was not disclosed in the patent;” but it may still be an infringement because it nevertheless may be so similar to the patented element that it constitutes an

emphasized that the doctrine of equivalents and equivalents under a means-plus-function analysis often derive the same result because both analyses include an assessment of the insubstantiality of the differences.²²⁵

E. Inventorship

Inventorship guarantees right of attribution to the inventor.²²⁶ The nonjoinder and misjoinder requirements of inventorship can invalidate a patent that with deceptive intent fails to join an inventor or joins a party who did not contribute to the invention.²²⁷ Inventorship becomes particularly problematic when inventors work for multiple entities including the government.²²⁸ Inventorship also works in conjunction with assignment to determine who owns the rights to the patented invention.²²⁹

“equivalent under the doctrine of equivalents.” See *Chiuminatta*, 145 F.3d at 1310.

225. See *Ali-Site Corp.*, 174 F.3d at 1321, 50 U.S.P.Q.2d (BNA) at 1168.

226. See 35 U.S.C. § 101 (1994) (“Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new or useful improvement thereof, may obtain a patent . . .”).

227. See 35 U.S.C. § 256 (inventorship may be corrected with a certificate of correction as long as the error arose without deceptive intent). See, e.g., *Pointer v. Six Wheel Corp.*, 177 F.2d 153, 157 (9th Cir. 1949) (“[I]n the case of a patent which is a joint invention, a patent issued to only one of the inventors is void.”) (citations omitted); see also 35 U.S.C. § 116; *Univ. of Colo. Found., Inc. v. Am. Cyanamid, Inc.*, 196 F.3d 1366, 1374, 52 U.S.P.Q.2d (BNA) 1801, 1806 (Fed. Cir. 1999) (stating, in response to a claim that misjoinder or nonjoinder invalidates a patent, “[35 U.S.C.] § 116 allows correction in all misjoinder cases featuring an error and in those nonjoinder cases where the unarmed inventor is free of deceptive intent”).

228. Parties who make an invention or discovery while performing duties for an employer are generally held not to have an individual right to a patent, unless the employment contract provides otherwise. See *Schroeder v. Tracor*, No. 99-1281, 1999 WL 1021055 (Fed. Cir. Nov. 5, 1999) (invalidating patents received by an individual employee upon cross-motion brought by the employer for breach of contract). Similarly, when an invention or discovery is made while working for a government entity, where the work consisted of research and development and/or utilized government resources and time, the individual is barred from personally patenting the invention, and the government is typically allowed to utilize the invention without paying royalties. See *Mine Safety Appliances Co. v. United States*, 364 F.2d 385, 150 U.S.P.Q. (BNA) 453 (Ct. Cl. 1963) (denying individual government researchers’ attempt to patent a safety helmet designed when its development was inextricably linked to the overall naval research effort).

229. See *Smith Int’l, Inc. v. Hughes Tool Co.*, 718 F.2d 1573, 219 U.S.P.Q. (BNA) 686 (Fed. Cir. 1983) (maintaining that the grant of a patent is the right to invoke the state’s power to exclude others from utilizing the discovery without the patentee’s consent). Compare *Clow & Sons, Inc. v. U.S. Pipe & Foundry Co.*, 313 F.2d 46, 136 U.S.P.Q. (BNA) 397 (5th Cir. 1963) (holding that the philosophy of patent law is to reward only the first and original inventor), with 35 U.S.C. § 261 (1994) (“Patents shall have the attributes of personal property . . . [P]atents shall be assignable in law . . .”); *Valmet Paper Mach., Inc. v. Beloit Corp.*, 868 F. Supp. 1085, 32 U.S.P.Q.2d (BNA) 1794 (W.D. Wis. 1994) (finding that patent rights can be assigned, and valid assignments vest independent authority in assignee to enforce rights stemming therefrom).

In *Schroeder v. Tracor, Inc.*,²³⁰ the Federal Circuit sided with the employer of the inventor.²³¹ The court found a shop right for the employer based on an employment agreement in which the inventor agreed to assign all of his rights in inventions or improvements conceived by him regardless of whether they were within the scope of his employment.²³² The Federal Circuit upheld this assignment as a basis for a shop right defense due to the inventor's conduct in allowing his employer to use the patented inventions for a number of years without objecting or demanding royalties.²³³

In *University of Colorado Foundation, Inc. v. American Cyanamid Co.*,²³⁴ the Federal Circuit held that federal patent law preempts any state law that purports to define rights based on inventorship.²³⁵ The court noted that allowing state inroads into the Patent Act's inventorship standard with independent state laws would confuse the issue with different requirements and lead to disparate remedies.²³⁶ Such legislation would frustrate the objectives of authorship for inventors and uniform federal patent laws.²³⁷ The court found no room under the Patent Act's detailed standards for inventorship because it contains explicit language foreclosing state supplementation of the national standard.²³⁸

F. Inequitable Conduct

A patent applicant may render her patent unenforceable by

230. No. 99-1281, 1999 WL 1021055 (Fed. Cir. Nov. 5, 1999).

231. *See id.* at *3 (assessing a former employee's claim of infringement on patents he obtained for his "pair antenna design" while working for the defendant company).

232. *See id.*

233. *See id.*

234. 196 F.3d 1366, 52 U.S.P.Q.2d (BNA) 1801 (Fed. Cir. 1999).

235. *See id.* at 1372, 52 U.S.P.Q.2d (BNA) at 1805 (noting that since its inception in Article I of the Constitution, patent law has developed with the dual objectives of rewarding inventors and supplying uniform national standards). 35 U.S.C.'s explicit, detailed, and comprehensive regulation of patent law constitutes a pervasive regulatory scheme demonstrating Congress' intent for federal law to dominate the field. *Id.*

236. *See id.* (asserting that to allow independent inventorship standard under state law could grant property rights to an individual who would not qualify under federal law, or may grant greater relief than under federal law).

237. *See id.*

238. *See id.* (concluding that Colorado's inventorship standards ran afoul of federal "field preemption" doctrine, whereby 35 U.S.C.'s explicit, detailed, and comprehensive regulation of patent law evidenced Congress's intent to institute a "scheme of federal regulation so comprehensive, that no room remains for a state to supplement"). The application of Colorado law on the matter of inventorship rights for the reformulated infant formula raised the specter of inconsistent results, confounding the dual federal objectives of patent law, and was, therefore, inappropriately applied. *See id.*

misleading the PTO during prosecution of the patent.²³⁹ The applicant has a duty of candor in her dealing with the examiner. Withholding or submitting false material information with the intent to deceive violates this duty and renders the patent unenforceable.²⁴⁰

In *Elk Corp. of Dallas v. GAF Bldg. Materials Corp.*,²⁴¹ the Federal Circuit reviewed the inequitable conduct requirement that prior art references not disclosed to the PTO are not merely cumulative of other references before the PTO.²⁴² The court also addressed the issue of whether the applicant had knowledge of how material the reference not disclosed to the PTO was to the patentability of the invention.²⁴³ The Federal Circuit held that intent to deceive and knowledge of the materiality may be shown by circumstantial evidence such as a request for a patent search report.²⁴⁴

In *Origin Medsystems, Inc. v. General Surgical Innovations, Inc.*,²⁴⁵ the Federal Circuit touched on the elements of an inequitable conduct analysis.²⁴⁶ The court held that the applicant's intent to deceive must be clear, especially when the PTO knows of the prior art and its relationship to the prosecution.²⁴⁷ According to the Federal Circuit, an applicant's attempt to merely distinguish prior art is not a material misrepresentation, even if the art is not distinguishable.²⁴⁸ The court further noted that inequitable conduct is "rarely" appropriate in summary judgment adjudication due to the subjective finding of intent to deceive.²⁴⁹

239. See 6 DONALD S. CHISUM, CHISUM ON PATENTS § 19.03[6], at 19-247 (1998) (describing the consequences of fraud and inequitable conduct during patent proceedings with the PTO).

240. See *id.* § 19.03[6][b], at 19-251 (noting that if the applicant obtained a patent through fraud or inequitable conduct, the Supreme Court has applied "the doctrine of unclean hands" to render the patent invalid or unenforceable).

241. 168 F.3d 28, 49 U.S.P.Q.2d (BNA) 1853 (Fed. Cir. 1999).

242. See *id.* at 31-32, 49 U.S.P.Q.2d (BNA) at 1855-56 (finding prior art patents were material even though they were merely cumulative of specific patents that had been disclosed to the PTO).

243. See *id.* at 32, 49 U.S.P.Q.2d (BNA) at 1856-57 (determining that the district court was correct in finding that materiality and knowledge of materiality existed).

244. See *id.* (holding that intent of a patent applicant to deceive the PTO rarely can, and does not need to be, proven by direct evidence. Instead, the court determines whether inequitable conduct can be established by looking at the overall facts and circumstances of the applicant's conduct).

245. No. 98-1416, 1999 WL 507160 (Fed. Cir. July 16, 1999) (unpublished opinion).

246. See *id.* (explaining that in an equitable conduct analysis, the PTO looks at the applicant's intent to deceive and whether the misrepresentation was material).

247. See *id.* at *2 (stating there must be clear and convincing evidence that the patent applicant specifically intended to commit a prohibited act).

248. See *id.* at *1 (noting there was a genuine issue as to whether the applicant's statement to the board was material).

249. See *id.* at *2 (declaring the district court erred in granting summary judgment on the applicant's intent to deceive because if the applicant's statement was a

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In *Destron/IDI, Inc. v. Electronic Identification Devices, Ltd.*,²⁵⁰ the Federal Circuit discussed the inequitable conduct standard for intent to deceive the PTO.²⁵¹ When the prosecuting attorney makes a good faith effort to disclose the results of his investigation, such as pre-critical date sales information, he meets his duty of good faith and candor.²⁵² Trying to defend the results of the investigation does not automatically lead to a finding that the applicant intentionally attempted to deceive the PTO.²⁵³

G. Other Patentability Procedures

1. Interference

When a patent application and another pending application or issued patent present a potential overlap of subject matter and priority, the PTO may administer an interference proceeding to resolve priority.²⁵⁴ The examiner names a senior and junior party based on who filed first.²⁵⁵ The junior party bears the burden of proof.²⁵⁶

In *Cavanagh v. McMahon*,²⁵⁷ the Federal Circuit held that the junior party must prove by a preponderance actual reduction to practice prior to the senior party's filing date of the evidence.²⁵⁸ The court noted that simply because a junior party makes a prima facie case of actual reduction to practice for purposes of declaring an

material misrepresentation, then a genuine issue of material fact existed as to whether he intended to deceive the PTO).

250. No. 98-1242, 1999 WL 37614 (Fed. Cir. Jan. 26, 1999) (unpublished opinion).

251. *See id.* (affirming the district court's decision that the information provided to the PTO by Destron/IDI and Hughes Aircraft did not constitute an intent to deceive and was not, therefore, inequitable conduct).

252. *See id.* at *1 (asserting that the testimony of Destron's attorney was credible and did not constitute inequitable conduct).

253. *See id.* at *2 (noting that disorganization and poor communication does not meet the clear and convincing evidence standard of intent to deceive).

254. *See* 35 U.S.C. § 135 (1994) (stating that "the Board of Patent Appeals and Interferences shall determine questions of priority of the inventions and may determine questions of patentability."). After the review, the commission will "issue the patent to the applicant who is adjudged to be the prior inventor." *Id.*

255. *See* 37 C.F.R. § 1.611 (2000) (explaining that the PTO will send a notice of declaration of an interference to each party and outlining what the notice will contain).

256. *See id.* § 1.657 (establishing that in an interference proceeding, the junior party has the burden of establishing that they filed first by a preponderance of the evidence standard).

257. No. 98-1304, 1999 WL 197176 (Fed. Cir. Apr. 7, 1999) (unpublished opinion).

258. *See id.* at *2 (noting that a hearing held by the PTO Board of Patent Appeals on Interferences found that the junior party did not prove actual reduction by preponderance of the evidence).

interference, this does not mean that the junior party has met the preponderance of the evidence test.²⁵⁹ The quantum of the interference proceeding is greater than the prima facie standard, even if the senior party does not present rebuttal evidence.²⁶⁰

2. Reexamination

In a PTO reexamination proceeding, the patentee or a third party may test the validity of an issued patent based on newly discovered prior art.²⁶¹ Reexamination requires a "substantial question of patentability," meaning prior patents or printed publications material to anticipation or obviousness.²⁶² This procedure enables either the patentee to confirm the validity of his patent or the accused infringer to stay infringement litigation so that the PTO can reassess patentability before the court addresses infringement.²⁶³ The patentee, however, cannot broaden the scope of his claims during reexamination.²⁶⁴

In *Hockerson-Halberstadt, Inc. v. Converse, Inc.*,²⁶⁵ the Federal Circuit adopted the same test to determine whether a patentee has impermissibly broadened a claim in reexamination as that used in reissue proceedings.²⁶⁶ The test, similar to reissue where the patentee after two years can only narrow a claim, limits the patentee from enlarging the claim's scope beyond subject matter that would have infringed the original patent.²⁶⁷ Problems usually arise when one limitation in the amended claim broadens one limitation of the claim and narrows the claim in another limitation.²⁶⁸ The court ruled that

259. *See id.* (explaining that the junior party's argument was flawed because a declaration of interference under the prima facie standard does not exclude the Board from determining that the applicant did not satisfy the preponderance of the evidence standard).

260. *See id.* (ruling that simply because a declaration of interference was determined and the prima facie burden was met, the junior party does not necessarily satisfy the preponderance of the evidence standard).

261. *See* 37 C.F.R. § 1.555 (2000) (outlining the process for a request for reexamination by the PTO).

262. *See id.* § 1.510.

263. *See id.* § 1.530 (outlining the procedures for patent owners to make statements in reexamination proceedings).

264. *See id.* § 1.552 (declaring patent claims will be reexamined on the basis of the original patent or printed materials). Further, questions raised that do not apply to the original patent will not be answered during the reexamination process. *See id.*

265. 183 F.3d 1369, 51 U.S.P.Q.2d (BNA) 1518 (Fed. Cir. 1999).

266. *See id.* at 1373-75, 51 U.S.P.Q.2d (BNA) at 1521-22 (stating a patentee has impermissibly broadened a claim in reexamination if there is any subject matter included that would not have infringed the original patent).

267. *See id.* at 1374-75, 51 U.S.P.Q.2d (BNA) at 1521.

268. *See id.* at 1375, 51 U.S.P.Q.2d (BNA) at 1521-22 (noting that in order for the court to examine proper claim construction, it must look at the whole claim in context, and not simply the claim itself).

such an effect does not exist when each of the disputed limitations operates to define the same element of the claim.²⁶⁹

In *Abbey v. Robert Bosch GmbH*,²⁷⁰ the Federal Circuit ruled that summary judgment on infringement is proper when the reexamination proceeding leads to an alteration of the original claims.²⁷¹ Defendant successfully called for a reexamination proceeding forcing the patentee to amend his claims to include additional limitations.²⁷² In so doing, the patentee had to substantively change the scope of his claims.²⁷³ The court held that the patent owner could enforce the substantively changed claims of the reexamined patent only after the date of the reexamination certificate.²⁷⁴

3. Continuation applications

A popular way to gain the patent advantage over a competitor's new products consists of perpetual patent prosecution based on a single original application and disclosure.²⁷⁵ To do this, the patent applicant maintains a continuation or a continuation-in-part application in the PTO and amends the claim language to cover the competitor's new product, provided that the initial disclosure was broad enough to lend itself to the amended claims.²⁷⁶

269. See *id.* at 1374-75, 51 U.S.P.Q.2d (BNA) at 1521-22 (holding the district court erred in determining that the patentee impermissibly broadened its claims during the reexamination proceeding because the district court examined a single element of the claim). Moreover, the Court of Appeals declared that it is necessary to interpret the entire claim in context. See *id.*

270. No. 99-1169, 1999 WL 819683 (Fed. Cir. Oct. 6, 1999) (unpublished opinion).

271. See *id.* at *3 (finding that "substantive changes" were made during the reexamination proceeding and that the claims were no longer "identical").

272. See *id.* (noting significance in the fact that defendant amended the claim due to a prior art rejection).

273. See *id.* (ruling that because the patentee substantially changed his claims, summary judgment for the defendants was appropriate).

274. See *id.*

275. See ALAN L. DURHAM, PATENT LAW ESSENTIALS 32-33 (1999) (noting that patent prosecution is a lengthy process, and applicant may choose to file a continuation to the original application in order to hold the original filing date, which is important in determining priority of invention as compared to competitor's inventions or references).

276. See 4 CHISUM, *supra* note 239, § 13.03(2)-(3), at 13-12 to 13-14 (defining a continuation application as a second application that contains the same disclosure as the original application, which is entitled to the benefits of the filing date of the original application under 35 U.S.C. § 120 as long as the conditions of copendency, cross-referencing, and identity of ownership are met). Chisum also defines a continuation-in-part application as a second application which repeats some portion or all of the original application and adding matter not disclosed in the earlier application, which are entitled to the filing date of the continuation-in-part application rather than that of the patent application. See *id.*; see also HARMON, *supra* note 85, at 196 (stating that the initial disclosure under 35 U.S.C. § 112 may be

The Federal Circuit, in *Ricoh Co. v. Nashua Corp.*,²⁷⁷ reinforced its sanction of the above mentioned continuation application practice.²⁷⁸ The court rejected the argument that a competitor should be entitled to intervening rights for the products developed while the patentee left a continuation application pending.²⁷⁹ In doing so, the court distinguished this practice from the impermissible broadening of claims two years after issuance in a reissue proceeding.²⁸⁰ The court held, "Absent congressional indication that intervening rights are to be applied in the context of continuation applications, we reject [the] argument that we should judicially adopt equitable safeguards, in contravention of a established precedent, when Congress itself has declined to do so."²⁸¹

III. INFRINGEMENT

The affirmative cause of action in patent litigation consists of accusing the defendant of infringing the patent.²⁸² The patent statute, under 35 U.S.C. § 271, gives the patent owner the right to exclude others from making, using, selling, or offering to sell any product or process covered by the claims of the patent.²⁸³ The scope of the patent monopoly extends to the entire country and lasts twenty years from the filing of the patent application.²⁸⁴ To find patent infringement, the court must evaluate the claim construction for meaning and scope. Once the court assigns the proper meaning and scope to the claims, the court must compare the accused product or process to the claims to decide whether they literally infringe or infringe under the doctrine of equivalents.²⁸⁵

written broadly without describing all species the claim encompasses).

277. No. 97-1344, 1999 WL 88969 (Fed. Cir. Feb. 18, 1999) (unpublished opinion).

278. *See id.* at *2-3 (holding on the authority of *Kingsdown Med. Consultants, Ltd. v. Hollister, Inc.*, 863 F.2d 867, 874, 9 U.S.P.Q.2d (BNA) 1384, 1390 (Fed. Cir. 1988), that filing a patent for the purpose of excluding a competitor's product from the market is expressly permissible).

279. *See id.* at *3.

280. *See id.*

281. *Id.*

282. *See* 35 U.S.C. § 271(b) (1994) ("Whoever actively induces infringement of a patent shall be liable as an infringer.").

283. *See id.* § 271(a) (1994) ("Except as otherwise provided in this title, whoever without authority makes, uses, offers to sell, or sells any patented invention during the term of the patent therefore, infringes the patent.").

284. *See id.* § 154(a)(2) (1994). Until a patent issues, it cannot be infringed, even by someone who knows that an application is "pending." Once the patent does issue, the patent owner can force any infringing activity to cease, even if that activity has already begun. *See* DURHAM, *supra* note 275, at 124.

285. *See* DURHAM, *supra* note 275, at 50 (noting that guidance as to the meaning and scope of a date can be found in the plain meaning of a word, the specification of

A. Claim Construction

Since the Supreme Court's *Markman* decision,²⁸⁶ district courts have held *Markman* hearings before trial to determine claim construction.²⁸⁷ The Federal Circuit has decided that as claim construction is a question of law, it should receive *de novo* review on appeal.²⁸⁸

In *Finnigan Corp. v. International Trade Commission*,²⁸⁹ the Federal Circuit distinguished its decision from *Cybor Corp. v. FAS Technologies, Inc.*,²⁹⁰ which empowered the Federal Circuit to consider any claim construction argument *de novo* on appeal.²⁹¹ The *Finnigan* court held that the appellee waived the new claim construction argument by not raising it before the International Trade Commission's administrative law judge.²⁹² The Federal Circuit noted that:

A party's argument should not be a moving target. The argument at the trial and appellate level should be consistent, thereby ensuring a clear presentation of the issue to be resolved, an adequate opportunity for response and evidentiary development by the opposing party, and a record reviewable by the appellate court that is properly crystallized around and responsive to the asserted argument.²⁹³

The court distinguished *Cybor*, recognizing that the decision "does not require us to effectively *retry* claim construction *de novo* by

a patent claim, the claims prosecution history, and evaluation of other claims); *see also* *SRI Int'l v. Matsushita Elec. Corp.*, 775 F.2d 1107, 1118, 227 U.S.P.Q. (BNA) 577, 583 (Fed. Cir. 1985) (asserting that claims are not to be construed to cover or not cover the device in question; only after the claims have been construed without reference to the accused device can the claims be applied to determine infringement).

286. *See* *Markman v. Westview Instruments, Inc.*, 517 U.S. 370 (1996), *affirming* 52 F.3d 967, 979, 34 U.S.P.Q.2d (BNA) 1321, 1329 (Fed. Cir. 1995) (noting that "[q]uestions of construction are questions of law for the judge, not questions of fact for the jury") (citations omitted).

287. *See* HARMON, *supra* note 85, at 208 (noting, following *Markman*, the rise of trial court evidentiary hearings prior to trial where the court resolves disputed meanings and technical scope claims); *see, e.g.*, *Ethicon Endo-Surgery, Inc. v. U.S. Surgical Corp.*, 93 F.3d 1572, 1577, 40 U.S.P.Q.2d (BNA) 1019, 1022 (Fed. Cir. 1996) (discussing the district court's conducting of pre-trial *Markman* hearing to determine the scope of the claim at issue by evaluating the claimed language and prosecution attorney).

288. *See* *Markman*, 52 F.3d at 979, 34 U.S.P.Q.2d (BNA) at 1329 ("Because claim construction is a matter of law, the construction given the claims is reviewed *de novo* on appeal.").

289. 180 F.3d 1354, 51 U.S.P.Q.2d (BNA) 1001 (Fed. Cir. 1999).

290. 138 F.3d 1448, 46 U.S.P.Q.2d (BNA) 1169 (Fed. Cir. 1998).

291. *See id.* at 1456, 46 U.S.P.Q.2d (BNA) at 1174 ("[W]e therefore reaffirm that, as a purely legal question, we review claim construction *de novo* on appeal including any allegedly fact-based questions relating to claim construction.").

292. *See* *Finnigan*, 180 F.3d at 1362, 51 U.S.P.Q.2d (BNA) at 1007.

293. *Id.* at 1363, 51 U.S.P.Q.2d (BNA) at 1007.

consideration of novel arguments not first presented to the tribunal whose decision is on review."²⁹⁴

In *Pitney Bowes, Inc. v. Hewlett-Packard Co.*,²⁹⁵ the Federal Circuit held that the patent drafter can use identical terms in the specification to describe different concepts.²⁹⁶ When the term comes up in the claim, the context of the claim will determine which concept it identifies.²⁹⁷ In this case, the court found context in the claim's preamble language to support one of the two constructions in the specification.²⁹⁸

In *Voice Technologies Group, Inc. v. VMC Systems, Inc.*,²⁹⁹ the Federal Circuit held that claim construction allows testimony from the inventor as a competent witness to explain the invention and what she intended to convey in the specification and cover in the claims.³⁰⁰ The court clarified its decision in *Markman* as not automatically disqualifying inventors as witnesses.³⁰¹ Instead, the court noted, "an inventor is a competent witness to explain the invention and what was intended to be conveyed by the specification and covered by the claims."³⁰² In addition, the testimony of the inventor often provides background information, such as an explanation of contemporary problems in the art at the invention's conception and the inventor's solution to these problems.³⁰³

B. *Literal Infringement*

Once the district court has determined the claim construction, the first level of analysis in a suit for patent infringement is whether the accused product or process literally infringes the claims of the asserted patent.³⁰⁴

294. *Id.* (emphasis in original).

295. 182 F.3d 1298, 51 U.S.P.Q.2d (BNA) 1161 (Fed. Cir. 1999).

296. *See id.* at 1310-11, 51 U.S.P.Q.2d (BNA) at 1170.

297. *See id.*

298. *See id.* (finding the word "spot" had two different meanings in the same patent application because it was used in different contexts, and the reader was "on notice" of the different meanings).

299. 164 F.3d 605, 49 U.S.P.Q.2d (BNA) 1333 (Fed. Cir. 1999).

300. *See id.* at 615-16, 49 U.S.P.Q.2d (BNA) at 1340-41.

301. *See id.* ("This court in *Markman* did not hold that the inventor cannot explain the technology and what was invented and claimed; the Federal Circuit held only that the inventor can not by later testimony change the invention and the claims from their meaning at the time the patent was drafted and granted.")

302. *Id.* at 615, 49 U.S.P.Q.2d (BNA) at 1341.

303. *See id.*

304. *See Southwall Tech., Inc. v. Cardinal IG Co.*, 54 F.3d 1570, 1575, 34 U.S.P.Q.2d (BNA) 1673, 1676 (Fed. Cir. 1995) (commenting that a patent is said to be literally infringed if the claims exactly describe the thing accused of infringement); *see also London v. Carson Pirie Scott & Co.*, 946 F.2d 1534, 1539, 20 U.S.P.Q.2d (BNA) 1456, 1459 (Fed. Cir. 1991) (stating there can be no literal

In *SunTiger, Inc. v. Scientific Research Funding Group*,³⁰⁵ the Federal Circuit explained that a claim need not read on the entirety of an accused device for literal infringement.³⁰⁶ The court also explained that when a claim requires a specific number of elements, the addition of elements to the accused product may avoid literal infringement.³⁰⁷ The court did not find such a situation in this case, but suggests this method as a means of avoiding literal infringement.³⁰⁸

C. Doctrine of Equivalents

When an accused product does not literally infringe the asserted patent, the patent owner may assert infringement under the doctrine of equivalents based on the court-created concept that insubstantial differences will not evade infringement when the accused product amounts to an equivalent of the claimed subject matter.³⁰⁹ The Federal Circuit and even the Supreme Court have struggled over the breadth of the infringement under the doctrine of equivalents, especially in light of arguments made during the prosecution history.³¹⁰

infringement if a claim limitation is wholly missing from the accused device, regardless of how insignificant).

305. 189 F.3d 1327, 51 U.S.P.Q.2d (BNA) 1811 (Fed. Cir. 1999).

306. *See id.* at 1336, 51 U.S.P.Q.2d (BNA) at 1816 (quoting *Stiftung v. Renishaw PLC*, 945 F.2d 1173, 1178, 20 U.S.P.Q.2d (BNA) 1094, 1098 (Fed. Cir. 1991)).

307. *See id.* at 1336, 51 U.S.P.Q.2d (BNA) at 1817.

308. *See id.* (finding that adding elements would not change the claim in this case because “[t]he claim at issue here is not specific as to the number of elements (i.e. dyes)”).

309. *See* 5A CHISUM, *supra* note 239, § 18.04, at 18-73 (stating that a product or a process that does not correspond to the literal terms of the claim of a patent but performs substantially the same function in substantially the same ways to obtain the same result is an infringement under this doctrine). Moreover, the doctrine of equivalents can work in reverse by excusing a product or process within the literal terms of a claim that performs the prescribed function in a substantially different way. *See id.* at 18-74; *see also* *Hughes Aircraft Co. v. United States*, 717 F.2d 1351, 1361, 219 U.S.P.Q. (BNA) 473, 480 (Fed. Cir. 1983) (noting that the purpose of the doctrine is to do equity by forbidding the practice of fraud on a patent).

310. The courts face the dichotomy between the “necessity of employing the clearest possible wording in preparing the specification and claims of a patent” as set out in 35 U.S.C. § 112 ¶ 6 and the “necessity of determining infringement without the risk of injustice that may result from a blindered focus on words alone.” *See* HARMON, *supra* note 85, at 273; *see also, e.g.,* *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 34, 41 U.S.P.Q.2d (BNA) 1865, 1873 (1997) (declining to abolish doctrine, or limit it, to copyists); *Graver Tank & Mfg. Co., Inc. v. Linde Air Prods. Co.*, 339 U.S. 605, 609 (1950) (noting judgment must be made in context of invention: equivalence is not bound by formula); *London v. Carson Pirie Scott & Co.*, 946 F.2d 1534, 1538, 20 U.S.P.Q.2d (BNA) 1456, 1458 (Fed. Cir. 1991) (stating that “designing or inventing around patents to make new inventions is encouraged,” but “piracy is not”).

The Federal Circuit in *Sextant Avionique, S.A. v. Analog Devices Inc.*,³¹¹ expanded the preclusion of infringement under the doctrine of equivalents to apply to any amendment whose purpose is unclear and not explained by the patentee.³¹² The court's adoption of such a strong influence of prosecution history estoppel over the doctrine of equivalents follows the Supreme Court's decision in *Warner-Jenkinson v. Hilton Davis Chemical Co.*³¹³ The Federal Circuit noted that in *Warner-Jenkinson*, the Supreme Court did not resolve the issue of whether an amendment made in response to an enablement rejection amounts to an amendment made for "reasons of patentability" that gives rise to prosecution history estoppel.³¹⁴ However, when the prosecution history of the patent does not disclose the reasons for the addition of the limitation, even if the amendment had not been necessary to overcome the prior art rejection, *Warner-Jenkinson* requires a presumption that the applicant added the limitation for a reason "related to patentability."³¹⁵ The Federal Circuit then addressed the question of the scope of the estoppel. The Federal Circuit interpreted *Warner-Jenkinson* quite broadly:

In circumstances in which the *Warner-Jenkinson* presumption is applicable, *i.e.*, where the reason for an amendment is unclear from an analysis of the prosecution history record, and unrebutted by the patentee, the prosecution history estoppel arising therefrom is total and completely 'bars' the application of the doctrine of equivalents as to the amended limitation.³¹⁶

The court tried to establish a bright-line rule for the operation of the doctrine of equivalents when reasonable competitors evaluate the patent's file history and try to determine the scope of any potential estoppel.³¹⁷

311. 172 F.3d 817, 49 U.S.P.Q.2d (BNA) 1865 (Fed. Cir. 1999).

312. *See id.* at 832, 49 U.S.P.Q.2d (BNA) at 1875 (holding prosecutory history estoppel completely bars the application of the doctrine of equivalents where the reason for an amendment is unclear or rebutted).

313. 520 U.S. 17, 41 U.S.P.Q.2d (BNA) 1865 (1997).

314. *See Sextant Avionique*, 172 F.3d at 828-29, 49 U.S.P.Q.2d (BNA) at 1872-73 (explaining arguments for and against deeming that an amendment made in response to an enablement rejection an amendment made for reasons of patentability).

315. *See id.* at 828, 49 U.S.P.Q.2d (BNA) at 1872 (describing the conditions necessary for prosecutory estoppel to arise); *see also Warner Jenkinson*, 520 U.S. at 33, 41 U.S.P.Q.2d (BNA) at 1873 ("Where no explanation is established, however, the court should presume that the patent applicant had a substantial reason related to patentability for including the limiting element added by amendment.").

316. *Sextant Avionique*, 172 F.3d at 832, 49 U.S.P.Q.2d (BNA) at 1875.

317. *See id.* (describing the difficulties inherent in determining scope of an estoppel arising from operation of the *Warner-Jenkinson* presumption).

Following the *Sextant* opinion, the Federal Circuit in *Merck & Co. v. Mylan Pharmaceutical, Inc.*³¹⁸ applied the court's analysis of prosecution history estoppel and infringement under the doctrine of equivalents.³¹⁹ The court held that prosecution history estoppel arises when the applicant narrows the scope of her claims to avoid an obviousness rejection.³²⁰ The applicant argued that she narrowed her claims to comply with the Examiner's restriction requirement; she did not amend to avoid the Examiner's obviousness rejection.³²¹ The Federal Circuit did not adopt the applicant's interpretation because the failure to pursue the broader claims, in such a situation, suggests that the applicant amended in order to get around the rejection.³²² The court held that the doctrine of equivalents cannot recapture subject matter given up over such an obviousness rejection.³²³

The Federal Circuit in *Ultrak, Inc. v. Radio Engineering Industries, Inc.*³²⁴ held that when a claim recites means-plus-function language, infringement under the doctrine of equivalents looks to the written description for the function.³²⁵ The doctrine then allows a finding of infringement if the function and the accused equivalent function achieve the same result.³²⁶ The court found that in that instance, the differences between the claim and the accused device are insubstantial.³²⁷

In *Rival Co. v. Sunbeam Corp.*,³²⁸ the Federal Circuit decided not to address the question as to whether comparison of the patented

318. 190 F.3d 1335, 51 U.S.P.Q.2d (BNA) 1954 (Fed. Cir. 1999).

319. *See id.* at 1340-42, 51 U.S.P.Q.2d (BNA) at 1957-59.

320. *See id.* at 1340, 51 U.S.P.Q.2d (BNA) at 1957 (echoing the *Warner-Jenkinson* decision to the extent that, because of prosecution history estoppel, claim scope reduced for patentability reasons cannot be reclaimed).

321. *See id.* at 1340, 51 U.S.P.Q.2d (BNA) at 1958 (finding that applicant amended in response to obviousness rejection, *notwithstanding* the existence of a restriction requirement).

322. *See id.* at 1340-42, 51 U.S.P.Q.2d (BNA) at 1958 (stating that the controlling fact when analyzing an applicant's motivation to amend is the reduction in claim scope, indicating a response to unpatentability).

323. *See id.* (determining that the extent of estoppel does not automatically extend to everything beyond a claim's literal scope, but is determined by what applicant released from the claim's scope in response to prior art).

324. 215 F.3d 1339, 1999 WL 197173, 52 U.S.P.Q.2d (BNA) 1526 (Fed. Cir. Apr. 8, 1999) (unpublished opinion).

325. *See* 1999 WL 197173, at *5, 52 U.S.P.Q. (BNA) at 1528.

326. *See Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 21, 41 U.S.P.Q.2d (BNA) 1865, 1868 (1997) (approving function analysis as a part of the triple identity test for doctrine of equivalents inquiry).

327. *See Ultrak*, 1999 WL 197173, at *5, 52 U.S.P.Q.2d (BNA) at 1530 (failing to find the difference in amounts of lens protrusion as changing significantly the function of allowing light to pass through).

328. No. 98-1198, 1999 WL 96416 (Fed. Cir. Feb. 23, 1999) (unpublished opinion).

invention to the accused product as a whole runs contrary to the Supreme Court's decision in *Warner-Jenkinson*.³²⁹ The court found that, as a matter of law, when an argument for infringement under the doctrine of equivalents renders the distinction between two claim limitations meaningless, that argument fails and the accused product does not infringe under the doctrine of equivalents.³³⁰

In *Steamfeeder, LLC v. Sure-Feed Systems, Inc.*,³³¹ the Federal Circuit explained the hypothetical claim analysis for prior art restriction as relating to the doctrine of equivalents reasoned in *Wilson Sporting Goods Co. v. David Geoffrey & Associates*.³³² The court addressed the procedural question of which party bears the burden of proof on the issue of whether the hypothetical claim reads on the prior art.³³³ The court held that an accused infringer has the burden of production to place the asserted range of equivalence within the scope of the prior art.³³⁴ The patent owner bears the burden of persuasion to show that the claim does not cover the prior art.³³⁵

The court also discouraged using the *Wilson* hypothetical claim analysis to redraft granted claims. The Federal Circuit held that:

While use of a hypothetical claim may permit a minor extension of a claim to cover subject matter that is substantially equivalent to that literally claimed, one cannot, in the course of litigation and outside of the PTO, cut and trim, expanding here, and narrowing there, to arrive at a claim that encompasses an accused device, but avoids the prior art. Slight broadening is permitted at that point, but not narrowing.³³⁶

The Federal Circuit's decision in *Festo v. Shoketsu Kinzoku Kohyo Kabushiki Co.*³³⁷ reconsidered its all-elements analysis for the doctrine of equivalents in light of the intervening decision of *Warner-Jenkinson*.³³⁸ The court reviewed its precedent of "all-elements"

329. See *Warner-Jenkinson*, 520 U.S. at 29, 41 U.S.P.Q.2d (BNA) at 1871 (mandating the application of doctrine of equivalents to the elements of claim, rather than to the invention as a whole).

330. See *Rival*, 1999 WL 96416, at *7 (upholding summary judgment for noninfringement where accused products did not possess an equivalent to a claim's limitations).

331. 175 F.3d 974, 50 U.S.P.Q.2d (BNA) 1515 (Fed. Cir. 1999).

332. 904 F.2d 677, 50 U.S.P.Q.2d (BNA) 1942 (Fed. Cir. 1990).

333. See *Steamfeeder*, 175 F.3d at 983, 50 U.S.P.Q.2d (BNA) at 1521 (adopting the *Wilson* court's allocation of burdens between accused infringers and patentees).

334. See *id.* (differentiating between burden of going forward and burden of persuasion).

335. See *id.* (finding no reason to shift burden of showing infringement to accused infringer when inquiry into hypothetical claims is required).

336. *Id.*

337. 172 F.3d 1361, 50 U.S.P.Q.2d (BNA) 1385 (Fed. Cir. 1999).

338. 520 U.S. 17, 41 U.S.P.Q.2d (BNA) 1865 (1997).

decisions beginning with *Pennwalt Corp. v. Durand-Wayland, Inc.*³³⁹ The Federal Circuit concluded that *Warner-Jenkinson* provided no basis for the proposition that the Supreme Court intended to erase the Federal Circuit's many all-elements decisions because the analysis limiting the doctrine of equivalents to each element or step does not narrow equivalency in circumstances in which the accused has changed a limitation.³⁴⁰ Moreover, *Warner-Jenkinson* makes the all-elements analysis appropriate to identify "the role played by each element in the context of the specific patent claim."³⁴¹

IV. INFRINGEMENT REMEDIES AND LIMITATIONS ON RECOVERY

A. Damages

1. Lost profits

In an action for patent infringement, a successful plaintiff can pray for monetary relief based on her lost profits or a reasonable royalty for a hypothetical patent license.³⁴² In *Grain Processing Corp. v. American Maize-Products Co.*,³⁴³ the Federal Circuit considered noninfringing alternatives with respect to an award of lost profits.³⁴⁴ The court held that a substitute not on the market or for sale during the period of infringement enters the calculus when determining whether a patentee would have made additional profits but for the infringement.³⁴⁵ Since the plaintiff may present market reconstruction theories but for the infringement, the accused infringer may present theories of his adoption of an acceptable noninfringing alternative.³⁴⁶ The court decided that it was:

only by comparing the patented invention to its next best available alternative(s) regardless of whether the alternative(s) were actually

339. 833 F.2d 931, 935, 4 U.S.P.Q.2d (BNA) 1737, 1740 (Fed. Cir. 1987) (en banc) (affirming ruling of no infringement where an "element-by-element comparison" of two machines determined that they performed substantially different functions).

340. See *Festo*, 172 F.3d at 1370, 50 U.S.P.Q.2d (BNA) at 1390 ("We discern in *Warner-Jenkinson* no basis for believing that the Court intended to erase this wealth of precedent.").

341. *Warner Jenkinson*, 520 U.S. at 40, 41 U.S.P.Q.2d (BNA) at 1475 (prescribing an adherence to the doctrine of equivalents based on an element-by-element analysis).

342. See 35 U.S.C. § 284 (1994).

343. 185 F.3d 1341, 51 U.S.P.Q.2d (BNA) 1556 (Fed. Cir. 1999).

344. See *id.* at 1349, 51 U.S.P.Q.2d (BNA) at 1562 (summarizing precedent for allowing available alternatives not on the market to preclude lost profits damages).

345. See *id.* at 1350-51, 51 U.S.P.Q.2d (BNA) at 1563 (surmising that, when faced with the existence of a patent, a potential competitor prefers to find a lawful way to remain in the market rather than leaving it altogether).

346. See *id.* (stating the requirement that a fair construction of a "but for" market must take into account possible actions on the part of the infringer).

produced and sold during the infringement [that] the court [can] discern the market value of the patent owner's exclusive right, and therefore his expected profit or reward, had the infringer's activities not prevented him from taking full economic advantage of this right.³⁴⁷

The court noted that a noninfringing alternative available during the entire infringement period must be available during the period of infringement for which the patent owner seeks damages, also known as the accounting period.³⁴⁸ A switch to a noninfringing substitute after the accounting period does not prove availability of the noninfringing substitute throughout the accounting period.³⁴⁹ Similarly, the court noted that an acceptable substitute is determined by the opinion of consumers in the relevant market.³⁵⁰

2. *Attorney's fees*

A court may award to the winning side attorney's fees, under 35 U.S.C. § 285, when the exceptional circumstances of a particular suit favor such an award.³⁵¹ District courts vary widely on what situations rise to the level of exceptional circumstances.³⁵² In *Interlink Electronics v. InControl Solutions, Inc.*,³⁵³ the Federal Circuit found "exceptional" circumstances for an award of attorney fees because the plaintiff submitted altered reproductions of a figure 3 from the patent, so that it would appear more similar to the accused device.³⁵⁴

In *Pharmacia & Upjohn Co. v. Mylan Pharmaceuticals, Inc.*,³⁵⁵ the Federal Circuit held that with regard to attorney's fees, under 35 U.S.C. § 285, Federal Circuit precedent applies as opposed to that of the regional circuit.³⁵⁶ The court held that courts must take into

347. *Id.* at 1351, 51 U.S.P.Q.2d (BNA) at 1563.

348. *See id.* at 1353, 51 U.S.P.Q.2d (BNA) at 1565 (terming the accounting period the "critical time period" when determining the availability of alternatives).

349. *See id.* (recommending caution to trial courts when determining the availability of substitutes not sold during the period of infringement).

350. *See id.* at 1355, 51 U.S.P.Q.2d (BNA) at 1566 (listing the facets of consumer opinions responsible for determining the acceptability of substitutes).

351. *See* 35 U.S.C. § 285 (1994) (authorizing the award of attorney's fees in "exceptional" circumstances).

352. *See* *Beckman Instruments, Inc. v. LKB Produkter AB*, 892 F.2d 1547, 1551, 13 U.S.P.Q.2d (BNA) 1301, 1304 (citing various reasons for deeming a case exceptional under 35 U.S.C. § 285).

353. No. 98-1567, 1999 WL 641230 (Fed. Cir. Aug. 24, 1999) (per curiam) (unpublished decision).

354. *See id.* at *3 (finding that District Court's determination that party acted in bad faith was sufficient to uphold designation of circumstances as exceptional).

355. 182 F.3d 1356, 51 U.S.P.Q.2d (BNA) 1466 (Fed. Cir. 1999).

356. *See id.* at 1359, 51 U.S.P.Q.2d (BNA) at 1468 (touting the uniqueness within patent law that Federal Circuit law governs the substantive interpretation of 35 U.S.C. § 285).

consideration findings of inequitable conduct,³⁵⁷ frivolous claims of willful infringement, and refusal to adhere to collateral estoppel in determining whether exceptional circumstances exist.³⁵⁸ The court noted that these are not determinative to the award of attorney's fees, but should be addressed under the district court's analysis.³⁵⁹

3. *Interest on damages*

A court has the ability to award interest based on its finding of damages. The Federal Circuit, in *Transmatic, Inc. v. Gulton Industries, Inc.*,³⁶⁰ concluded that in determining the correct dividing line for calculating pre-judgment and post-judgment interest, regional circuit law applies.³⁶¹ The court held that this issue extends outside of patent law and is dominated by Supreme Court precedent interpreting 28 U.S.C. § 1961(a).³⁶²

B. Prosecution History Estoppel

The doctrine of prosecution history estoppel precludes a patent owner from making claims on subject matter that she gave up during patent prosecution to avoid patentability rejections. In *Princeton Biochemicals, Inc. v. Beckman Instruments, Inc.*,³⁶³ the Federal Circuit refused to apply prosecution history estoppel to an unamended claim.³⁶⁴ The court held that amending the parent claims of a final claim that was returned to its unamended form in a continuation-in-part application does not trigger prosecution history estoppel.³⁶⁵ In *Pharmacia & Upjohn Co. v. Mylan Pharmaceuticals, Inc.*,³⁶⁶ the Federal Circuit held that when an applicant identifies an element of a

357. *See id.* at 1359, 51 U.S.P.Q.2d (BNA) at 1468 (recalling that Federal Circuit precedent requires the consideration of inequitable conduct under 35 U.S.C. § 285).

358. *See id.* at 1361, 51 U.S.P.Q.2d (BNA) at 1469 (agreeing with respondent that the district court properly considered opposition's assertion of willful infringement and resistance to estoppel when making "extraordinary" determination).

359. *See id.*, 51 U.S.P.Q.2d (BNA) at 1468 (refusing to hold that "improvident allegation of willfulness or resistance to the imposition of collateral estoppel automatically warrants an award of attorney fees").

360. 180 F.3d 1342, 50 U.S.P.Q.2d (BNA) 1591 (Fed. Cir. 1999).

361. *See id.* at 1347-48, 50 U.S.P.Q.2d (BNA) at 1593-94 (determining that having the Federal Circuit fix the division between pre- and post-judgment would not promote uniformity or certainty within the circuits).

362. *See* *Kaiser Aluminum & Chem. Corp. v. Bonjorno*, 494 U.S. 827 (1990) (holding that post-verdict interest is calculated from the date of judgment entered and at the rate in effect on the day of a court's legally sufficient verdict).

363. No. 98-1525, 1999 WL 641233 (Fed. Cir. Aug. 19, 1999) (unpublished opinion).

364. *See id.* at *5 (finding that a claim's return to unamended form counsels against application of prosecution history estoppel).

365. *See id.*

366. 170 F.3d 1373, 50 U.S.P.Q.2d (BNA) 1033 (Fed. Cir. 1999).

composition as critical, prosecution history estoppel prevents the patent owner from going back and laying claim to any compositions which do not include the critical element.³⁶⁷ Thus, emphasis on criticality of an element creates a safe harbor for reasonable competitors to take all other embodiments as unclaimed.³⁶⁸

CONCLUSION

Lately, Congress has been changing the playing field for patent practice with a greater frequency. In the past, the Federal Circuit provided the majority of the dynamic flux in patent law. The American Inventors Protection Act has set into motion many new concepts in U.S. patent law such as domestic publication, term adjustment, and a variety of other mechanics affecting patent prosecution.

The Federal Circuit will have to consider how these new formalities affect patent practice and take them into consideration when ruling on interpretations of patent law. It is important for the cohesion of patent law that new concepts in patent law are integrated into the existing law to establish a functional patent system, as opposed to exclusively serving the goals of the political interests that lobbied to enact these concepts. The Federal Circuit will play a key role in making patent practice a manageable task within the new regime.

367. *See id.* at 1376, 50 U.S.P.Q.2d (BNA) at 1036 (accepting respondent's argument that petitioner, through clear and convincing statements, relinquished drug formulations and is barred from claiming infringement of competitor drugs using these formulations).

368. *See id.* at 1379, 50 U.S.P.Q.2d (BNA) at 1038-39 (describing how the collateral estoppel doctrine allows an accused infringer to take advantage of an unenforceability decision made with respect to an unrelated accused infringer).