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

PHIL N. MAKROGIANNIS∗

TABLE OF CONTENTS

Introduction........................................................................................................ 1382
I. Procedural Aspects of Federal Circuit Practice........................................ 1382
   A. Subject Matter Jurisdiction............................................................... 1382
   B. Personal Jurisdiction......................................................................... 1385
   C. Standing............................................................................................... 1386
   D. Clarification of Prior Decisions.......................................................... 1388
   E. Vacatur and Remand........................................................................... 1389
   F. Preemption........................................................................................... 1389
   G. Summary Judgment Standard............................................................. 1390

II. Patentability and Validity........................................................................... 1391
   A. Patentable Subject Matter................................................................. 1391
   B. Novelty................................................................................................. 1393
      1. Statutory bar...................................................................................... 1394
      2. Anticipation....................................................................................... 1396
         a. Inherency....................................................................................... 1396
         b. Invention by another....................................................................... 1397
         c. Obviousness................................................................................... 1398
   C. Enablement........................................................................................... 1401
      1. Written description........................................................................... 1402
      2. Best mode......................................................................................... 1403
   D. Means-Plus-Function......................................................................... 1405
   E. Inventorship......................................................................................... 1408

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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

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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. Since 1982, the Federal Circuit has exercised exclusive appellate jurisdiction over all patent appeals.

In Scherbatskoy v. Halliburton Co., 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. The Fifth Circuit transferred the appeal to the Federal Circuit honoring its exclusive jurisdiction over appeals arising under the patent laws. 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.

The Federal Circuit in Connaught Laboratories, Inc. v. SmithKline Beecham P.L.C. 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. The Federal Circuit explained that its appellate jurisdiction excludes the review of district court discovery orders. “[T]he 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.

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.”).


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).


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.”

In DSC Communications Corp. v. Pulse Communications, Inc., the Federal Circuit expanded its appellate jurisdiction to include nonfrivolous counterclaims raising patent issues. Previously, the court held that it had appellate jurisdiction over cases raising nonfrivolous compulsory counterclaims of patent infringement. 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.

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

In Puerta v. California Institute of Technology, the Federal Circuit agreed with the district court’s determination that 28 U.S.C.
§ 1498(a) provides the Court of Federal Claims with exclusive jurisdiction over patent infringement claims against alleged infringing work performed “for the government.”\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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 \textit{Precor Inc. v. Keys Fitness Products},\textsuperscript{26} the Federal Circuit applied the Supreme Court’s personal jurisdiction analysis in \textit{Burger King Corp. v. Rudzewicz}\textsuperscript{27} to a Taiwanese corporation.\textsuperscript{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.\textsuperscript{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.\textsuperscript{30}

\textsuperscript{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)).

\textsuperscript{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).

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

\textsuperscript{25} See, e.g., \textit{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).

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

\textsuperscript{27} 471 U.S. 462 (1985).

\textsuperscript{28} See \textit{Precor}, 1999 WL 55298, at *3 (holding that the particular conditions from \textit{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).

\textsuperscript{29} See id. at *4 (distinguishing \textit{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).

\textsuperscript{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 \textit{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. Such interests include providing efficient resolution of controversies, furthering “fundamental substantive policies,” and the plaintiff’s interest in obtaining convenient and effective relief.

In Schwanger v. Munchkin, Inc., the Federal Circuit reversed a district court’s decision to apply Sixth Circuit law to determine the existence of personal jurisdiction. The court mandated that the district court use the Federal Circuit’s three-part test for personal jurisdiction in patent cases. 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. However, when a state law claim comes before the Federal Circuit, as in Amana Refrigeration, Inc. v. Quadlux, Inc., 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.

C. Standing

Article III of the Constitution limits federal courts to adjudicate only actual cases or controversies. Federal courts have created the

31. See id.
32. Id. at *3 (citing World-Wide Volkswagen, 444 U.S. at 292).
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 1938, 1964-65, 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).
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).
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. Standing requires evidence of injury, causation, and redressability. The standing doctrine also requires that issues before the court are ripe and not moot. The Federal Circuit reviews issues of standing de novo.

In Amana Refrigeration, 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. The court found no actual controversy regarding the patent’s validity in light of defendant’s covenant not to assert patent infringement. 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

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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).


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.\textsuperscript{50}

In Mackay v. Commissioner of Patents and Trademarks,\textsuperscript{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 Act\textsuperscript{52} or the Administrative Procedure Act\textsuperscript{53} requires an exhaustion of administrative remedies.\textsuperscript{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.\textsuperscript{55} In this case, the PTO failed to assign a priority date.\textsuperscript{56} Because the petitioner failed to pursue this administrative remedy prior to filing a complaint, the district court lacked jurisdiction over the claim.\textsuperscript{57}

D. Clarification of Prior Decisions

In Scaltech v. Retec/Tetra, LLC,\textsuperscript{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.\textsuperscript{59} The Pfaff decision set forth an analysis for the on-sale bar under 35 U.S.C. § 102(b).\textsuperscript{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.\textsuperscript{61} Specifically, a process patent requires analysis of the process offered

\begin{itemize}
\item \textsuperscript{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).
\item \textsuperscript{52} 28 U.S.C. §§ 1346(b), 2671-6780 (1994).
\item \textsuperscript{53} 5 U.S.C. §§ 701-706 (1994).
\item \textsuperscript{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).
\item \textsuperscript{55} See 37 C.F.R. § 1.530 (2000) (outlining the procedure required for a patent owner to request reexamination by the PTO).
\item \textsuperscript{56} See Mackay, 1999 WL 955907, at *1.
\item \textsuperscript{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.”).
\item \textsuperscript{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).
\item \textsuperscript{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).
\item \textsuperscript{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).
\end{itemize}
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 (“If 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.”).


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).


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., the en banc Federal Circuit overruled its previous decisions of Cable Electric Products, Inc. v. Genmark, Inc., and Harmonic Design, Inc. v. Hunter Douglas, Inc. 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. 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.

G. Summary Judgment Standard

Federal Rule of Civil Procedure 56 provides for summary judgment adjudication of issues before trial. The general standard for summary judgment requires the lack of genuine issues of material fact. 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.

patent issues arising from those claims).

71. 175 F.3d 1356, 50 U.S.P.Q.2d (BNA) 1672 (Fed. Cir. 1999) (en banc).
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 crossclaim 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, the Federal Circuit held that the summary judgment standard on the issue of patent validity required a quantum of clear and convincing evidence. 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. 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.

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. 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 . . . .” 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.

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))).
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 30 (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., the Federal Circuit affirmed its landmark decision in State Street Bank & Trust Co. v. Signature Financial Group, Inc. to allow business methods into the realm of patentable subject matter. The court held an invention employing a mathematical algorithm patentable subject matter when the algorithm is applied “to produce a useful, concrete, tangible result.” 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. The Federal Circuit seems eager to conform with the changing needs of computer-related inventions in our “modern world.”

In Juicy Whip, Inc. v. Orange Bang, Inc., the Federal Circuit held that the utility requirement of patentable subject matter does not exclude a product modified to imitate another product. The court found that the ability to imitate a feature satisfies the utility requirement. 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.

In Bloomstein v. Paramount Pictures Corp., 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.
categorized a “cinematic work” as printed matter and therefore not patentable subject matter. The patent at issue involved animation used to conform a character’s lip movements to dubbed-in dialog. The Federal Circuit did not find this quality sufficient to bridge Section 101, and followed its earlier decision in In re Gulack, “[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.”

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

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, 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 inoperable 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.  

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. 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.

In IGT v. Global Gaming Technology, Inc., 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. The court followed the Supreme Court’s recent decision in Pfaff v. Wells Electronics, Inc., 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.

In Datapoint Corp. v. PictureTel Corp., 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. In such a situation, patent law deems

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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).


111. See id.


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).


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”).


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).\textsuperscript{118} In Brasseler, U.S.A. I, L.P. v. Stryker Sales Corp.,\textsuperscript{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.\textsuperscript{120} The court found a commercial sale based on the distinct nature of the corporations with no common ownership or control.\textsuperscript{121} The court ignored any consideration of special circumstances because the Supreme Court in Pfaff\textsuperscript{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.\textsuperscript{123} In Comfort Silkie Co. v. Säfert,\textsuperscript{124} the Federal Circuit compared the Supreme Court’s decision in Egbert v. Lippman,\textsuperscript{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.\textsuperscript{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).\textsuperscript{127} In Abbott Laboratories v. Geneva Pharmaceuticals, Inc.,\textsuperscript{128} the Federal Circuit rejected an exception to the on-sale bar for accidental or fraudulent sales of the invention by third parties.\textsuperscript{129} The court found that when the applicant reduces the invention to practice, the

\begin{footnotesize}
\begin{enumerate}
\item 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)).
\item 182 F.3d 888, 51 U.S.P.Q.2d (BNA) 1470 (Fed. Cir. 1999).
\item See id. at 890, 51 U.S.P.Q.2d (BNA) at 1472.
\item See id. (finding the buyer and seller involved in the sale were separate corporations based on their having different owners and no common control).
\item 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).
\item 104 U.S. 333 (1881).
\item 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).
\item 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)).
\item 182 F.3d 1315, 51 U.S.P.Q.2d (BNA) 1307 (Fed. Cir. 1999).
\item 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).
\end{enumerate}
\end{footnotesize}
invention is ready for patenting regardless of whether the applicant or the customer realizes all the aspects of the invention. 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.”

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. 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.

The Federal Circuit in In re Robertson held that mere “probabilities or possibilities” cannot satisfy the requirements of inherent anticipation. 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. In another case turning on inherency, MEHL/Biophile International Corp. v.
Miliagro,

the Federal Circuit required that the prior art reference inherently teach the limitations and their relationship to each other. 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. Finally, in Atlas Powder Co. v. IRECO Inc., 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.

b. Invention by another

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

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., the Federal Circuit noted that corroborative evidence balances the interests of the patent applicant against the self-interest of a testifying inventor. The court held that corroboration of an inventor’s testimony was unnecessary unless the inventor or her assignee is a named party asserting priority, or the inventor stands to gain directly and substantially from a finding of priority. 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.

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; (2) the “differences between the prior art and the claims...”; (3) the knowledge of one skilled in the art; and (4) the field of ordinary skill. The parties and the court must establish these factors by a preponderance of the evidence.


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

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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 Unical Corp. 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 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).

156. 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 obtained 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).


161. See id. at *7.


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. 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. 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. On the other hand, in In re Oggero, 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.

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. Section 112 of the patent statute and Federal Circuit case law have broken down enablement into the requirements of written description, best mode, and definiteness.

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).


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).


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 open-ended 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).


\(^{181}\) 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., the Federal Circuit reiterated that the enablement analysis set forth in In re Wands applies to both ex parte prosecution and inter partes litigation. The court held the Wands analytical framework for enablement analysis applied regardless of the situation. 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
8. the breadth of the claims

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. This requirement applies only if the inventor has a preferred way of practicing the invention. The applicant need not identify the best mode as such. This requirement, however, forces the applicant to disclose the best mode
in sufficient detail to allow one skilled in the art to practice it without undue experimentation, as opposed to concealing it from the public.

In Ricoh Co. v. Nashua Corp., the Federal Circuit held that an inventor’s unrebutted testimony may prove that the embodiment of the invention disclosed in the patent serves as the best mode of the invention. 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.

In Evans Medical Ltd., v. American Cyanamid Co., 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. 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.

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).


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”).


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., 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. 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.

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. Courts often struggle with the equivalent means enabled by this type of claim and the doctrine of equivalents. In WMS Gaming Inc. v. International Game Technology, the Federal Circuit addressed literal infringement of a computer means-plus-function claim. The court held that when “the disclosed structure...
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. 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.

In Rodime PLC v. Seagate Technology, Inc., the Federal Circuit addressed the issue of whether a claim falls within the 35 U.S.C. § 112 ¶ 6 means-plus-function analytical framework. 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. 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. 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.

In Odetics, Inc. v. Storage Technology Corp., the Federal Circuit distinguished its Chiuminatta decision on the analytical framework of means-plus-function claims. 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).


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.


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.\textsuperscript{217} The Odets 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.”\textsuperscript{218} Thus, the Odets VIII court broadened the reach of means-plus-function claims, which had been severely limited by its Chiuminatta decision.\textsuperscript{219}

In Al-Site Corp. v. VSI International, Inc.\textsuperscript{220} the Federal Circuit utilized the doctrine of equivalents to assess the sufficiency of a finding of equivalence in a means-plus-function claim.\textsuperscript{221} The court found several differences between 35 U.S.C. § 112 ¶ 6 and the doctrine of equivalents.\textsuperscript{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.”\textsuperscript{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.\textsuperscript{224} Though such disparity exists, the Federal Circuit also

\begin{itemize}
\item \textsuperscript{217} See id. at 1267-68, 51 U.S.P.Q.2d (BNA) at 1434-37.
\item \textsuperscript{218} Id. at 1268, 51 U.S.P.Q.2d (BNA) at 1230.
\item \textsuperscript{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.”).
\item \textsuperscript{220} 174 F.3d 1308, 50 U.S.P.Q.2d (BNA) 1161 (Fed. Cir. 1999).
\item \textsuperscript{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).
\item \textsuperscript{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.
\item \textsuperscript{223} Id. at 1320, 50 U.S.P.Q.2d (BNA) at 1168.
\item \textsuperscript{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).
In Schroeder v. Tracor, Inc., the Federal Circuit sided with the employer of the inventor. 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. 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.

In University of Colorado Foundation, Inc. v. American Cyanamid Co., the Federal Circuit held that federal patent law preempts any state law that purports to define rights based on inventorship. 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. Such legislation would frustrate the objectives of authorship for inventors and uniform federal patent laws. 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.

F. Inequitable Conduct

A patent applicant may render her patent unenforceable by

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.
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. 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.

In Elk Corp. of Dallas v. GAF Bldg. Materials Corp., 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. 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. 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.

In Origin Medsystems, Inc. v. General Surgical Innovations, Inc., the Federal Circuit touched on the elements of an inequitable conduct analysis. 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. 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. The court further noted that inequitable conduct is “rarely” appropriate in summary judgment adjudication due to the subjective finding of intent to deceive.

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239. See 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).
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).
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
In Destron/IDI, Inc. v. Electronic Identification Devices, Ltd., the Federal Circuit discussed the inequitable conduct standard for intent to deceive the PTO. 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. Trying to defend the results of the investigation does not automatically lead to a finding that the applicant intentionally attempted to deceive the PTO.

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. The examiner names a senior and junior party based on who filed first. The junior party bears the burden of proof.

In Cavanagh v. McMahon, 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. 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.

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).
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. The quantum of the interference proceeding is greater than the prima facie standard, even if the senior party does not present rebuttal evidence.

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. Reexamination requires a “substantial question of patentability,” meaning prior patents or printed publications material to anticipation or obviousness. 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. The patentee, however, cannot broaden the scope of his claims during reexamination.

In Hockerson-Halberstadt, Inc. v. Converse, Inc., 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. 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. Problems usually arise when one limitation in the amended claim broadens one limitation of the claim and narrows the claim in another limitation. 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).
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.
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.\footnote{269} In Abbey v. Robert Bosch GmbH,\footnote{270} the Federal Circuit ruled that summary judgment on infringement is proper when the reexamination proceeding leads to an alteration of the original claims.\footnote{271} Defendant successfully called for a reexamination proceeding forcing the patentee to amend his claims to include additional limitations.\footnote{272} In so doing, the patentee had to substantively change the scope of his claims.\footnote{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.\footnote{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.\footnote{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.\footnote{276}

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\footnote{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.}

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

\footnote{271}{See id. at *3 (finding that “substantive changes” were made during the reexamination proceeding and that the claims were no longer “identical”).}

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

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

\footnote{274}{See id.}

\footnote{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).}

\footnote{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 codependency, 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., reinforced its sanction of the above mentioned continuation application practice. 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. In doing so, the court distinguished this practice from the impermissible broadening of claims two years after issuance in a reissue proceeding. 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.”

III. INFRINGEMENT

The affirmative cause of action in patent litigation consists of accusing the defendant of infringing the patent. 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. The scope of the patent monopoly extends to the entire country and lasts twenty years from the filing of the patent application. 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.

written broadly without describing all species the claim encompasses).

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.
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, district courts have held Markman hearings before trial to determine claim construction. The Federal Circuit has decided that as claim construction is a question of law, it should receive de novo review on appeal.

In Finnigan Corp. v. International Trade Commission, the Federal Circuit distinguished its decision from Cybor Corp. v. FAS Technologies, Inc., which empowered the Federal Circuit to consider any claim construction argument de novo on appeal. 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. 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.

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

...
consideration of novel arguments not first presented to the tribunal whose decision is on review.\textsuperscript{294} In Pitney Bowes, Inc. v. Hewlett-Packard Co.,\textsuperscript{295} the Federal Circuit held that the patent drafter can use identical terms in the specification to describe different concepts.\textsuperscript{296} When the term comes up in the claim, the context of the claim will determine which concept it identifies.\textsuperscript{297} In this case, the court found context in the claim’s preamble language to support one of the two constructions in the specification.\textsuperscript{298} In Voice Technologies Group, Inc. v. VMC Systems, Inc.,\textsuperscript{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.\textsuperscript{300} The court clarified its decision in Markman as not automatically disqualifying inventors as witnesses.\textsuperscript{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.”\textsuperscript{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.\textsuperscript{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.\textsuperscript{304}

\textsuperscript{294} Id. (emphasis in original).
\textsuperscript{295} 182 F.3d 1298, 51 U.S.P.Q.2d (BNA) 1161 (Fed. Cir. 1999).
\textsuperscript{296} See id. at 1310-11, 51 U.S.P.Q.2d (BNA) at 1170.
\textsuperscript{297} See id.
\textsuperscript{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).
\textsuperscript{299} 164 F.3d 605, 49 U.S.P.Q.2d (BNA) 1333 (Fed. Cir. 1999).
\textsuperscript{300} See id. at 615-16, 49 U.S.P.Q.2d (BNA) at 1340-41.
\textsuperscript{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.”).
\textsuperscript{302} Id. at 615, 49 U.S.P.Q.2d (BNA) at 1341.
\textsuperscript{303} See id.
\textsuperscript{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, the Federal Circuit explained that a claim need not read on the entirety of an accused device for literal infringement. 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. The court did not find such a situation in this case, but suggests this method as a means of avoiding literal infringement.

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. 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.

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).
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 blinded 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.,\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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."\textsuperscript{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.\textsuperscript{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.\textsuperscript{317}

\begin{itemize}
\item \textsuperscript{311} 172 F.3d 817, 49 U.S.P.Q.2d (BNA) 1865 (Fed. Cir. 1999).
\item \textsuperscript{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).
\item \textsuperscript{313} 520 U.S. 17, 41 U.S.P.Q.2d (BNA) 1865 (1997).
\item \textsuperscript{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).
\item \textsuperscript{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.").
\item \textsuperscript{316} Sextant Avionique, 172 F.3d at 832, 49 U.S.P.Q.2d (BNA) at 1875.
\item \textsuperscript{317} See id. (describing the difficulties inherent in determining scope of an estoppel arising from operation of the Warner-Jenkinson presumption).
\end{itemize}
Following the Sextant opinion, the Federal Circuit in *Merck & Co. v. Mylan Pharmaceutical, Inc.*<sup>318</sup> applied the court’s analysis of prosecution history estoppel and infringement under the doctrine of equivalents.<sup>319</sup> The court held that prosecution history estoppel arises when the applicant narrows the scope of her claims to avoid an obviousness rejection.<sup>320</sup> 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.<sup>321</sup> 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.<sup>322</sup> The court held that the doctrine of equivalents cannot recapture subject matter given up over such an obviousness rejection.<sup>323</sup>

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

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

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<sup>318</sup> 190 F.3d 1335, 51 U.S.P.Q.2d (BNA) 1954 (Fed. Cir. 1999).
<sup>319</sup> See id. at 1340-42, 51 U.S.P.Q.2d (BNA) at 1957-59.
<sup>320</sup> 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).
<sup>321</sup> 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).
<sup>322</sup> 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).
<sup>323</sup> 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).
<sup>325</sup> See 1999 WL 197173, at *5, 52 U.S.P.Q. (BNA) at 1528.
<sup>327</sup> 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).
invention to the accused product as a whole runs contrary to the Supreme Court’s decision in Warner-Jenkinson. 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.

In Streamfeeder, LLC v. SureFeed Systems, Inc., 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. 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. 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. The patent owner bears the burden of persuasion to show that the claim does not cover the prior art.

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.

The Federal Circuit’s decision in Festo v. Shokatsu Kinzoku Kohyo Kabushiki Co. reconsidered its all-elements analysis for the doctrine of equivalents in light of the intervening decision of Warner-Jenkinson. The court reviewed its precedent of “all-elements”
decisions beginning with Pennwalt Corp. v. Durand-Wayland, Inc.\textsuperscript{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.\textsuperscript{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."\textsuperscript{341}

\section*{IV. Infringement Remedies and Limitations on Recovery}

\subsection*{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.\textsuperscript{342} In Grain Processing Corp. v. American Maize-Products Co.,\textsuperscript{343} the Federal Circuit considered noninfringing alternatives with respect to an award of lost profits.\textsuperscript{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.\textsuperscript{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.\textsuperscript{346} The court decided that it was:

\begin{quote}
only by comparing the patented invention to its next best available alternative(s) regardless of whether the alternative(s) were actually
\end{quote}

\begin{footnotesize}
\begin{enumerate}
\item[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).
\item[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.").
\item[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).
\item[343.] 185 F.3d 1341, 51 U.S.P.Q.2d (BNA) 1556 (Fed. Cir. 1999).
\item[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).
\item[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).
\item[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).
\end{enumerate}
\end{footnotesize}
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).
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).
consideration findings of inequitable conduct, 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”).


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).


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

365. See id.

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.\textsuperscript{367} Thus, emphasis on criticality of an element creates a safe harbor for reasonable competitors to take all other embodiments as unclaimed.\textsuperscript{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.

\textsuperscript{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).

\textsuperscript{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).