

1993 AREA SUMMARIES

A YEAR IN REVIEW: THE FEDERAL CIRCUIT'S PATENT DECISIONS OF 1993

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PROLOGUE

The 1993 term of the United States Court of Appeals for the Federal Circuit was punctuated by decisions addressing a variety of patent-related issues, in areas ranging from jurisdiction to remedies. The year was also marked by a rather rare, but important, occurrence in the area of patent law—the rendering of a decision by the United States Supreme Court.

For ease of reference, this Article is organized into six parts covering major areas of patent law. Part I discusses the 1993 decisions of the Supreme Court and Federal Circuit relating to jurisdiction and procedure. In Part II, the decisions pertaining to patentability and validity issues are summarized. Part III contains summaries of the Federal Circuit's treatment of interference issues. Part IV discusses the 1993 decisions dealing with questions of patent infringement, while Part V summarizes the Federal Circuit's rulings regarding equitable defenses to patent infringement. The Article concludes with a section discussing the Federal Circuit's rulings on remedies for patent infringement.

I. JURISDICTION AND PROCEDURE

A. *Jurisdiction*

Cardinal Chemical Co. v. Morton International, Inc.,¹ presented the question of whether the Federal Circuit's affirmance of a finding of noninfringement of a patent was sufficient reason for vacating a declaratory judgment that held the patent invalid.² The Supreme Court discussed the rationale behind the Federal Circuit's practice of vacating declaratory judgments of patent invalidity following determinations of noninfringement.³ The Court observed that this practice arose from the Federal Circuit's conviction that a finding of noninfringement resolved the entire controversy between the parties. Any declaratory judgment of invalidity, therefore, was moot in the jurisdictional sense.⁴

The Court noted that the Federal Circuit had considered its vacatur⁵ practice dictated by two earlier Supreme Court decisions.⁶ The Court also pointed out, however, that one of the earlier cases did not involve a declaratory judgment,⁷ and that the other did not answer the question of whether, in the absence of an ongoing dispute between the parties over infringement, an adjudication of invalidity would be moot.⁸ The Court addressed that question in *Cardinal Chemical Co.*⁹

The Court indicated that the Federal Circuit's vacatur practice involved a jurisdictional issue.¹⁰ The Court ruled that the Federal Circuit had jurisdiction over Morton's appeal from the declaratory

1. 113 S. Ct. 1967 (1993).

2. *Cardinal Chem. Co. v. Morton Int'l, Inc.*, 113 S. Ct. 1967, 1969 (1993).

3. *Id.* at 1971.

4. *Id.* at 1972-73. The Federal Circuit's vacatur practice stems from the 1987 decisions of *Vieau v. Japax, Inc.*, 823 F.2d 1510, 3 U.S.P.Q.2d (BNA) 1094 (Fed. Cir. 1987) (holding that determination that patent was not infringed renders declaratory judgment on invalidity moot), and *Fonar Corp. v. Johnson & Johnson*, 821 F.2d 627, 3 U.S.P.Q.2d (BNA) 1109 (Fed. Cir. 1987) (concluding that finding of noninfringement moots patent invalidity issue).

5. Vacatur practice is a rule or order by which a proceeding is vacated.

6. *Cardinal Chem.*, 113 S. Ct. at 1973. The two previous decisions are *Electrical Fittings Corp. v. Thomas & Betts Co.*, 307 U.S. 241 (1939) (holding that where court finds patent valid but not infringed, successful defendant could demand that finding of validity be vacated because issue was raised as affirmative defense), and *Altwater v. Freeman*, 319 U.S. 359 (1943) (finding that noninfringement determination does not dispose of issue of validity where it has been raised in counter-claim).

7. *Cardinal Chem.*, 113 S. Ct. at 1973 (noting that *Electrical Fittings Corp.* involved ruling on affirmative defense).

8. *Id.* at 1973-74 (explaining that court in *Altwater* found that controversy did not end on dismissal of bill for noninfringement).

9. *Id.* at 1967.

10. *Id.* at 1974.

judgment of invalidity, even though it had affirmed the lower court's holding of noninfringement.¹¹ The Court noted that because the Federal Circuit is not a court of last resort, it is not precluded from considering a question of validity merely because the lower court deemed it moot.¹² The Court further observed that once jurisdiction has been established, courts are entitled to presume that jurisdiction continues.¹³ Because the district court had original jurisdiction over the actions, the Federal Circuit had appellate jurisdiction over Morton's claim.¹⁴ The court, therefore, had the power to decide all issues raised on appeal, because neither party came forward with a showing of a material change in circumstances that would entirely terminate the controversy.¹⁵ The Court held that the Federal Circuit's current vacatur practice was neither compelled by the Court's precedent nor required by the "case or controversy" requirement of Article III of the Constitution.¹⁶

In addition, the Court found no other grounds to support the Federal Circuit's vacatur practice.¹⁷ The Supreme Court noted that although it is often more difficult to determine whether a patent is valid than whether it has been infringed, there are other important countervailing concerns that militate against such a vacatur practice.¹⁸ For example, there is a strong public interest in the finality of judgments in patent litigation.¹⁹ Moreover, the Federal Circuit's practice denies the patentee appellate review, prolongs the life of invalid patents, and encourages endless litigation, or at least causes uncertainty, over the validity of the patent.²⁰ Consequently, the Supreme Court held that the Federal Circuit erred in vacating the district court's declaratory judgment of invalidity.²¹

As noted in *Cardinal Chemicals*, the Federal Circuit has exclusive jurisdiction over appeals from all U.S. district courts in patent-related

11. *Id.* at 1975.

12. *Id.*

13. *Id.*

14. *Id.*

15. *Id.* at 1976.

16. *Id.*

17. *Id.* at 1976-77.

18. *Id.* at 1977.

19. *See Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 330 (1945) (noting that validity question is of greater concern to public than infringement issue).

20. *Cardinal Chem.*, 113 S. Ct. at 1977.

21. *Id.* at 1978. In a concurring opinion on remand, Judge Mayer chided Morton for requesting the Supreme Court to reverse, rather than affirm, the Federal Circuit's vacatur judgment, and said that Morton, by doing so, conceded invalidity. *Morton Int'l, Inc. v. Cardinal Chem. Co.*, 5 F.3d 1464, 1471, 28 U.S.P.Q.2d (BNA) 1190, 1195 (Fed. Cir. 1993).

litigation.²² In *Cedars-Sinai Medical Center v. Watkins*,²³ the Federal Circuit noted that 28 U.S.C. § 1295(a)(1)²⁴ "grants [the Federal Circuit] exclusive jurisdiction over an appeal from a federal district court, 'if the jurisdiction of that court was based, in whole or in part, on [28 U.S.C. § 1338 (1988)].'"²⁵

In *Cedars-Sinai*, a patent application assigned to the medical center was involved in an interference²⁶ with another party's application.²⁷ Shortly after the interference had been instituted, the U.S. Department of Energy served Cedars-Sinai with a determination under 42 U.S.C. § 5908; the U.S. Government asserted title over U.S. and foreign rights to the invention that was the subject of Cedars-Sinai's application.²⁸ Cedars-Sinai failed to request reconsideration of the determination, which subsequently became final.²⁹ Rather, Cedars-Sinai filed suit in district court seeking, *inter alia*, a declaratory judgment under § 2201³⁰ based on the following issues: whether the theories of laches, waiver, and estoppel barred the Government from asserting title to Cedars-Sinai's invention under § 5908; whether chapter 18 of title 35 of the U.S. Code superseded § 5908; and whether the determination itself was unlawfully issued.³¹ The district court granted the Government's motion to dismiss for lack of subject-matter jurisdiction on ripeness grounds.³²

Before turning to the merits of the appeal, the Federal Circuit considered whether it had jurisdiction under § 1295(a)(1)³³ to hear the appeal. The Federal Circuit's jurisdiction was determined by whether the district court's jurisdiction had been derived from § 1338.³⁴ The court noted that § 1338 provides, in pertinent part, that district courts have original jurisdiction over a civil action "*arising*

22. *Cardinal Chem.*, 113 S. Ct. at 1971.

23. 11 F.3d 1573, 29 U.S.P.Q.2d (BNA) 1188 (Fed. Cir. 1993).

24. 28 U.S.C. § 1295(a)(1) (1988).

25. *Cedars-Sinai Medical Ctr. v. Watkins*, 11 F.3d 1573, 1577, 29 U.S.P.Q.2d (BNA) 1188, 1190 (Fed. Cir. 1993) (quoting 28 U.S.C. 1295(a)(1) (1988)). 28 U.S.C. § 1338(a) reads: "The district courts shall have original jurisdiction of any civil action arising under any act of Congress relating to patents"

26. An interference proceeding is one in which the Patent and Trademark Office determines priority of invention between two or more parties claiming the same patent.

27. *Cedars-Sinai*, 11 F.3d at 1576, 29 U.S.P.Q.2d (BNA) at 1189.

28. *Id.*

29. *Id.*

30. Declaratory Judgment Act, 28 U.S.C. § 2201 (1988).

31. *Cedars-Sinai*, 11 F.3d at 1576, 29 U.S.P.Q.2d (BNA) at 1189.

32. *Id.* at 1577, 29 U.S.P.Q.2d (BNA) at 1190.

33. 28 U.S.C. § 1295(a)(1) (1988) (stating that Federal Circuit has exclusive jurisdiction over appeal from federal district court if "the jurisdiction of that court was based, in whole or in part, on 28 U.S.C. § 1338").

34. *Cedars-Sinai*, 11 F.3d at 1577, 29 U.S.P.Q.2d (BNA) at 1190.

under any Act of Congress *relating to* patents.”³⁵ The court therefore considered whether the declaratory judgment action arose under a patent-related statute.³⁶

Faced with a declaratory judgment action, the court applied the principles articulated in *Franchise Tax Board v. Construction Laborers Vacation Trust*,³⁷ to determine whether § 1338 jurisdiction existed.³⁸ Applying the well-pleaded complaint rule,³⁹ the court constructed a hypothetical injunctive action by the Government against Cedars-Sinai to enforce the assignment rights declared in the determination.⁴⁰ The court then determined that this hypothetical cause of action arose in part under 42 U.S.C. § 5908⁴¹ and that the case was therefore distinguishable from cases involving simple contractual disputes.⁴² Rejecting the argument that the statute, which in essence mandated the issuance of a patent to the Government rather than to the inventor, merely concerned the administrative functioning of the Patent and Trademark Office (PTO) Commissioner, the court determined that § 5908 was an Act of Congress clearly related to patents.⁴³ Consequently, the Federal Circuit held that it had jurisdiction to review the district court’s dismissal of the case for lack of ripeness and, thus, lack of article III jurisdiction.⁴⁴

The court noted that the Supreme Court, in *Abbott Labs v. Gardner*,⁴⁵ had delineated a “two-prong test for applying the constitutional doctrine of ripeness: (1) are the issues fit for judicial decision, that is, is there a present case or controversy between the parties; and (2) is there sufficient risk of one party suffering immediate hardship to warrant prompt adjudication of the case.”⁴⁶ Regarding the first patent question, the court stated that, were the action based solely on

35. 28 U.S.C. § 1338(a) (1988) (emphasis added).

36. *Cedars-Sinai*, 11 F.3d at 1578, 29 U.S.P.Q.2d (BNA) at 1191.

37. 463 U.S. 1, 16 (1983) (citing *Skelly Oil Co. v. Phillips Petroleum Co.*, 339 U.S. 667 (1950)).

38. *Cedars-Sinai*, 11 F.3d at 1578, 29 U.S.P.Q.2d (BNA) at 1191.

39. *Franchise Tax Board v. Construction Laborers Vacation Trust*, 463 U.S. 1, 16 (1983) (articulating principle that federal jurisdiction is lacking if federal question only arose out of defense to state-created action).

40. *Cedars-Sinai*, 11 F.3d at 1578, 29 U.S.P.Q.2d (BNA) at 1191.

41. 42 U.S.C. § 5908 (1988) (mandating that patent of invention made by person under contract to Secretary of Energy will belong to United States).

42. *Cedars-Sinai*, 11 F.3d at 1579, 29 U.S.P.Q.2d (BNA) at 1191 (noting that if cause of action was merely contractual issue, Federal Circuit would lack jurisdiction over case).

43. *Id.*

44. *Id.* at 1580, 29 U.S.P.Q.2d (BNA) at 1192.

45. 387 U.S. 136 (1967).

46. *Cedars-Sinai*, 11 F.3d at 1580-81, 29 U.S.P.Q.2d (BNA) at 1192 (referring to ripeness test laid out in *Abbott Labs v. Gardner*, 387 U.S. 136, 149 (1967)); see also *Lake Carriers' Ass'n v. MacMullan*, 406 U.S. 498, 506 (1972) (following ripeness test delineated in *Abbott Labs*).

Cedars-Sinai's "domestic patent rights, the case would be barred, both by Article III and the discretionary consideration of conservation of judicial resources, because of the pending interference."⁴⁷ The court nonetheless found that the first prong of the *Abbott Labs* test had been satisfied because the determination adversely affected Cedars-Sinai's ability to license its foreign patents and that the pending interference was immaterial to Cedars-Sinai's foreign patent rights.⁴⁸

The second prong of the ripeness test, however, was not satisfied. The court found that Cedars-Sinai failed to show jurisdiction⁴⁹ when it did not demonstrate facts sufficient to support its contention that it would suffer hardship, to its title to its foreign patents, resulting from the determination.⁵⁰ Thus, noting the constitutional limitations on jurisdiction, the Federal Circuit affirmed the dismissal of the case.⁵¹

Another case stemming from a declaratory judgment action and addressing the jurisdictional question of whether an actual controversy existed was *BP Chemicals Ltd. v. Union Carbide Corp.*⁵² As the court explained in *BP Chemicals*, the existence of an actual controversy involving patent rights requires more than the mere presence of an adversely held patent.⁵³ There must be both "(1) an explicit threat, or similar action, by the patentee that creates a reasonable apprehension in the declaratory plaintiff that it faces an infringement suit, and (2) present activity by the plaintiff that could constitute infringement, or some concrete steps taken with an intent to conduct such activity."⁵⁴

The issue on appeal in this case was whether the district court properly dismissed the action for failing to meet the requirement of 28 U.S.C. § 2201 that there be an actual controversy; an issue that encompasses concepts such as ripeness, standing, and the prohibition against advisory judicial rulings.⁵⁵ BP had filed a declaratory judgment action against Union Carbide seeking a declaration of invalidity or unenforceability of Union Carbide's patent and a

47. *Cedars-Sinai*, 11 F.3d at 1581, 29 U.S.P.Q.2d (BNA) at 1192.

48. *Id.* at 1582, 29 U.S.P.Q.2d (BNA) at 1193.

49. See *KVOS, Inc. v. Associated Press*, 299 U.S. 269, 278 (1936) (holding that party seeking to invoke jurisdiction has burden of establishing jurisdiction).

50. *Cedars-Sinai*, 11 F.3d at 1583, 29 U.S.P.Q.2d (BNA) at 1193 (noting that Government's motion to dismiss challenged Cedars-Sinai's contention that it had suffered legal wrong).

51. *Id.*

52. 4 F.3d 975, 28 U.S.P.Q.2d (BNA) 1124 (Fed. Cir. 1993).

53. *BP Chems. Ltd. v. Union Carbide Corp.*, 4 F.3d 975, 978, 28 U.S.P.Q.2d (BNA) 1124, 1126 (Fed. Cir. 1993).

54. *Id.*

55. *Id.* at 977, 28 U.S.P.Q.2d (BNA) at 1126.

declaration that the patent was not infringed by a process licensed by BP and potentially practiced by BP's licensees.⁵⁶ The district court had granted Union Carbide's motion to dismiss the action for lack of a justiciable controversy, finding that Union Carbide did not threaten BP or its licensees with suit or place them in reasonable apprehension of suit.⁵⁷

BP argued on appeal that the totality of the circumstances demonstrated that the requirements of a declaratory judgment action had been met, pointing to its commercial competition with Union Carbide.⁵⁸ BP also noted that the Federal Circuit had not yet considered the situation where a licensor's business is undermined by threats directed through its actual or potential licensees.⁵⁹ BP further pointed to its potential liability for contributory or inducing infringement and its contractual obligations to indemnify its licensees as factors giving rise to a "controversy."⁶⁰ Union Carbide responded that it did not threaten either BP or any licensee with suit, that the patent was not infringed, and that BP was seeking an opportunity to litigate Union Carbide's patent prospectively in order to obtain an advisory opinion on its validity and scope.⁶¹ Union Carbide also argued that any remarks it made about the patent during licensing negotiations were made to support its attempts to license the process and not to threaten or intimidate.⁶²

Characterizing the case as presenting a "close factual question on the issue of reasonable apprehension of suit,"⁶³ the court nevertheless affirmed the district court's dismissal of the action. The Federal Circuit noted that the district court heard testimony about the actions and statements of the parties concerned, made credibility determinations when there was conflicting testimony, and applied an objective standard in determining whether there was reasonable apprehension of suit.⁶⁴ The court noted that although Union Carbide's officials refused to promise BP that it would not enforce its patent against BP's licensees, a fact that was relevant but not dispositive in determining reasonable apprehension of suit,⁶⁵ Union Carbide's officials repeat-

56. *Id.*, 28 U.S.P.Q.2d (BNA) at 1125.

57. *Id.*, 28 U.S.P.Q.2d (BNA) at 1126.

58. *Id.*

59. *Id.*

60. *Id.*

61. *Id.*

62. *Id.*

63. *Id.* at 980, 28 U.S.P.Q.2d (BNA) at 1128.

64. *Id.* at 979, 28 U.S.P.Q.2d (BNA) at 1127.

65. *Id.* at 980, 28 U.S.P.Q.2d (BNA) at 1128; *see also* Shell Oil Co. v. Amoco Corp., 970 F.2d 885, 889, 23 U.S.P.Q.2d (BNA) 1627, 1631 (Fed. Cir. 1992) (holding that court may consider

edly expressed a desire to amicably resolve any problems that might arise.⁶⁶ Addressing BP's statement that its licensees would use BP's process but for Union Carbide's patent, the court noted that a party's "interest in practicing another's invention did not satisfy the two-part list for an actual controversy."⁶⁷

The court was not persuaded that injuries to BP's interests, allegedly resulting from the possibility of suit by Union Carbide and from the inhibitory effect of its patent, presented an actual controversy.⁶⁸ The court stated that while BP's interest as patent licensor may be adversely affected by competitive activity from Union Carbide, BP cannot bring a declaratory judgment action against Union Carbide unless that competitive activity constitutes a threat to sue BP's potential licensees.⁶⁹ After emphasizing the concept of standing that underlies the actual controversy requirement,⁷⁰ the court noted that BP's interest, whether as an indemnitor or based on possible liability for contributory or inducing infringement, was no more definite than that of its licensees.⁷¹

The court also found that the absence of the parties that BP described as intending to infringe Union Carbide's patent reinforced the finding that this action was brought simply for marketing and competitive purposes.⁷² The Federal Circuit therefore affirmed the district court's dismissal of the action for failing to present an actual controversy.⁷³

As noted in the previous discussion, 28 U.S.C. § 1295(a)(1) provides that the Federal Circuit has exclusive jurisdiction over an appeal from a final decision of a district court if jurisdiction is based on 28 U.S.C. § 1338.⁷⁴ Section 1338 of Title 28 provides, *inter alia*, that district courts have original jurisdiction over any civil action

circumstances surrounding statement of intent to enforce patent); *C.R. Bard, Inc. v. Schwartz*, 716 F.2d 874, 881, 219 U.S.P.Q. (BNA) 197, 203-04 (Fed. Cir. 1983) (concluding that statements of intent to enforce patent made after filing of declaratory action are part of totality of circumstances).

66. *BP Chems.*, 4 F.3d at 980, 28 U.S.P.Q.2d (BNA) at 1128.

67. *Id.* (citing *International Medical Prosthetics Research Assoc., Inc. v. Gore Enter. Holdings, Inc.*, 787 F.2d 572, 576, 229 U.S.P.Q. (BNA) 278, 281 (Fed. Cir. 1986) (holding that controversy does not exist simply because patent exists)).

68. *Id.* at 980-81, 28 U.S.P.Q.2d (BNA) at 1129.

69. *Id.* at 981, 28 U.S.P.Q.2d (BNA) at 1129.

70. *See id.* (noting that indemnitor's standing is only derivative).

71. *See id.* (stating that without direct infringement there cannot be contributory or inducing infringement).

72. *Id.*

73. *Id.*

74. 28 U.S.C. § 1295(a)(1) (1988); *see supra* note 33 and accompanying text (discussing jurisdiction of Federal Circuit).

arising under any Act of Congress relating to patents.⁷⁵ The next case involves a question of jurisdiction under 28 U.S.C. § 1338.

In *Additive Controls & Measurement Systems, Inc. v. Flowdata Inc.*,⁷⁶ Additive Controls & Measurement Systems, Inc. (Adcon) challenged the propriety of the removal of its business disparagement case from Texas state court to a U.S. district court.⁷⁷ Adcon had filed suit in a state court claiming interference with its business due to Flowdata's statements to Adcon's customers that Adcon's product infringed Flowdata's patent.⁷⁸ After Flowdata caused the case to be removed to the district court, Flowdata answered Adcon's complaint and then counterclaimed for patent infringement.⁷⁹ The district court granted partial summary judgment of patent infringement and issued a permanent injunction barring Adcon from infringing Flowdata's patent.⁸⁰ Adcon thereafter moved to remand the case to state court, claiming that the district court lacked subject matter jurisdiction.⁸¹ The present appeal arose from the district court's denial of this motion.⁸²

Adcon challenged the legality of the removal of the business disparagement case to federal district court.⁸³ The Federal Circuit noted that under 28 U.S.C. § 1441(a) a defendant may remove an action to federal district court if that court has subject matter jurisdiction.⁸⁴ The district court had premised its jurisdiction on 28 U.S.C. § 1338(a).⁸⁵ The Federal Circuit therefore considered whether the district court correctly decided this jurisdictional question.⁸⁶

The court observed that the Supreme Court had construed 28 U.S.C. § 1338(a) as conferring jurisdiction to the district courts not only over causes of action created by federal patent law, but also over causes of action involving a substantial question of patent law.⁸⁷

75. 28 U.S.C. § 1338(a) (1988).

76. 986 F.2d 476, 477, 25 U.S.P.Q.2d (BNA) 1798, 1799 (Fed. Cir. 1993).

77. *Additive Controls & Movement Sys., Inc. v. Flowdata Inc.*, 986 F.2d 476, 477, 25 U.S.P.Q.2d (BNA) 1798, 1799 (Fed. Cir. 1993).

78. *Id.*

79. *Id.*

80. *Id.*

81. *Id.*

82. *Id.*

83. *Id.*

84. *Id.*

85. See *id.* (stating that 28 U.S.C. § 1338(a) gives district courts exclusive jurisdiction over civil actions relating to patents).

86. *Id.*

87. *Id.* at 477-78, 25 U.S.P.Q.2d (BNA) at 1799-1800 (citing *Christianson v. Colt Indus. Operating Corp.*, 486 U.S. 800, 808-09, 7 U.S.P.Q.2d (BNA) 1109, 1113 (1988) (holding that scope of 28 U.S.C. § 1338(a) includes causes of action involving substantial question of federal

Although the Federal Circuit found that Adcon's state-law business disparagement claim was not created by federal patent law, the court found that resolving this claim involved a substantial question of patent law—whether Adcon's product infringed Flowdata's patent.⁸⁸

Under Texas state law, proof of business disparagement required proof that the allegedly disparaging statement was false.⁸⁹ Thus, Adcon was required to prove that Flowdata's statements that Adcon's product infringed Flowdata's patent were false.⁹⁰ Because Adcon's right to relief depended on resolving the question of infringement—a substantial question of patent law—the Federal Circuit found that the district court properly refused Adcon's motion to remand the case to state court.⁹¹

In another case dealing with jurisdiction, *Katz v. Lear Siegler, Inc.*,⁹² the issue in question was Katz's ownership of certain patents and thus Katz's standing to sue.⁹³ Because the party invoking federal jurisdiction bears the burden of establishing standing,⁹⁴ the question of patent ownership was also one of jurisdiction.⁹⁵

The district court had granted summary judgment, finding that Katz had no standing to sue Lear Siegler, Inc. and Smith & Wesson Corp. (collectively LSI) because Katz did not have title to the patents.⁹⁶ The district court held that the inventor, Theodore, had assigned his patent rights in writing to Armament Systems and Procedures, Inc. (ASP), thereby placing legal and equitable title to the patents in ASP, before assigning the patent rights to Katz.⁹⁷ The district court also held that Katz could not void the unrecorded Theodore-ASP assignment under 35 U.S.C. § 261⁹⁸ "because Katz was not without notice of that [assignment]."⁹⁹ Theodore and ASP had executed an

patent law)).

88. *Id.* at 478, 25 U.S.P.Q.2d (BNA) at 1800.

89. *Id.*

90. *Id.*

91. *Id.* at 479, 25 U.S.P.Q.2d (BNA) at 1800.

92. 5 F.3d 1502, 29 U.S.P.Q.2d (BNA) 1450 (Fed. Cir. 1993), *cert. denied*, 114 S. Ct. 1069 (1994).

93. *Katz v. Lear Siegler, Inc.*, 5 F.3d 1502, 29 U.S.P.Q.2d (BNA) 1450 (Fed. Cir. 1993), *cert. denied*, 114 S. Ct. 1069 (1994).

94. *See Lujan v. Defenders of Wildlife*, 112 S. Ct. 2130, 2136 (1992) (holding that burden of establishing standing falls on party invoking jurisdiction).

95. *Katz*, 5 F.3d at 1502, 29 U.S.P.Q.2d (BNA) at 1452.

96. *Id.*, 29 U.S.P.Q.2d (BNA) at 1453.

97. *Id.*

98. 35 U.S.C. § 261 (1988). Section 261 provides, in pertinent part, that "[a]n assignment . . . shall be void as against any subsequent purchaser . . . for a valuable consideration, without notice, unless it is recorded in the Patent and Trademark Office within three months from its date or prior to the date of such subsequent purchase." *Id.*

99. *Katz*, 5 F.3d at 1502, 29 U.S.P.Q.2d (BNA) at 1453.

agreement granting ASP an exclusive license to make, use, and sell devices covered by Theodore's patents in return for ASP paying Theodore royalties.¹⁰⁰ Theodore and ASP had subsequently executed an amendment to the exclusive license agreement, which stated that Theodore was assigning his entire right, title, and interest in certain patents, including the patents at issue, to ASP.¹⁰¹ The amendment also granted ASP the right and sole discretion to sue for patent infringement.¹⁰² Theodore's attorneys later sent a letter to ASP announcing that he was rescinding the agreement and ordering ASP to stop using the patents, but ASP asserted that it had never received the letter.¹⁰³

Katz, who had become interested in the patents at issue, had at some point contacted Theodore.¹⁰⁴ Katz averred that he had made a search of the assignment records of the PTO, but found no record of any prior assignment of the patents.¹⁰⁵ Katz and Theodore then executed documents assigning Theodore's entire right, title, and interest in the patents to Katz.¹⁰⁶ In addition, Theodore and Katz had executed another agreement assigning Katz all rights in the Theodore/ASP exclusive license agreement, including the right to sue ASP.¹⁰⁷ This Theodore/Katz agreement, however, made no mention of the amendment to the Theodore/ASP agreement.¹⁰⁸ Meanwhile, ASP continued to manufacture products covered by the patents until Katz began suing ASP's customers, including Lear Siegler, Inc.¹⁰⁹

LSI had moved for summary judgment on the ground that Katz had no standing to sue.¹¹⁰ As noted above, the district court granted LSI's motion, finding that ASP, not Katz, had title to the patents.¹¹¹

On appeal, Katz argued that the district court erred in granting summary judgment because a genuine issue of fact existed regarding whether Katz had notice of the earlier assignment to ASP within the meaning of § 261.¹¹² Accepting Katz's assertions that Katz had no

100. *Id.*, 29 U.S.P.Q.2d (BNA) at 1451.

101. *Id.*

102. *Id.*, 29 U.S.P.Q.2d (BNA) at 1454 n.6.

103. *Id.*, 29 U.S.P.Q.2d (BNA) at 1451.

104. *Id.*

105. *Id.*

106. *Id.*, 29 U.S.P.Q.2d (BNA) at 1452.

107. *Id.*

108. *Id.*

109. *Id.*

110. *Id.*

111. *Id.*

112. *Id.*, 29 U.S.P.Q.2d (BNA) at 1453.

actual notice of the amendment to the Theodore/ASP assignment and that Katz had searched the PTO records and found nothing about the patents, the Federal Circuit found no error in the district court's grant of summary judgment.¹¹³

The court explained that the "notice" required by § 261 "includes constructive and inquiry notice."¹¹⁴ The Federal Circuit noted that the district court had not rested its decision on the grounds that Katz had actual notice, but had considered the dispositive issue to be whether, as a matter of law, Katz could be charged with constructive or inquiry notice.¹¹⁵ The court rejected Katz's contention that constructive notice is limited to the notice provided by the recording system of § 261.¹¹⁶ The court indicated that "constructive notice may also be based on any facts within the purchaser's knowledge, or means of knowledge, that should logically lead him, through removable inquiry, to knowledge of the prior unrecorded assignment."¹¹⁷

The undisputed facts convinced the court that Katz was properly held to inquiry notice.¹¹⁸ The court noted that Katz was experienced in acquiring and enforcing patents and his purpose in acquiring the patents at issue was to enforce them; Katz knew of the Theodore/ASP license agreement; Katz also knew that ASP had been manufacturing and selling products covered by the patents, and ASP had never paid any royalties required by the license agreement but not required by the amendment; Katz had twice contacted ASP regarding the patents; and Katz had a continuing working relationship with Theodore.¹¹⁹ The Federal Circuit found, as did the district court, that under such circumstances, a person exercising ordinary care should have asked minimal, obvious questions concerning Theodore's contractual relationship with ASP.¹²⁰

Because there was no evidence of such an inquiry by Katz, the Federal Circuit held that the district court did not err in concluding that Katz could not rely on 35 U.S.C. § 261 for standing.¹²¹ Nonetheless, the court vacated the summary judgment because the district

113. *Id.*

114. *Id.*; see also *Film Tec Corp. v. Allied-Signal, Inc.*, 939 F.2d 1568, 1574, 19 U.S.P.Q.2d (BNA) 1508, 1512-13 (Fed. Cir. 1991); *Taylor Engines, Inc. v. All Steel Engines, Inc.*, 192 F.2d 171, 174, 92 U.S.P.Q. (BNA) 35, 37 (9th Cir. 1951).

115. *Katz*, 5 F.3d at 1502, 29 U.S.P.Q.2d (BNA) at 1453.

116. *Id.*

117. *Id.* (quoting ALBERT H. WALKER, WALKER ON PATENTS § 281 (4th ed. 1904)).

118. *Id.*, 29 U.S.P.Q.2d (BNA) at 1454.

119. *Id.*

120. *Id.*

121. *Id.*

court had not considered whether the amendment to the Theodore/ASP license agreement was void for lack of consideration, a question that implicated Katz's standing to sue and, therefore, the subject matter jurisdiction of the district court.¹²²

In addition to having jurisdiction over appeals from district courts under 28 U.S.C. § 1295(a)(1), the Federal Circuit also has jurisdiction over various appeals from the PTO's Board of Patent Appeals and Interferences¹²³ (Board). For example, under 35 U.S.C. § 141, a party to an interference, who is dissatisfied with the decision of the Board on the interference, may appeal the decision to the Federal Circuit.¹²⁴

The Federal Circuit addressed the question of whether it had such jurisdiction over an appeal from the Board in *Davis v. Loesch*,¹²⁵ a case which arose from an interference proceeding. Davis and Granger, who were named as joint inventors in the patent and in the reissue application involved in the interference action, had been deemed a single party designated as "Davis et al." in the interference proceeding.¹²⁶ Similarly, Loesch, St. John, and Mints, who were named as joint inventors in their application, had been deemed a single party designated as "Loesch et al."¹²⁷ The court faced the question of whether it had jurisdiction over the appellant where the notice of appeal did not bear the names of both Davis and Granger as seeking review, but instead was captioned "DAVIS ET AL."¹²⁸

The court noted that in *Torres v. Oakland Scavenger Co.*,¹²⁹ which involved application of Rule 3 of the Federal Rules of Appellate Procedure,¹³⁰ the Supreme Court held that the appellate court lacked jurisdiction over a party that is not named in the notice of appeal from a judgment of a district court and that the words "et al." in the notice of appeal were not sufficient to identify the party.¹³¹ The Federal Circuit noted that *Davis* involved not Rule 3, but Rule 15 of the Federal Rules of Appellate Procedure, which deals with the review of orders of administrative agencies, boards, and commissions.¹³² Noting that the language of Rule 3 is very similar to that

122. *Id.*, 29 U.S.P.Q.2d (BNA) at 1454-55.

123. *See* 35 U.S.C. § 141 (1988).

124. *Id.*

125. 998 F.2d 963, 27 U.S.P.Q.2d (BNA) 1440 (Fed. Cir. 1993).

126. *Davis v. Loesch*, 998 F.2d 963, 966, 27 U.S.P.Q.2d (BNA) 1440, 1443 (Fed. Cir. 1993).

127. *Id.*

128. *Id.* at 965-66, 27 U.S.P.Q.2d (BNA) at 1442.

129. 487 U.S. 312 (1988).

130. FED. R. APP. P. 3.

131. *Davis*, 998 F.2d at 966, 27 U.S.P.Q.2d (BNA) at 1443.

132. *Id.*

of Rule 15 and that the rationale of *Torres* appeared to apply in a Rule 15 context, the court assumed, without deciding, that the *Torres* rationale applies generally to Rule 15 appeals.¹³³ The Federal Circuit determined, however, that the *Torres* rationale did not govern the case at hand because *Davis*, unlike *Torres*, did not involve more than one appellant.¹³⁴

The court observed that, according to the long-standing interference practice of the PTO, the PTO had deemed each set of joint inventors as constituting a single party and had designated them as such.¹³⁵ Thus, "Davis et al.," although signifying two inventors, was but one party.¹³⁶ In contrast, the "et al." designation in *Torres* had signified multiple parties.¹³⁷ Therefore, the court held that it had jurisdiction as the notice of appeal met the requirement of Rule 15(a), requiring that the court specify the parties seeking review.¹³⁸

B. Venue

*Katz v. Lear Siegler, Inc.*¹³⁹ also involved a question relating to venue. Katz had brought the action against LSI in the Western District of New York.¹⁴⁰ LSI defaulted, but before entering judgment on the default, the New York District Court granted LSI's motion to set aside the entry of default and entertained its motion to dismiss or, in the alternative, to transfer for improper venue.¹⁴¹ The district court, after analyzing the question of venue, found that New York was not the proper venue because LSI neither resided in New York nor had a regular and established place of business in New York.¹⁴² Furthermore, Katz failed to show that LSI committed any acts of infringement in New York. The district court therefore transferred the case for improper venue.¹⁴³

133. *Id.*

134. *Id.*

135. *Id.*; see also *Manny v. Garlick*, 135 F.2d 757, 768, 57 U.S.P.Q. (BNA) 377, 388 (C.C.P.A. 1943) (stating that joint inventors are designated single party by PTO in interference proceedings).

136. *Davis*, 998 F.2d at 966, 27 U.S.P.Q.2d (BNA) at 1443.

137. *Id.*

138. *Id.*, 27 U.S.P.Q.2d (BNA) at 1442.

139. 5 F.3d 1502, 29 U.S.P.Q.2d (BNA) 1450 (Fed. Cir. 1993), *cert. denied*, 114 S. Ct. 1069 (1994).

140. *Katz v. Lear Siegler, Inc.*, 5 F.3d 1502, 29 U.S.P.Q.2d (BNA) 1450 (Fed. Cir. 1993), *cert. denied*, 114 S. Ct. 1069 (1994).

141. *Id.*

142. *Id.*; see also 28 U.S.C. § 1400(b) (1988) (permitting district court to transfer case to proper venue instead of dismissing case).

143. *Katz*, 5 F.3d at 1502, 29 U.S.P.Q.2d (BNA) at 1455.

On appeal, Katz did not dispute the substance of the venue determination.¹⁴⁴ Instead, Katz argued that LSI had “waived any objection to venue by its default and that the objection could not be revived by the district court’s setting aside of the default.”¹⁴⁵ LSI argued, and the district court agreed, that “no authority is inconsistent with allowing” a challenge to venue, following a default, once that default has been set aside.¹⁴⁶ The Federal Circuit, however, determined that previous cases and the Federal Rules of Civil Procedure make it clear that in a case such as this, LSI waived its objection to venue.¹⁴⁷

The court pointed to the well-established principle that venue is waived by a defaulting defendant.¹⁴⁸ The court rejected LSI’s argument that the setting aside of the default *per se* revived its ability to object to venue.¹⁴⁹ The court held that LSI’s assertion of a lack of proper venue was waived because it was not made before the time when LSI was required to appear in response to the complaint, as indicated by the plain wording of Rule 12(h)(1).¹⁵⁰ Accordingly, the court held that the New York District Court erred in transferring the case under § 1406(a) for improper venue.¹⁵¹

C. Choice of Law

As explained in *Payless Shoesource, Inc. v. Reebok International Ltd.*,¹⁵² the Federal Circuit reviews procedural matters under the law of the regional circuit in which the district court sits.¹⁵³ The Federal Circuit also defers to the law of the regional circuit when addressing substantive legal issues over which the Federal Circuit does not have exclusive subject matter jurisdiction.¹⁵⁴ But for substantive legal

144. *Id.*

145. *Id.*

146. *Id.*

147. *Id.*, 29 U.S.P.Q.2d (BNA) at 1455-56; *see also* FED. R. CIV. P. 12(h)(1) (“A defense of . . . improper venue . . . is waived . . . if it is neither made by motion under this rule nor included in a responsive pleading or an amendment thereof”); *Hoffman v. Blaski*, 363 U.S. 335, 343 (1960) (holding that defendant who fails to assert venue, or who defaults, thereby waives venue).

148. 15 CHARLES A. WRIGHT ET AL., *FEDERAL PRACTICE AND PROCEDURE* § 3829 (2d ed. 1986).

149. *Katz*, 5 F.3d at 1502, 29 U.S.P.Q.2d (BNA) at 1456 (citing *Bavouset v. Shaw’s of San Francisco*, 43 F.R.D. 296, 299 (S.D. Tex. 1967) (“The fact that a court has allowed a party in default to proceed in the suit and answer the complaint does not automatically put the defaulting party in the position of one who is making a timely response to a complaint.”)).

150. *Id.*, 29 U.S.P.Q.2d (BNA) at 1457.

151. *Id.*

152. 998 F.2d 985, 27 U.S.P.Q.2d (BNA) 1516 (Fed. Cir. 1993).

153. *Payless Shoesource, Inc. v. Reebok Int’l Ltd.*, 998 F.2d 985, 987, 27 U.S.P.Q.2d (BNA) 1516, 1518 (Fed. Cir. 1993).

154. *Id.* at 985, 27 U.S.P.Q.2d (BNA) at 1516.

issues within its exclusive appellate jurisdiction, including patent law, the Federal Circuit applies its own law.¹⁵⁵

During 1993, the court consistently applied these choice-of-law rules. As discussed below, a question raised in *Delta-X Corp. v. Baker Hughes Production Tools, Inc.*,¹⁵⁶ relating to a motion for judgment notwithstanding the verdict (JNOV), was decided by applying the law of the Fifth Circuit; this question was a procedural one, not pertaining to the court's statutory mandate as a national court of appeals.¹⁵⁷ Similarly, in *Haworth, Inc. v. Steelcase, Inc.*,¹⁵⁸ the Federal Circuit applied the law of the Sixth Circuit in reviewing and affirming a decision of the district court denying Herman Miller, Inc.'s motion for permissive intervention.¹⁵⁹

In contrast, in *Broyhill Furniture Industries, Inc. v. Craftmaster Furniture Corp.*,¹⁶⁰ the Federal Circuit, after noting that it generally defers to the law of the regional circuit, in reviewing a ruling on a Rule 60(b) motion, did not accord such deference because the district court's ruling on the Rule 60(b) motion turned on substantive matters unique to patent law—i.e., whether a consent judgment enjoining infringement should be set aside following a judicial determination that the patent was procured through inequitable conduct in the PTO.¹⁶¹ In *Payless Shoesource*, discussed above,¹⁶² the court also applied its own law in reviewing a denial of a motion for preliminary injunctive relief for alleged design patent infringement.¹⁶³

D. Law of the Case

In *BIC Leisure Products, Inc. v. Windsurfing International, Inc.*,¹⁶⁴ the Federal Circuit held that its prior opinion¹⁶⁵ in the case did not preclude the district court from considering BIC's defense of absolute

155. *Id.* at 988, 27 U.S.P.Q.2d (BNA) at 1518.

156. 984 F.2d 410, 25 U.S.P.Q.2d (BNA) 1447 (Fed. Cir. 1993).

157. *Delta-X Corp. v. Baker Hughes Prod. Tools, Inc.*, 984 F.2d 410, 412, 25 U.S.P.Q.2d (BNA) 1447, 1448 (Fed. Cir. 1993).

158. 12 F.3d 1090, 29 U.S.P.Q.2d (BNA) 1368 (Fed. Cir. 1993).

159. *Haworth, Inc. v. Steelcase, Inc.*, 12 F.3d 1090, 1092, 29 U.S.P.Q.2d (BNA) 1368, 1369-70 (Fed. Cir. 1993) (stating that when reviewing procedural matter not unique to patent law, Federal Circuit uses law of regional circuit).

160. 12 F.3d 1080, 1084, 29 U.S.P.Q.2d (BNA) 1283, 1286 (Fed. Cir. 1993).

161. *Broyhill Furniture Indus., Inc. v. Craftmaster Furniture Corp.*, 12 F.3d 1080, 1084, 29 U.S.P.Q.2d (BNA) 1283, 1284 (Fed. Cir. 1993).

162. *See supra* notes 152-55 and accompanying text.

163. *Payless Shoesource, Inc. v. Reebok Int'l Ltd.*, 998 F.2d 985, 987-88, 27 U.S.P.Q.2d (BNA) 1516, 1518 (Fed. Cir. 1993).

164. 1 F.3d 1214, 27 U.S.P.Q.2d (BNA) 1671 (Fed. Cir. 1993).

165. *Windsurfing Int'l, Inc. v. AMF, Inc.*, 782 F.2d 995, 228 U.S.P.Q. 562 (Fed. Cir. 1986), *cert. denied*, 477 U.S. 905 (1986) (*Windsurfing I*).

intervening rights that was raised at the damages phase of the trial.¹⁶⁶ In general, the "doctrine of law of the case points that once a court decides a rule of law, that decision should govern the same issue throughout later stages of that case."¹⁶⁷ In *Windsurfing I*, however, the court was presented only with the issue of a codefendant's waiver of an equitable intervening rights defense to an injunction.¹⁶⁸ Because the court had only addressed equitable intervening rights during the liability phase of the case, consideration of BIC's absolute intervening rights defense was not precluded during the damages phase.¹⁶⁹

E. Discovery

Ordinarily, an order denying or granting discovery is not appealable.¹⁷⁰ As noted by the court in the following case, however, an "order denying discovery of a nonparty, issued . . . ancillary to the subject action, is final and appealable."¹⁷¹

*Katz v. Batavia Marine & Sporting Supplies, Inc.*¹⁷² arose out of a suit filed by Katz against Batavia for infringement of a patent for a combined key chain and tear-gas sprayer.¹⁷³ During discovery, Katz had learned that Batavia had purchased tear-gas products from Smith & Wesson.¹⁷⁴ Seeking to identify these products, Katz served Def-Tec Corporation, the successor in interest to Smith & Wesson's tear-gas enterprise, with a notice of deposition and subpoena *duces tecum*.¹⁷⁵ The subpoena issued by the district court requested a broad range of documents, including any documents in Def-Tec's possession or control relating to acquisition or sale of any patent and any documents relating to the development, manufacture, marketing, or sale of MACE®.¹⁷⁶

Def-Tec sought relief from the third-party discovery, contending that Katz sought discovery of trade secrets and proprietary information, that one of Def-Tec's competitors was a party to the suit, and

166. *BIC Leisure Prods., Inc. v. Windsurfing Int'l, Inc.*, 1 F.3d 1214, 1220, 27 U.S.P.Q.2d (BNA) 1671, 1676 (Fed. Cir. 1993); see also *infra* Part VI.D.1. (discussing intervening rights).

167. *BIC Leisure Products*, 1 F.3d at 1222, 27 U.S.P.Q.2d (BNA) at 1677 (citing *Christianson v. Colt Indus. Operating Corp.*, 486 U.S. 800, 816 (1988)).

168. *Windsurfing I*, 782 F.2d at 997, 228 U.S.P.Q. (BNA) at 562.

169. *BIC Leisure Products*, 1 F.3d at 1222, 27 U.S.P.Q.2d (BNA) at 1677.

170. *Katz v. Batavia Marine & Sporting Supplies, Inc.*, 984 F.2d 422, 424, 25 U.S.P.Q.2d (BNA) 1547, 1547 (Fed. Cir. 1993).

171. *Id.*

172. 984 F.2d 422, 25 U.S.P.Q.2d (BNA) 1547 (Fed. Cir. 1993).

173. *Batavia Marine*, 984 F.2d at 423, 25 U.S.P.Q.2d (BNA) at 1547.

174. *Id.*, 25 U.S.P.Q.2d (BNA) at 1547-48.

175. *Id.*, 25 U.S.P.Q.2d (BNA) at 1548.

176. *Id.* at 423-24, 25 U.S.P.Q.2d (BNA) at 1548.

that the notice did not contain reasonable particularity as required by Rule 30(b)(6).¹⁷⁷ In particular, Def-Tec argued that the subpoenaed information was irrelevant and included confidential material, and therefore should not be subject to discovery.¹⁷⁸ The district court quashed Katz's subpoena, holding that Katz had failed to show that the discovery was "necessary and relevant in response to Def-Tec's *prima facie* showing that it was oppressive."¹⁷⁹

Katz argued in his appeal that he was not seeking confidential information and that none of the requested information had been specifically identified as confidential by Def-Tec.¹⁸⁰ Further, Katz argued that the documents had been reviewed by Def-Tec, or its counsel, or the district court for confidential content.¹⁸¹ The Federal Circuit observed that relevancy for purposes of Rule 26(b), which applies to discovery of parties and nonparties, is broadly construed, and that nonparty status may be considered in weighing the burdens imposed by discovery requests.¹⁸² The court held that Katz had not established a need for the breadth of information requested sufficient to overcome Def-Tec's showing that the requested discovery was burdensome.¹⁸³ The court observed that the litigation concerned the patented key-ring/tear-gas product, but held that the pertinence of the requested documents far exceeded this narrow subject matter.¹⁸⁴ The Federal Circuit therefore concluded that the district court had not abused its discretion in denying the discovery.¹⁸⁵

Similarly, in *Haworth, Inc. v. Herman Miller, Inc.*¹⁸⁶ the Federal Circuit reviewed a district court's denial of a motion to compel a nonparty's production of documents.¹⁸⁷ Haworth had sued a number of parties, including Allsteel, for infringing patents asserted against Herman Miller.¹⁸⁸ The Allsteel litigation was terminated

177. *Id.* at 424, 25 U.S.P.Q.2d (BNA) at 1548.

178. *Id.*, 25 U.S.P.Q.2d (BNA) at 1549.

179. *Id.*, 25 U.S.P.Q.2d (BNA) at 1548.

180. *Id.*, 25 U.S.P.Q.2d (BNA) at 1549.

181. *Id.*

182. *Id.*, 25 U.S.P.Q.2d (BNA) at 1548; *see also* *Micro Motion, Inc. v. Kane Steel Co.*, 894 F.2d 1318, 1326, 13 U.S.P.Q.2d (BNA) 1696, 1701-02 (Fed. Cir. 1990) (noting that for purposes of discovery, relevancy to subject matter is construed broadly); *American Standard Inc. v. Pfizer Inc.*, 828 F.2d 734, 738, 3 U.S.P.Q.2d (BNA) 1817, 1819 (Fed. Cir. 1987) (stating that nonparty status weighs against disclosure in discovery request).

183. *Batavia Marine*, 984 F.2d at 425, 25 U.S.P.Q.2d (BNA) at 1549.

184. *Id.*

185. *Id.*

186. 998 F.2d 975, 27 U.S.P.Q.2d (BNA) 1469 (Fed. Cir. 1993).

187. *Haworth, Inc. v. Herman Miller, Inc.*, 998 F.2d 975, 976, 27 U.S.P.Q.2d (BNA) 1469, 1469 (Fed. Cir. 1993).

188. *Id.*, 27 U.S.P.Q.2d (BNA) at 1470.

following settlement.¹⁸⁹ In the present case against Haworth, Herman Miller sought discovery of the documents relating to the other litigation, including documents concerning Haworth's position regarding various Allsteel products and correspondence between Haworth and Allsteel.¹⁹⁰ Although Allsteel had produced several thousand pages of documents in response to Herman Miller's demand, it refused to provide details of its settlement agreement with Haworth on the grounds that production would violate the duty of confidentiality imposed by the agreement.¹⁹¹ Herman Miller then filed a motion to compel production in a district court outside the jurisdiction where the present suit was pending.¹⁹² The district court denied this motion on the grounds that judicial economy and efficiency required Herman Miller to first try to obtain the settlement documents from Haworth, the opposing party, in the district court presiding over the underlying case.¹⁹³

Herman Miller argued on appeal that: (1) the district court clearly erred in finding that Herman Miller had not sought production of the settlement documents from Haworth; (2) the district court could not properly require Herman Miller to seek discovery of documents from Haworth before requesting a third party to produce them; and (3) the district court's denial of discovery was improper because the scope of the subpoena would include settlement documents in Allsteel's sole possession.¹⁹⁴ The Federal Circuit noted that, in situations in which discovery is pursued outside the jurisdiction of the pending suit, local jurisdiction may be involved to decide discovery matters in an ancillary proceeding,¹⁹⁵ and then proceeded to consider Herman Miller's arguments.¹⁹⁶

The Federal Circuit rejected Herman Miller's first argument that it had sought production of the Haworth-Allsteel settlement documents from Haworth.¹⁹⁷ The court observed that when Herman Miller moved to compel production from Allsteel, Herman Miller had merely served Haworth with a production request under Rule 34, and had not sought to compel production.¹⁹⁸

189. *Id.*

190. *Id.*

191. *Id.* at 977, 27 U.S.P.Q.2d (BNA) at 1470.

192. *Id.*, 27 U.S.P.Q.2d (BNA) at 1471.

193. *Id.*

194. *Id.* at 977-78, 27 U.S.P.Q.2d (BNA) at 1471.

195. *Id.* at 978, 27 U.S.P.Q.2d (BNA) at 1471 (citing *Solarex Corp. v. Arco Solar, Inc.*, 870 F.2d 642, 643, 10 U.S.P.Q.2d (BNA) 1247, 1248 (Fed. Cir. 1989)).

196. *Id.* at 977, 27 U.S.P.Q.2d (BNA) at 1471.

197. *Id.* at 978, 27 U.S.P.Q.2d (BNA) at 1471.

198. *Id.*

Regarding Herman Miller's second argument that nonparty status did not defer its rights to discovery, the Federal Circuit held that it was not an abuse of discretion for the district court to require Herman Miller to first seek discovery of the settlement documents from Haworth.¹⁹⁹ The court pointed out that Rule 26(b) allows a district court to limit discovery if it determines the requested discovery may be obtained from some other source.²⁰⁰

Finally, the court rejected Herman Miller's argument that the documents possessed by Haworth were not the same as those possessed by Allsteel.²⁰¹ Noting that the "convoluted scenario" spun by Herman Miller's attorney to explain why potential evidence might appear only in Allsteel's files revealed the "vast expanse of Herman Miller's fishing net,"²⁰² the Federal Circuit concluded that Herman Miller had engaged in overzealous discovery and affirmed the district court's denial of the motion to compel.²⁰³

F. Compulsory Counterclaim

The compulsory counterclaim rule is provided in Rule 13(a) of the Federal Rules of Civil Procedure.²⁰⁴ In *Beech Aircraft Corp. v. EDO Corp.*,²⁰⁵ the court considered whether Beech's patent assignment action against EDO was a compulsory counterclaim that should have been asserted in a previous trade-secret misappropriation litigation.²⁰⁶

Beech and EDO had entered into four contracts providing that EDO would design, develop, and construct a wing structure for a new composite aircraft.²⁰⁷ Under these contracts, EDO had developed the "H" section technology for attaching spars to the wing skins.²⁰⁸ EDO had previously filed suit against Beech, alleging, in part, that Beech had misappropriated trade secrets by using and procuring a patent to the "H" section technology.²⁰⁹ Before filing its amended answer in this previous litigation, Beech had become aware, from a deposition of an EDO employee, of a patent and divisional applica-

199. *Id.*

200. *Id.*, 27 U.S.P.Q.2d (BNA) at 1472.

201. *Id.*

202. *Id.*

203. *Id.*

204. FED. R. CIV. P. 13(a).

205. 990 F.2d 1237, 26 U.S.P.Q.2d (BNA) 1572 (Fed. Cir. 1993).

206. *Beech Aircraft Corp. v. EDO Corp.*, 990 F.2d 1237, 1245-47, 26 U.S.P.Q.2d (BNA) 1572, 1579-81 (Fed. Cir. 1993).

207. *Id.* at 1240, 26 U.S.P.Q.2d (BNA) at 1575.

208. *Id.*

209. *Id.* at 1241, 26 U.S.P.Q.2d (BNA) at 1576.

tion filed by EDO on the "H" section technology.²¹⁰ Beech, however, failed to file a counterclaim seeking assignment of EDO's application for the patent.²¹¹ The district court then held that the "H" section technology had become the property of Beech by virtue of the contracts between the parties and, consequently, that Beech had not misappropriated any of EDO's trade secrets.²¹² Two years later, Beech made a motion to the district court to enforce the judgment in the previous litigation, requesting that EDO be ordered to assign its patent and divisional application on the "H" section technology to Beech.²¹³ The district court declined, stating that "Beech neither requested nor received any affirmative relief in the previous litigation"²¹⁴ and noted that Beech's request was barred as untimely under Rule 59(e).²¹⁵

In the present case, Beech filed a motion for partial summary judgment asking that EDO's patent and application be assigned to Beech.²¹⁶ Although the district court determined that Beech was not precluded by the compulsory counterclaim rule, or any other rule, from requesting that EDO be ordered to assign its patent and divisional application to Beech, the district court nonetheless denied Beech's motion.²¹⁷ Beech's primary argument on appeal was that its assignment claim was not based on any of the contracts between the parties, but was based on the judgment in the previous litigation, and, therefore, that Rule 13(a) did not bar Beech from asserting its assignment claim.²¹⁸

The Federal Circuit disagreed and explained that the district court's judgment in the previous litigation did not create any ownership rights in Beech against EDO and did not effect an assignment.²¹⁹ The court found that Beech's assignment claim undeniably arose from the same contractual relationship at issue in the previous litigation.²²⁰ Accordingly, the Federal Circuit held that the compulsory

210. *Id.*

211. *Id.*

212. *Id.* at 1241-42, 26 U.S.P.Q.2d (BNA) at 1576. The decision in the previous case is reported at *EDO Corp. v. Beech Aircraft Corp.*, 715 F. Supp. 990 (D. Kan. 1988), *aff'd*, 911 F.2d 1447 (10th Cir. 1990).

213. *Beech*, 990 F.2d at 1242, 26 U.S.P.Q.2d (BNA) at 1576.

214. *See id.* (citing district court's refusal to enforce judgment of previous litigation).

215. *Id.*, 26 U.S.P.Q.2d (BNA) at 1576-77.

216. *Id.*, 26 U.S.P.Q.2d (BNA) at 1577.

217. *Id.* at 1244, 26 U.S.P.Q.2d (BNA) at 1578 (holding that court was unable to grant relief requested because it was for PTO to determine effects of court's previous judgment).

218. *Id.* at 1245-46, 26 U.S.P.Q.2d (BNA) at 1580.

219. *Id.* at 1246, 26 U.S.P.Q.2d (BNA) at 1580.

220. *Id.*

counterclaim rule precluded Beech's belated claim for assignment in the present case.²²¹

G. Summary Judgment

In 1993, the Federal Circuit reviewed several summary judgments entered by trial courts. The first three cases discussed below deal with the standard courts follow in making summary decisions, while the last case discussed in this subsection deals with the question of when a district court can *sua sponte* enter summary judgment.

As explained in *Keystone Retaining Wall Systems, Inc. v. Westrock, Inc.*,²²² summary judgment is proper only in situations in which the pleadings, depositions, answers to interrogatories, and administration on file, along with any affidavits, show that there is no genuine issue of material fact and that, as a matter of law, the movant is entitled to judgment.²²³ A fact is material if it is relevant and necessary to the proceedings and may affect the outcome of the decision.²²⁴ The moving party shows the existence of a genuine issue by presenting evidence sufficient to allow a reasonable fact-finder to decide the question in favor of that party.²²⁵ The evidence submitted by the nonmovant in opposition to a motion for summary judgment is to be considered true, and all justifiable inferences are to be drawn in the nonmovant's favor.²²⁶ In its *de novo* review of a summary judgment motion, the Federal Circuit applies the same legal standard as used by the district court in determining the propriety of summary judgment.²²⁷

"This standard," said the court in *Paragon Podiatry Laboratory, Inc. v. KLM Laboratories, Inc.*,²²⁸ "provides that the mere existence of some alleged factual dispute between the parties will not defeat an otherwise properly supported motion for summary judgment; the requirement is that there be no *genuine* issue of *material* fact."²²⁹ Summary judgment thus is not proper where the evidence presents

221. *Id.*

222. 997 F.2d 1444, 27 U.S.P.Q.2d (BNA) 1297 (Fed. Cir. 1993).

223. See *Keystone Retaining Wall Sys., Inc. v. Westrock, Inc.*, 997 F.2d 1444, 1449, 27 U.S.P.Q.2d 1297, 1301 (Fed. Cir. 1993); see also FED. R. CIV. P. 56(c); *Celotex Corp. v. Catrett*, 477 U.S. 317, 322 (1986).

224. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986).

225. *Keystone*, 997 F.2d at 1449, 27 U.S.P.Q.2d (BNA) at 1301 (citing *Anderson*, 477 U.S. at 248).

226. *Id.* (citing *Anderson*, 477 U.S. at 255).

227. *Id.* at 1450, 27 U.S.P.Q.2d (BNA) at 1301.

228. 984 F.2d 1182, 25 U.S.P.Q.2d 1561 (Fed. Cir. 1993).

229. *Paragon Podiatry Lab., Inc. v. KLM Lab., Inc.*, 984 F.2d 1182, 1184-85, 25 U.S.P.Q.2d (BNA) 1561, 1563 (Fed. Cir. 1993) (emphasis added) (citing *Anderson*, 477 U.S. at 247-248).

a disagreement sufficient to require submission to a jury, but is proper where the evidence is so one-sided that a party must prevail as a matter of law.²³⁰

The Federal Circuit emphasized the required absence of a genuine issue of material fact in *McElmurry v. Arkansas Power & Light Co.*²³¹ Observing that the moving party bears the initial burden of demonstrating an absence of a genuine issue of material fact,²³² the court found that Arkansas Power & Light (AP&L) had satisfied its burden. To support its motion for summary judgment regarding shop rights,²³³ AP&L presented three affidavits, deposition testimony, and a statement of uncontested facts as required under Rule 29 of the Federal Rules of Civil Procedure.²³⁴ The burden, therefore, shifted to McElmurry to come forward with evidence showing specific facts demonstrating a genuine issue for trial.²³⁵ The court held that McElmurry's reliance on conclusory statements and denials in the pleadings²³⁶ was insufficient to raise the genuine issue of material fact necessary to avoid summary judgment.²³⁷

In another case where the Federal Circuit applied the summary judgment standard, *Keystone Retaining Wall Systems, Inc. v. Westrock, Inc.*,²³⁸ the question was whether Keystone's evidence regarding overall similarity raised a genuine issue of material fact precluding the district court's granting of a motion for summary judgment of noninfringement of Keystone's design patent.²³⁹ In opposing the motion, Keystone had submitted evidence of actual confusion between Keystone's blocks and the defendant's blocks.²⁴⁰ Crediting this evidence and giving Keystone the benefit of all inferences, the Federal Circuit held that Keystone failed to demonstrate a genuine issue of material fact regarding overall similarity because Keystone's evidence was primarily relevant to the unpatented wall and not to the claimed

230. *Id.*

231. 995 F.2d 1576, 27 U.S.P.Q.2d (BNA) 1129 (Fed. Cir. 1993).

232. *McElmurry v. Arkansas Power & Light Co.*, 995 F.2d 1576, 1578, 27 U.S.P.Q.2d (BNA) 1129, 1131 (Fed. Cir. 1993).

233. *See infra* Part V.E (discussing holding on shop rights).

234. *McElmurry*, 995 F.2d at 1578, 25 U.S.P.Q.2d (BNA) at 1131.

235. *Id.*

236. *Id.* (noting that McElmurry denied many of AP&L's uncontested facts and requests for admissions as well as responding that it lacked information necessary to answer many interrogatories).

237. *Id.*

238. 997 F.2d 1444, 27 U.S.P.Q.2d (BNA) 1297 (Fed. Cir. 1993).

239. *Keystone Retaining Wall Sys., Inc. v. Westrock, Inc.*, 997 F.2d 1444, 27 U.S.P.Q.2d (BNA) 1297 (Fed. Cir. 1993). Another issue raised was whether, in granting summary judgment of noninfringement, the district court misapplied the law of design patent infringement. The portion of the opinion dealing with this issue is discussed below.

240. *Id.*, 27 U.S.P.Q.2d (BNA) at 1301.

design of the individual blocks.²⁴¹ Accordingly, because Keystone's evidence opposing summary judgment failed to show a genuine issue of material fact, the Federal Circuit held that the district court had not erred in granting the motion for summary judgment of noninfringement.²⁴²

In all of the above cases, the Federal Circuit considered the issue of whether summary judgment should have been granted. In *International Visual Corp. v. Crown Metal Manufacturing Co.*,²⁴³ the Federal Circuit was faced with the question of whether a ruling of summary judgment of noninfringement was precluded merely because the party found not to infringe had not moved for summary judgment on that particular theory.²⁴⁴

International Visual Corporation (IVC) filed a complaint alleging that Crown's device infringed IVC's patent.²⁴⁵ Crown then counter-claimed for a declaratory judgment of noninfringement, invalidity, and unenforceability.²⁴⁶ IVC then moved for summary judgment on the issues of infringement, willful infringement, and Crown's invalidity defense.²⁴⁷ Crown responded by moving for summary judgment on the issues of invalidity and unenforceability, but not on the issue of noninfringement.²⁴⁸ The district court denied IVC's motion, granted Crown's motion on noninfringement grounds, and dismissed the case.²⁴⁹

On appeal, IVC argued that the district court was precluded from granting the summary judgment for noninfringement because Crown had not specifically moved for summary judgment on that particular issue.²⁵⁰ The Federal Circuit noted that district courts have the power to enter summary judgments *sua sponte*, as long as the losing party was notified that it had to come forward with all of its evidence.²⁵¹ Because IVC had notice that the issue of noninfringement was before the court on the parties' cross-motions,²⁵² the district

241. *Id.*, 27 U.S.P.Q.2d (BNA) at 1302-03.

242. *Id.*, 27 U.S.P.Q.2d (BNA) at 1303.

243. 991 F.2d 768, 26 U.S.P.Q.2d (BNA) 1588 (Fed. Cir. 1993).

244. *International Visual Corp. v. Crown Metal Mfg. Co.*, 991 F.2d 768, 768, 26 U.S.P.Q.2d (BNA) 1588, 1590 (Fed. Cir. 1993).

245. *Id.*, 26 U.S.P.Q.2d (BNA) at 1589.

246. *Id.*

247. *Id.*

248. *Id.*

249. *Id.*

250. *Id.*, 26 U.S.P.Q.2d (BNA) at 1590.

251. *Id.* (citing *Celotex Corp. v. Catrett*, 477 U.S. 317, 326 (1986) (holding that district court may grant summary judgment on issue properly before court)).

252. *Id.* at 770, 26 U.S.P.Q.2d (BNA) at 1590. IVC had stated that "the infringement issue is now ripe for summary adjudication," and had argued the issue on several occasions. *Id.*

court was not precluded from *sua sponte* granting summary judgment for noninfringement.²⁵³

As the above cases illustrate, a proper entry of summary judgment will preclude the issue summarily decided from reaching a jury.²⁵⁴ This should be distinguished from the right to a trial by jury, which is addressed in the next case.

H. Right to a Jury Trial

The Seventh Amendment of the U.S. Constitution provides for the right to a trial by jury.²⁵⁵ In *Paragon Podiatry Laboratory, Inc. v. KLM Laboratories, Inc.*,²⁵⁶ the court was presented with the question of whether a patentee has a right to a jury trial on the issue of culpable intent, which is a factual element of the defense of inequitable conduct.²⁵⁷ Acknowledging that statements in a number of Supreme Court cases refer to intent as an issue to be resolved by a jury, the Federal Circuit distinguished the present case by explaining that those cases did not involve intent in the context of an equitable defense.²⁵⁸

The court noted that the patent-infringement defense of inequitable conduct is entirely equitable in nature and cited precedent for the proposition that the Seventh Amendment right to a jury trial is applicable to actions at law, but not at equity.²⁵⁹ Thus, a disputed finding of intent to mislead or deceive the PTO during the prosecution of a patent application, a finding that is material to the equitable issue of inequitable conduct, is an issue for the judge, not the jury, to decide.²⁶⁰

As the above cases show, there are a variety of possible impediments a litigant may face in trying to get their case before a jury. Even when a litigant is successful in presenting the case to a jury and obtaining a verdict, the litigant may be confronted with other obstacles to

253. *Id.*

254. FED. R. CIV. P. 56(b).

255. U.S. CONST. amend. VII.

256. 984 F.2d 1182, 25 U.S.P.Q.2d (BNA) 1561 (Fed. Cir. 1993).

257. *Paragon Podiatry Lab., Inc. v. KLM Lab., Inc.*, 984 F.2d 1182, 1190, 25 U.S.P.Q.2d (BNA) 1561, 1568 (Fed. Cir. 1993). The court previously held in *Gardco Mfg., Inc. v. Herst Lighting Co.*, that the decision regarding inequitable conduct is a discretionary decision to be made by the judge on her or his own factual findings. 820 F.2d 1209, 1211-13, 2 U.S.P.Q.2d (BNA) 2015, 2017-19 (Fed. Cir. 1987).

258. *Paragon*, 984 F.2d at 1190, 25 U.S.P.Q.2d (BNA) at 1567-68.

259. *Id.*, 25 U.S.P.Q.2d (BNA) at 1568; *see also* *United States v. Louisiana*, 339 U.S. 699, 706 (1950) (stating that Seventh Amendment is not applicable to equity actions and only applies to actions at law).

260. *Paragon*, 984 F.2d at 1190, 25 U.S.P.Q.2d (BNA) at 1568.

gaining the benefit of the jury's verdict, as the cases in later subsections illustrate.²⁶¹

I. Jury Instructions

As observed in *Delta-X Corp. v. Baker Hughes Production Tools, Inc.*,²⁶² when a review of jury instructions in their entirety reveals that errors in the instructions, taken as a whole, clearly misled the jury, an appellate court will order a new trial.²⁶³ To prevail in a challenge to the correctness of jury instructions, a party must show not only that there was a fatal error in the jury instructions, but also that the party properly preserved the issue for appeal by requesting alternative instructions that could have corrected the flaws.²⁶⁴

In *Delta-X*, the appellant, Baker, contended that several isolated references in the instructions could have confused the jury about its role in interpreting patent claims.²⁶⁵ Baker had objected to the jury instructions at trial and asked the judge to interpret the claims and resolve issues about the meaning of the word "comparator" in the claims.²⁶⁶ In particular, Baker had requested that the judge instruct the jury that, as a matter of law, a comparator and a computer are not the same.²⁶⁷ The judge denied the request and submitted the dispute over the meaning of claim terminology to the jury.²⁶⁸ On appeal, Baker argued that the district court had instructed the jury that the court would interpret the claims, but never did so. Baker contended that this created uncertainty about whether the jury had properly interpreted the claims.²⁶⁹

The Federal Circuit found that excerpts from the jury instructions did suggest that the district court would interpret the claims for the jury.²⁷⁰ Nonetheless, the court concluded that the instructions were

261. See *infra* Part I.I-K.

262. 984 F.2d 410, 415, 25 U.S.P.Q.2d (BNA) 1447, 1450-51 (Fed. Cir. 1993).

263. *Delta-X Corp. v. Baker Hughes Prod. Tools, Inc.*, 984 F.2d 410, 415, 25 U.S.P.Q.2d (BNA) 1447, 1451 (Fed. Cir. 1993).

264. *Id.* (citing *Biodex Corp. v. Loredan Biomedical, Inc.*, 946 F.2d 850, 858, 20 U.S.P.Q.2d (BNA) 1252, 1259 (Fed. Cir. 1991), *cert. denied*, 112 S. Ct. 2957 (1992)); see also *Goodwall Constr. Co. v. Beers Constr. Co.*, 991 F.2d 751, 755, 26 U.S.P.Q.2d (BNA) 1420, 1423-24 (Fed. Cir. 1993) (holding that district court had no obligation to issue curative instructions because Goodwall's closing argument, which was alleged by Beers to be inconsistent with Goodwall's position in prosecuting its patent before PTO, did not affect validity or enforceability of patent and because parties' consent order foreclosed introduction of validity issues at trial).

265. *Delta-X*, 984 F.2d at 414-15, 25 U.S.P.Q.2d (BNA) at 1450-51.

266. *Id.* at 415, 25 U.S.P.Q.2d (BNA) at 1451.

267. *Id.*

268. *Id.*

269. *Id.*

270. *Id.*

not misleading when considered in their entirety.²⁷¹ Reviewing the jury instructions for prejudicial error, the Federal Circuit found that the instructions made clear that the jury was to resolve evidentiary disputes concerning claim terms and to determine whether Baker's products infringed the patent.²⁷² Because the jury returned a finding of infringement, the court concluded that the jury must have resolved the dispute over the meaning of "comparator."²⁷³ Thus, there was no error "so egregious as to mislead the jury and require a new trial."²⁷⁴

J. Jury Verdict Form

The court considered the propriety of a jury verdict form in *Goodwall Construction Co. v. Beers Construction Co.*²⁷⁵ The court's verdict form gave the jury a blank to answer "yes" or "no" to the question of literal infringement and a blank to answer "yes" or "no" to the question of infringement under the doctrine of equivalents for each asserted patent claim.²⁷⁶ According to the court's instructions, however, the doctrine of equivalents was not to be addressed if the jury found literal infringement.²⁷⁷ For each claim, the jury answered "yes" to the question of literal infringement but, as instructed, answered "no" to the question of infringement under the doctrine of equivalents.²⁷⁸ On post-trial motions, the district court determined that the jury instructions had precluded the jury from finding infringement under the doctrine of equivalents.²⁷⁹ The district court granted Goodwall's motion for judgment on infringement under the doctrine of equivalents under Rule 50(b)²⁸⁰ after finding that the tripartite test was met and that the recognized limitations on the doctrine would not apply.²⁸¹

271. *Id.*

272. *Id.*

273. *Id.*

274. *Id.* (citing *Jamesbury Corp. v. Litton Indus. Prods.*, 756 F.2d 1556, 1558, 225 U.S.P.Q. (BNA) 253, 255 (Fed. Cir. 1985)).

275. 991 F.2d 751, 756-57, 26 U.S.P.Q.2d (BNA) 1420, 1424-25 (Fed. Cir. 1993).

276. *Goodwall Constr. Co. v. Beers Constr. Co.*, 991 F.2d 751, 756, 26 U.S.P.Q.2d 1420, 1425 (Fed. Cir. 1993).

277. *Id.*

278. *Id.* at 757, 26 U.S.P.Q.2d (BNA) at 1425.

279. *Id.*

280. FED. R. CIV. P. 50(b).

281. *Goodwall Constr.*, 991 F.2d at 758, 26 U.S.P.Q.2d (BNA) at 1425. See Part IV.B.2 for discussion regarding the tripartite test and recognized limitations, i.e., the prior art and prosecution history.

The Federal Circuit determined that the district court had acted properly but should have invoked Rule 49(a), rather than Rule 50(b).²⁸² Because neither party had objected to the verdict form that was used, both parties waived the right to a jury trial on infringement under the doctrine of equivalents if the jury found literal infringement.²⁸³ Rule 49(a) was the appropriate vehicle for the court to enter judgment because the jury had provided answers to some, but not all, verdict interrogatories and those answers disposed of the case.²⁸⁴

K. Judgment As a Matter of Law/Judgment Notwithstanding the Verdict

Appealing a judgment entered on a jury verdict after denial of a motion for judgment as a matter of law under Federal Rule of Civil Procedure 50(b), the appellant must show that: "(1) reasonable persons could not in light of the evidence before them have found the facts necessary to support the verdict; or (2) the facts properly found cannot in law support the verdict."²⁸⁵ But, as the decisions below illustrate, an appellant must first move for a directed verdict at the close of evidence to obtain review of a denial of a Rule 50(b) motion.

Wang Laboratories, Inc. v. Toshiba Corp.,²⁸⁶ raised the question of whether the sufficiency of evidence underlying a district court's denial of a motion for judgment notwithstanding the verdict²⁸⁷ on a jury's verdict of infringement was reviewable on appeal where the alleged infringer moved for summary judgment before trial but failed to move for a directed verdict at the close of evidence.²⁸⁸ The Federal Circuit determined that it was precluded from reviewing the sufficien-

282. *Goodwall Constr.*, 991 F.2d at 757, 26 U.S.P.Q.2d (BNA) at 1425. Rule 49(a) provides that if, when a court employs special interrogatories, it "omits any issues of fact raised by the pleadings or by the evidence, each party waives the right to a trial by jury of the issue so omitted unless before the jury retires the party demands its submission to the jury. As to an issue omitted without such demand the court may make a finding . . ." FED. R. CIV. P. 49(a).

283. *Goodwall Constr.*, 991 F.2d at 757, 26 U.S.P.Q.2d (BNA) at 1425.

284. *Id.*; see also *Therrell v. Georgia Marble Holdings Corp.*, 960 F.2d 1555, 1563 (11th Cir. 1992) (holding that failure to demand that issue be presented to jury results in consent to judicial judgment on issue); *Wahpeton Canvas Co. v. Frontier, Inc.*, 870 F.2d 1546, 1553-54, 10 U.S.P.Q.2d (BNA) 1201, 1208 (Fed. Cir. 1989) (concluding that motion on issue not resolved by jury is motion for judgment under Rule 49(a)).

285. *Mentor v. Coloplast*, 998 F.2d 992, 994, 27 U.S.P.Q.2d (BNA) 1521, 1524 (Fed. Cir. 1993).

286. 993 F.2d 858, 26 U.S.P.Q.2d (BNA) 1767 (Fed. Cir. 1993).

287. *Wang Lab., Inc. v. Toshiba Corp.*, 993 F.2d 858, 26 U.S.P.Q.2d (BNA) 1767 (Fed. Cir. 1993). The case was heard and decided before December 1, 1991, the effective date of the amendment to FED. R. CIV. P. 50(b), which now refers to JNOV as "judgment as a matter of law." *Wang*, 993 F.2d at 860 n.1, 26 U.S.P.Q.2d (BNA) at 1770 n.1.

288. *Id.* at 869, 26 U.S.P.Q.2d (BNA) at 1777.

cy of the evidence supporting the jury's verdict of infringement as the alleged infringer, NEC, failed to raise this factual issue in a timely manner.²⁸⁹

The court acknowledged that the standard for summary judgment is virtually the same as that for a directed verdict—that there is only one reasonable conclusion as to the verdict.²⁹⁰ Under Rule 50(b), however, a motion for a directed verdict is a prerequisite to a motion for JNOV.²⁹¹ NEC's motion for summary judgment before trial was not a substitute for a motion for a directed verdict at the close of all the evidence.²⁹² The court, therefore, held that the sufficiency of the evidence underlying the district court's denial of JNOV was unreviewable.²⁹³

L. District Court Findings

*Cablestrand Corp. v. Wallshein*²⁹⁴ highlighted the importance of findings of fact and conclusions of law, pursuant to Rule 52(a), as providing a basis for review.²⁹⁵ Following a bench trial, the district court had issued a final judgment, which contained a general verdict stating simply that defendant Melvin Wallshein takes judgment against plaintiff Cablestrand Corporation on defendant's counterclaim and that defendant Weiss is awarded judgment.²⁹⁶ The district court had not filed any findings of fact or conclusions of law.²⁹⁷ On appeal, the Federal Circuit faced a number of issues, including patent validity, infringement, laches, estoppel, and personal liability. None of these issues had been mentioned in the district court's judgment.²⁹⁸ The Federal Circuit held that the judgment of the district court provided an insufficient basis for reviewing such a complex case.²⁹⁹ Consequently, the court vacated the decision and remanded the case for findings of fact and conclusions of law pursuant to Rule 52(a).³⁰⁰

289. *Id.* The court disagreed with NEC's contention that the issue of infringement, entailing the issue of claim construction, could be decided as a matter of law without reviewing the sufficiency of the evidence. *Id.*

290. *Id.* (citing *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 250 (1986)).

291. FED. R. CIV. P. 50(b).

292. *Wang*, 993 F.2d at 869, 26 U.S.P.Q.2d (BNA) at 1777.

293. *Id.*; see also *Delta-X Corp. v. Baker Hughes Prod. Tools, Inc.*, 984 F.2d 410, 415, 25 U.S.P.Q.2d (BNA) 1447, 1451 (Fed. Cir. 1993) (finding that district court erred in granting JNOV motion without motion for directed verdict).

294. 989 F.2d 472, 26 U.S.P.Q.2d (BNA) 1079 (Fed. Cir. 1993).

295. *Cablestrand Corp. v. Wallshein*, 989 F.2d 472, 473, 26 U.S.P.Q.2d (BNA) 1079, 1079 (Fed. Cir. 1993).

296. *Id.*

297. *Id.*, 26 U.S.P.Q.2d (BNA) at 1080.

298. *Id.*, 26 U.S.P.Q.2d (BNA) at 1079.

299. *Id.*, 26 U.S.P.Q.2d (BNA) at 1080.

300. *Id.*

Similarly, in *Atlantic Thermoplastics Co. v. Faytex Corp.*,³⁰¹ the court, for a second time in this case, vacated and remanded the district court's judgment because the district court did not provide findings of fact as required by Rule 52(a).³⁰² On the first remand, the district court had found that:

the patent was not invalid under the on sale bar because Faytere had failed to show, by clear and convincing evidence, a sale *or offer for sale* by Atlantic prior to the critical date. While Atlantic had negotiated with Triangle before the critical date, the district court held that these preliminary negotiations were directed to the necessity of further testing and development. The court therefore reaffirmed its findings that Atlantic's activities before the critical date were for experimental purposes, and not for profit.³⁰³

The court, with one judge dissenting,³⁰⁴ found that this opinion set forth, rather than the relevant factual findings, conclusory findings regarding the question of patent validity under the on-sale bar of 35 U.S.C. § 102(b) and remanded the case a second time.³⁰⁵

M. Motion for Setting Aside Judgment/New Trial

A party may move to set aside judgment under Rule 60(b) of the Federal Rules of Civil Procedure. The Federal Circuit reviewed an order denying a motion under Rule 60(b)(3) to set aside judgment on grounds of fraud in *Fraige v. American-National Watermattress Corp.*³⁰⁶

Fraige and Vinyl Products (collectively Vinyl Products) sued American-National claiming infringement of Vinyl Products' patent to a waterbed mattress containing certain fibers for reducing wave motion.³⁰⁷ Vinyl Products moved for a preliminary injunction, which American-National opposed, submitting in support of its opposition, false and forged documentation.³⁰⁸ American-National submitted declarations by its president falsely attesting that an

301. 5 F.3d 1477, 28 U.S.P.Q.2d (BNA) 1343 (Fed. Cir. 1993).

302. *Atlantic Thermoplastics Co. v. Faytex Corp.*, 5 F.3d 1477, 1478, 28 U.S.P.Q.2d (BNA) 1343, 1344 (Fed. Cir. 1993).

303. *Id.* at 1478-79, 28 U.S.P.Q.2d (BNA) at 1344-45.

304. The dissent indicated that "the record itself discloses an unmistakable path to the district court's legal judgment." *Id.* at 1482, 28 U.S.P.Q.2d (BNA) at 1347 (Rader, J., dissenting). The majority replied, "That the record may support findings that could be implied from the district court opinion does not satisfy the requirement that findings adequate to support the judgment be 'specially' found." *Id.* at 1480, 28 U.S.P.Q.2d (BNA) at 1347.

305. *Id.* at 1481-82, 28 U.S.P.Q.2d (BNA) at 1347. The on-sale bar is discussed below.

306. 996 F.2d 295, 27 U.S.P.Q.2d (BNA) 1149 (Fed. Cir. 1993).

307. *Fraige v. American-National Watermattress Corp.*, 996 F.2d 295, 296, 27 U.S.P.Q.2d (BNA) 1149, 1150 (Fed. Cir. 1993).

308. *Id.*

advertisement, which was altered to show the presence of fibers inside a waterbed mattress, predated the filing date of the application that matured into the patent in suit.³⁰⁹ American-National's president also falsely attested that his company's predecessor had sold fiber-filled mattresses more than one year before the filing of the patent application.³¹⁰ Relying on this false evidence, the district court denied the motion for a preliminary injunction.³¹¹

While the case was being tried before a jury, Vinyl Products became aware of American-National's fraud and attempted to present evidence of the fraud to the court.³¹² After American-National's counsel denied any misconduct, represented that experts would refute the fraud allegations, and objected to Vinyl Products' attempts to have the evidence on fraud admitted, the district court excluded the evidence and ruled that it would hear the matter after the trial.³¹³

After trial, the court entered judgment based on the jury's special verdicts that the patent was infringed but invalid under 35 U.S.C. §§ 102, 103, and 112.³¹⁴ At the post-trial hearing, American-National's attorneys admitted that they did not have any expert testimony to refute Vinyl Products' allegation.³¹⁵ After the post-trial hearing on the fraud issue, the district court found that American-National's president had practiced a fraud on the court and, therefore, the court imposed sanctions under Rule 11 of the Federal Rules of Civil Procedure.³¹⁶ Vinyl Products then moved under Rule 60(b)(3) for the court to set aside the verdict of invalidity based on American-National's fraud.³¹⁷ The district court acknowledged that American-National's president had filed false and forged documents relevant to the question of whether the claimed mattress was in the prior art, but nonetheless denied the Rule 60(b) motion based on its belief that the tainted evidence had not infected the trial and on its conclusion that invalidity was sustainable on grounds independent from the § 102 on-sale bar.³¹⁸ The district court denied Vinyl Products' subsequent request for reconsideration, even

309. *Id.*

310. *Id.*

311. *Id.*

312. *Id.*

313. *Id.*

314. *Id.*

315. *Id.*

316. *Id.*

317. *Id.* at 297, 27 U.S.P.Q.2d (BNA) at 1150.

318. *Id.*, 27 U.S.P.Q.2d (BNA) at 1150-51.

though it acknowledged that certain witnesses who testified had seen the forged advertisement.³¹⁹

The Federal Circuit found that the district court committed clear error in finding that the tainted evidence was neither presented at trial nor shown to any witness who testified.³²⁰ The court further determined that even if the jury's verdict of invalidity under § 112 could not have been affected by the fraud, the judgment could not stand.³²¹ The Federal Circuit therefore held that the district court abused its discretion in refusing to set aside the judgment of invalidity and reversed and remanded the case for a new trial on the question of invalidity.³²²

In *Broyhill Furniture Industry, Inc. v. Craftmaster Furniture Corp.*,³²³ the Federal Circuit reviewed the district court's decision to grant Craftmaster's Rule 60(b) motion to set aside a consent judgment.³²⁴ This consent judgment enjoined Craftmaster from infringing a Broyhill patent.³²⁵ After this consent judgment was entered, another district court, resolving an earlier filed lawsuit, found that Broyhill's patent was unenforceable because Broyhill had engaged in inequitable conduct during prosecution before the PTO.³²⁶ Following the invalidation of the patent, Craftmaster moved the court to void the consent judgment and for permission to bring counterclaims against Broyhill for fraud against both Craftmaster and the court.³²⁷ The district court granted both of Craftmaster's motions.³²⁸

319. *Id.*, 27 U.S.P.Q.2d (BNA) at 1151.

320. *Id.* at 298, 27 U.S.P.Q.2d (BNA) at 1151.

321. *Id.* at 297, 27 U.S.P.Q.2d (BNA) at 1151 (finding persuasive Supreme Court's rationale behind order setting aside judgment in *Hazel-Atlas Glass Co. v. Hartford-Empire Co.*, 322 U.S. 238 (1944)). Following the Supreme Court, the Federal Circuit determined that: first, the fraud was clearly established because American-National's president had deliberately schemed to interfere with the judicial process; second, the fraud was not only a wrong against the judicial system and Vinyl Products, but involved a matter of public concern; and, finally, American-National was in no position to dispute the effectiveness of its fraud, and the fraud's impact on the jury's invalidity verdicts was merely speculative. *Id.* at 298-99, 27 U.S.P.Q.2d (BNA) at 1152.

322. *Id.* at 300, 27 U.S.P.Q.2d (BNA) at 1153.

323. 12 F.3d 1080, 29 U.S.P.Q.2d (BNA) 1283 (Fed. Cir. 1993).

324. *Broyhill Furniture Indus., Inc. v. Craftmaster Furniture Corp.*, 12 F.3d 1080, 1081, 29 U.S.P.Q.2d (BNA) 1283, 1284 (Fed. Cir. 1993).

325. *Id.* at 1082, 29 U.S.P.Q.2d (BNA) at 1284.

326. *Id.* (noting that original ruling finding Broyhill's patent unenforceable was appealed and remanded, and that patent was again invalidated).

327. *Id.*

328. *Id.* As the Federal Circuit recounted, the district court had voided the consent judgment because "[i]f Broyhill does not possess a valid patent, Craftmaster cannot infringe Broyhill's patent." *Id.* at 1083-84, 29 U.S.P.Q.2d (BNA) at 1286 (citing district court opinion). A second reason for voiding the consent judgment given by the district court was that "Broyhill had committed a 'fraud upon the court' within the meaning of the provision in [Rule 60(b)] stating that 'this rule does not limit the power of a court . . . to set aside a judgment for fraud upon the court.'" *Id.* at 1083, 29 U.S.P.Q.2d (BNA) at 1285.

The Federal Circuit determined that the district court erred in concluding that the consent judgment enjoining infringement was void, because Craftmaster could not infringe Broyhill's unenforceable patent.³²⁹ The Federal Circuit held that a judgment is void under Rule 60(b)(4) only if the court that rendered the judgment lacked jurisdiction or failed to act in accordance with due process of law.³³⁰ Because neither of these bases for voiding the consent judgment was present, the court held that the district court abused its discretion in granting the motion on the basis of Rule 60(b)(4).³³¹

The Federal Circuit also determined that the district court erred in concluding that Broyhill had committed a "fraud upon the court" within the meaning of the savings clause.³³² The court explained that such fraud embraces only those species of fraud that subvert or attempt to subvert the integrity of the court or that have been perpetuated by officers of the court.³³³ Finding that Broyhill's inequitable conduct before the PTO was not such a species of fraud, the court concluded that the district court had abused its discretion in setting aside the consent judgment on the basis of the savings clause.³³⁴ The Federal Circuit vacated the district court's order and remanded for a determination of whether relief would be appropriate under other provisions of Rule 60(b).³³⁵

Mendenhall v. Cedarapids, Inc.,³³⁶ involved a motion for a new trial. Mendenhall and his exclusive licensee had sued Cedarapids, alleging infringement of Mendenhall's two reissue patents relating to a process for preparing hot-mix asphalt using recycled asphalt.³³⁷ After a jury trial, the district court entered a judgment of invalidity in favor of Cedarapids, accepting the special verdicts that: claims one through eleven of the first reissue patent were invalid under 35 U.S.C. § 103 for obviousness; claims twelve and thirteen of the same patent were not invalid for obviousness, but claim twelve was invalid under the second paragraph of 35 U.S.C. § 112 for indefiniteness; and all claims

329. *Id.* at 1087, 29 U.S.P.Q.2d (BNA) at 1288.

330. *Id.* at 1084, 29 U.S.P.Q.2d (BNA) at 1286.

331. *Id.*

332. *Id.* at 1085, 29 U.S.P.Q.2d (BNA) at 1287.

333. *Id.* at 1085-87, 29 U.S.P.Q.2d (BNA) at 1287-88.

334. *Id.*

335. *Id.* at 1087, 29 U.S.P.Q.2d (BNA) at 1288. The court indicated that the district court had correctly concluded that Craftmaster could not obtain relief under subsection (3) of Rule 60(b), which provides that a court may set aside a judgment for "fraud," because the motion had not been filed within the one-year time limitation applicable to this subsection. *Id.* at 1086, 29 U.S.P.Q.2d (BNA) at 1287-88.

336. 5 F.3d 1557, 28 U.S.P.Q.2d (BNA) 1081 (Fed. Cir. 1993).

337. *Mendenhall v. Cedarapids, Inc.*, 5 F.3d 1557, 1559, 28 U.S.P.Q.2d (BNA) 1081, 1083 (Fed. Cir. 1993).

of the second reissue patent were invalid under the public-use bar of 35 U.S.C. § 102(b).³³⁸ Mendenhall filed a motion for a new trial, which the district court denied.³³⁹

The Federal Circuit rejected each of Mendenhall's arguments that a new trial should have been ordered.³⁴⁰ The court disagreed with Mendenhall's contention that inconsistencies in the jury's special verdicts regarding invalidity necessitated a new trial.³⁴¹ Noting that a court may properly accept some special verdicts for those issues that are resolved according to the evidence and law while rejecting others,³⁴² the court held that the district court had not relied on all of the special verdicts in its judgment, and that there was no inconsistency in those verdicts on which the court relied.³⁴³ Specifically, the court saw no inconsistency in the jury finding claims one through eleven of the first reissue patent obvious while finding claims twelve and thirteen of the same patent nonobvious, because there were additional limitations in the latter claims that were properly given controlling significance.³⁴⁴ Concerning the second reissue patent, the court found that the special verdict, holding that the claims were not invalid for obviousness and viewed in light of the principle that "anticipation is the epitome of obviousness," did not require that the court set aside the verdict of invalidity under the public-use bar.³⁴⁵

The court also rejected Mendenhall's argument that the jury instructions were erroneous.³⁴⁶ Finally, in rejecting Mendenhall's challenge, the court did not agree that the district court erred as a matter of law when it admitted the judge's opinion from earlier litigation against another party involving the patents presently in suit, which had resulted in a judgment that the patents were not invalid.³⁴⁷

338. *Id.* at 1561-62, 28 U.S.P.Q.2d (BNA) at 1085.

339. *Id.* at 1562, 28 U.S.P.Q.2d (BNA) at 1086.

340. *See id.* at 1562-76, 28 U.S.P.Q.2d (BNA) at 1086-98 (refusing to grant new trial).

341. *See id.* (rejecting arguments claiming inconsistent verdicts, erroneous instructions, and incorrect evidentiary rulings).

342. *Id.* at 1562-63, 28 U.S.P.Q.2d (BNA) at 1086-87 (citing *Quaker City Gear Works, Inc. v. Skil Corp.*, 747 F.2d 1446, 1453, 223 U.S.P.Q. (BNA) 1161, 1165 (Fed. Cir. 1984), *cert. denied*, 471 U.S. 1136 (1985)).

343. *Id.* at 1563, 28 U.S.P.Q.2d (BNA) at 1086.

344. *Id.*

345. *Id.*, 28 U.S.P.Q.2d (BNA) at 1086-87.

346. *See id.* at 1563-66, 28 U.S.P.Q.2d (BNA) at 1087-89.

347. *Id.* at 1566, 28 U.S.P.Q.2d (BNA) at 1089.

Reviewing the decision excluding the proffered evidence for an abuse of discretion,³⁴⁸ the court first noted that the opinion in the previous case could not be used as a collateral estoppel, because Cedarapids was not a party to that case.³⁴⁹ The court then explained why, contrary to Mendenhall's arguments, the previous opinion was not controlling under either the court's precedent³⁵⁰ or under principles of *stare decisis*.³⁵¹ The court explained that the two prior cases on which Mendenhall relied dealt with using a district court's opinion from a previous litigation concerning validity as legal precedent, not as substantive evidence of disputed facts.³⁵² After pointing out that *stare decisis* is generally inappropriate on the issue of patent validity,³⁵³ the court noted that Mendenhall had failed to recognize that *stare decisis* applies only if the underlying factual findings of the two cases are the same, not merely the evidence.³⁵⁴ Furthermore, whether *stare decisis* applies is a legal matter for the judge to decide, not the jury.³⁵⁵

Turning to Rule 403,³⁵⁶ the court determined that the district court properly considered all of the proffered evidence *in camera* and neither committed error nor abused its discretion in refusing to admit the opinion from the prior litigation as substantive evidence on all overlapping issues, especially in light of the high likelihood of prejudice and confusion that would have resulted if it had been admitted.³⁵⁷ Thus rejecting all of Mendenhall's arguments, the Federal Circuit upheld the denial of Mendenhall's motion for a new trial.³⁵⁸

348. *Id.* at 1568-69, 28 U.S.P.Q.2d (BNA) at 1091 (citing *Block v. R.H. Macy & Co.*, 712 F.2d 1241, 1245 (8th Cir. 1983)).

349. *Id.* at 1569, 28 U.S.P.Q.2d (BNA) at 1091 (citing *Blonder-Tongue Lab. Inc. v. University of Ill. Found.*, 402 U.S. 313, 329 (1971), and recognizing that Mendenhall did not assert collateral estoppel argument).

350. *Id.* (citing *Gillette Co. v. S.C. Johnson & Son, Inc.*, 919 F.2d 720, 723, 16 U.S.P.Q.2d (BNA) 1923, 1926 (Fed. Cir. 1990); *Stevenson v. Sears, Roebuck & Co.*, 713 F.2d 705, 711, 218 U.S.P.Q. (BNA) 969 (Fed. Cir. 1983)).

351. *Id.* at 1570-72, 28 U.S.P.Q.2d (BNA) at 1092-94 (stating that because factual findings underlying legal determinations were not same, *stare decisis* did not apply).

352. *Id.* at 1570, 28 U.S.P.Q.2d (BNA) at 1092-93.

353. *Id.*, 28 U.S.P.Q.2d (BNA) at 1092 (citing *Stevenson*, 713 F.2d at 711, 218 U.S.P.Q. (BNA) at 974).

354. *Id.*, 28 U.S.P.Q.2d (BNA) at 1093.

355. *Id.* at 1570-71, 28 U.S.P.Q.2d (BNA) at 1093.

356. FED. R. EVID. 403 (permitting court, at its discretion, to exclude evidence that is otherwise admissible, but which raises dangers of unfair prejudice, confusion of issues, or waste of judicial resources).

357. See *Mendenhall*, 5 F.3d at 1572-75, 28 U.S.P.Q.2d (BNA) at 1094-97 (discussing and rejecting Mendenhall's argument that evidence or prior patent litigation should be excluded under Rule 403 because of its prejudicial effect).

358. *Id.* at 1576, 28 U.S.P.Q.2d (BNA) at 1097.

II. PATENTABILITY AND VALIDITY

The general requirements for a valid utility patent have a basis in chapters 10 and 11 of the patent statute, Title 35 of the United States Code. With respect to the conditions for patentability, the "utility" requirement is provided at 35 U.S.C. § 101.³⁵⁹ The "novelty" requirement is spelled out at 35 U.S.C. § 102,³⁶⁰ while the "nonobviousness" requirement is provided at 35 U.S.C. § 103.³⁶¹

Even if an invention is useful, new, and nonobvious, an inventor will not be granted a U.S. patent to the invention without fulfilling other requirements. The patent must be based on an application having a specification and one or more claims meeting the requirements listed at 35 U.S.C. § 112.³⁶² The first paragraph of § 112 contains the "written description," "enablement," and "best mode" requirements that must be met by the specification.³⁶³ Under the second paragraph of § 112, the specification must conclude with one or more claims meeting the "definiteness" requirement and reciting what the applicant regards as his or her invention.³⁶⁴

Depending on the type of patent, other requirements must be met as well. For example, 35 U.S.C. § 171 specifies conditions for a design patent,³⁶⁵ while 35 U.S.C. § 161 specifies those for a plant patent.³⁶⁶

359. See 35 U.S.C. § 101 (1988) ("Whoever invents or discovers any new and *useful* process, machine, manufacture, or composition of matter, or any new and *useful* improvement thereof, may obtain a patent therefore, subject to the conditions and requirements of this title.") (emphasis added).

360. See *id.* § 102 (describing conditions under which novelty exists).

361. See *id.* § 103 ("A patent may not be obtained . . . if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person of ordinary skill in the art to which said subject matter pertains.").

362. See *id.* § 112 (outlining specification requirements).

363. See *id.* ("The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.").

364. See *id.* ("The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention").

365. See *id.* § 171 ("Whoever invents any new, original and ornamental design for an article of manufacture may obtain a patent therefor, subject to the conditions and requirements of this title.

The provisions of this title relating to patents for inventions shall apply to patents for design, except as otherwise provided.").

366. See *id.* § 161 ("Whoever invents or discovers and asexually reproduces any distinct and new variety of plant, including cultivated spores, mutants, hybrids, and newly found seedlings, other than a tuber propagated plant or a plant found in an uncultivated state, may obtain a patent therefor, subject to the conditions and requirements of this title.

Issues relating to some of the general requirements for a valid utility patent were raised in several cases decided by the Federal Circuit in 1993 and are discussed in subsection A below. Because the novelty and nonobviousness requirements for patentability under §§ 102 and 103 are common to utility, design, and reissue patents, the portions of the cases dealing with prior art issues pertaining to these types of patents are discussed in parts 2 and 3 of subsection A.³⁶⁷ Decisions on issues relating to special requirements for specific types of patents, namely reissue patents and design patents, are discussed in subsection B and C respectively.³⁶⁸

A. Standard Patentability Requirements

1. 35 U.S.C. § 101

Section 101 requires that an invention be "useful."³⁶⁹ As apparent from *Miles Laboratories, Inc. v. Shandon, Inc.*,³⁷⁰ an argument that a claim encompasses inoperable embodiments or species goes to whether a claimed invention has practical utility pursuant to § 101 and whether the specification enables one skilled in the art to "use" the claimed invention pursuant to the first paragraph of § 112.³⁷¹

A case may also raise the issue of whether the practical utility requirement and, consequently, the how-to-use requirement have been met in the context of a prior art rejection.³⁷² As apparent from *In re Ziegler*,³⁷³ if a reference is applied as prior art under 35 U.S.C. § 102(e), an applicant may attempt to "antedate" the reference by establishing entitlement to a priority date of an earlier application

The provisions of this title relating to patents for inventions shall apply to patents for plants, except as otherwise provided.").

367. See *infra* notes 379-444 and accompanying text; see also *supra* note 359.

368. See *infra* notes 445-99 and accompanying text.

369. 35 U.S.C. § 101 (1988).

370. 997 F.2d 870, 27 U.S.P.Q.2d (BNA) 1123 (Fed. Cir. 1993).

371. *Miles Lab., Inc. v. Shandon Inc.*, 997 F.2d 870, 875, 27 U.S.P.Q.2d (BNA) 1123, 1126 (Fed. Cir. 1993) (construing Shandon's indefiniteness argument—that Miles' patent claims were invalid under § 112, second paragraph, because they covered inoperative embodiments—as challenge to validity under utility requirement of § 101 or enablement requirement of § 112, first paragraph; court held that claims were not invalid on these grounds because record showed that challenged embodiments would be operative); see also *In re Ziegler*, 992 F.2d 1197, 1200-01, 26 U.S.P.Q.2d (BNA) 1600, 1603 (Fed. Cir. 1993) (reporting that "how-to-use" prong of enablement requirement of 35 U.S.C. § 112 incorporates as matter of law, requirement of 35 U.S.C. § 101 that specification disclose as matter of fact, practical utility for claimed invention).

372. See *Ziegler*, 992 F.2d at 1199-1203, 26 U.S.P.Q.2d at 1603 (determining whether practical utility existed in light of "how-to-use" prong of enablement requirement where there was prior art rejection).

373. *Id.* at 1197, 26 U.S.P.Q.2d (BNA) at 1600.

under 35 U.S.C. § 119.³⁷⁴ To establish such entitlement, the prior application must be shown to satisfy the requirements of 35 U.S.C. § 112, including the how-to-use requirement, which incorporates the utility requirement.³⁷⁵

Section 101 also provides the basis for a “double-patenting” rejection of an application claim by specifying that an inventor is only entitled to a single patent for an invention.³⁷⁶ Thus, where an inventor obtains a patent claim covering one invention and files another patent application having a claim of identical scope, the application claim is unpatentable on the ground of statutory double patenting.³⁷⁷ Where the application claim has a scope that is not identical to the scope of the patent claim and where a question of the former’s obviousness in view of the latter’s is raised, the double-patenting analysis proceeds to an inquiry under the doctrine of obviousness-type double patenting.³⁷⁸

2. *Obviousness-type double patenting*

As explained in *In re Goodman*,³⁷⁹ the doctrine of equivalents exists to prevent extension of the patent right beyond the statutory period and so rejects claims to subject matter that is not patentably distinct from subject matter claimed in a prior patent to the same invention.³⁸⁰ Thus, a court will inquire whether an application claim defines an obvious variation of a prior patent claim; if so, the court will sustain the PTO’s rejection for obviousness-type double patenting in the absence of a terminal disclaimer filed in the application.³⁸¹

The Federal Circuit has also required, in certain circumstances, an additional inquiry to support an obviousness-type double patenting rejection. In such circumstances, e.g., where a later-filed improve-

374. See *id.* at 1200, 26 U.S.P.Q.2d (BNA) at 1603 (stating that foreign patent application must meet requirements of § 112 in order to gain entitlement to priority date under § 119).

375. *Id.* (explaining that satisfaction of this test requires specification by written description of invention, manner and process of its manufacture and use in “full, clear, concise, and exact terms”).

376. See 35 U.S.C. § 101 (1988) (providing that only *new* inventions or *new* improvements to existing inventions can be patented).

377. See *In re Goodman*, 11 F.3d 1046, 1052-53, 29 U.S.P.Q.2d (BNA) 2010, 2015-16 (Fed. Cir. 1993) (citing *Miller v. Eagle Mfg. Co.*, 151 U.S. 186, 197 (1894); *In re Stanley*, 214 F.2d 151, 153, 102 U.S.P.Q. (BNA) 234, 236 (C.C.P.A. 1954)).

378. See *id.* at 1052, 29 U.S.P.Q.2d (BNA) at 2015 (citing *In re Vogel*, 422 F.2d 438, 441, 164 U.S.P.Q. (BNA) 619, 621-22 (C.C.P.A. 1970)).

379. *Id.* at 1046, 29 U.S.P.Q.2d (BNA) at 2010.

380. *Id.* at 1052, 29 U.S.P.Q.2d (BNA) at 2015 (citing *In re Braat*, 937 F.2d 589, 592, 19 U.S.P.Q.2d (BNA) 1289, 1291-92 (Fed. Cir. 1991)).

381. *Id.*, 29 U.S.P.Q.2d (BNA) at 2015-16 (citing *In re Eckel*, 393 F.2d 848, 157 U.S.P.Q. (BNA) 415 (C.C.P.A. 1968)).

ment patent issues before an earlier-filed basic patent,³⁸² the rejection, to be sustained, requires not only that the application claims be patentably indistinct from the prior patent claims, but also that the prior patent claims be patentably indistinct from the application claims.³⁸³ The court considered whether the case of *Goodman* required such a two-way analysis.³⁸⁴

The broadest of Goodman's application claims, which Goodman grouped together on appeal and which thus stood (or fell) together,³⁸⁵ defined a genus of nucleic-acid constructs.³⁸⁶ The court determined that the claimed genus encompassed the species covered by a claim of the prior patent, and that the application claims therefore were not patentably distinct from the prior patent claims.³⁸⁷ The court also determined that the circumstances of the case did not require application of the two-way analysis.³⁸⁸

The court noted that Goodman, not the PTO, dictated the rate of prosecution of the generic claims *vis-a-vis* the narrower claims of the prior patent.³⁸⁹ Goodman chose to obtain early issuance of its narrower claims and file a continuation for the broader claims rather than appeal the rejection of the broader claims to the court.³⁹⁰ Accordingly, the lack of patentable distinctness of the application claims compared to the patent claims was sufficient to sustain the obviousness-type double patenting rejection.³⁹¹

Of course, as in *Goodman*, the PTO, rather than the applicant, may dictate the rate of prosecution of different claims by imposing a restriction requirement under 35 U.S.C. § 121,³⁹² as reflected by *Texas Instruments, Inc. v. United States International Trade Commis-*

382. See *In re Stanley*, 214 F.2d 151, 158, 102 U.S.P.Q. (BNA) 234, 240 (C.C.P.A. 1954) (recounting fact that application for improvements on "Methods and Apparatus for the Fluid Treatment of Filamentary Materials" was filed prior to application for "Method for Treatment [o]f Filaments").

383. *Goodman*, 11 F.3d at 1053, 29 U.S.P.Q.2d (BNA) at 2016.

384. *Id.*

385. *Id.* (citing, *inter alia*, *In re King*, 801 F.2d 1324, 231 U.S.P.Q. (BNA) 136 (Fed. Cir. 1986)).

386. *Id.* at 1049, 29 U.S.P.Q.2d (BNA) at 2013.

387. *Id.* at 1053 n.4, 29 U.S.P.Q.2d (BNA) at 2016 n.4 (citing, e.g., *In re Van Ornum*, 686 F.2d 937, 944, 214 U.S.P.Q. (BNA) 761, 767 (C.C.P.A. 1982)).

388. *Id.* at 1053, 29 U.S.P.Q.2d (BNA) at 2016.

389. *Id.*

390. *Id.*

391. *Id.*

392. See *Texas Instruments, Inc. v. United States Int'l Trade Comm'n*, 988 F.2d 1165, 1168, 26 U.S.P.Q.2d (BNA) 1018, 1020 (Fed. Cir. 1993) (noting that Commission issued limited exclusion order and cease and desist orders to each of five respondents).

tion.³⁹³ If the PTO requires restriction between two groups of claims representing independent and distinct inventions and, in response, an applicant elects one group of claims that ultimately issue in a patent and files a divisional application to the non-elected group of claims, then consonance (i.e., the demarcation between the two inventions that prompted the restriction requirement) must be maintained.³⁹⁴ Otherwise, the non-consonant claims of the divisional application may be rejected as obvious in view of the patent claims under the doctrine of obviousness-type double patenting.³⁹⁵

3. 35 U.S.C. § 102

An application claim is unpatentable and a patent claim is invalid under 35 U.S.C. § 102 if it is not novel—i.e., “anticipated.”³⁹⁶ For example, under 35 U.S.C. § 102(b), an inventor will lose any right to a patent for an invention if it was “on sale” for more than one year before the filing of the U.S. patent application.³⁹⁷

a. 35 U.S.C. § 102(b)

Section 102(b) of the patent statute operates as an absolute bar to patentability and precludes the patenting of any invention that was patented or described in a printed publication in the United States or a foreign country, or that was publicly used or on sale in the United States, for more than one year before the filing of the U.S. patent application.³⁹⁸ This bar is known as the “on-sale bar” to patentability.³⁹⁹

As pointed out in the dissenting opinion in *Atlantic Thermoplastics*

393. See *id.* at 1179, 26 U.S.P.Q.2d (BNA) at 1029 (upholding ITC’s determination that claims were not invalid for obviousness-type double patenting because consonance was maintained and claims of patent in question were not obvious in view of claims of earlier patent).

394. See *id.* (discussing rule that requires that “patentee may not remove a patent from consideration as a prior art reference pursuant to [§ 112] where the principle of consonance is violated”).

395. See *id.* (noting that principle of consonance protects patentee’s ability to remove patent from consideration as prior art reference).

396. See *Akzo N. v. United States ITC*, 808 F.2d 1471, 1479 (Fed. Cir. 1986) (finding proper application of § 102 novelty uses standard of anticipation that requires “each and every element” of claimed invention be disclosed in prior art reference, along with showing that prior art reference is enabling); *Titanium Metals Corp. of Am. v. Banner*, 778 F.2d 773, 781 (Fed. Cir. 1985) (stating that § 102 is “usual basis for rejection for lack of novelty or anticipation”).

397. See 35 U.S.C. § 102(b) (1988) (“A person shall be entitled to a patent unless the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States. . . .”) (emphasis added).

398. *Id.*

399. *Id.*

Co. v. Faytex Corp.,⁴⁰⁰ commentators have noted that Federal Circuit decisions relating to the on-sale bar have not provided any sense of predictability⁴⁰¹ on this issue because these Federal Circuit decisions have set forth several tests for the on-sale bar of § 102(b).⁴⁰² Under the test identified in the *Atlantic Thermoplastics* dissent, "the on-sale bar requires that: (1) the claimed invention be embodied in or obvious over the subject matter sold; (2) the operability of the invention must have been verified by sufficient testing; and (3) the sale must have been plurality for profit rather than experimental purposes."⁴⁰³ Another test applied by the Federal Circuit requires: (1) more than one year before the critical date, there must have been a sale or definite offer to sell; (2) evidence that the claimed invention is anticipated by or obvious over the subject matter sold; and (3) an evaluation of the circumstances surrounding the sale in view of the underlying policies.⁴⁰⁴ Finally, in some cases the test simply requires a consideration of the "totality of the circumstances" in light of the policies underlying the on-sale bar.⁴⁰⁵ In the following case, the court apparently applied this last test.

In *Keystone Retaining Wall Systems, Inc. v. Westrock, Inc.*,⁴⁰⁶ Keystone asserted that the district court erred in granting summary judgment for patent invalidity.⁴⁰⁷ Keystone argued that a genuine issue of material fact existed regarding whether an embodiment of the claimed invention was on sale before the critical date required under 35 U.S.C. § 102(b).⁴⁰⁸ The claimed invention related to a retaining wall made from interlocked blocks and soil-stabilizing fabric (geo-grid) connected to the wall via pins interconnecting and aligning the blocks.⁴⁰⁹ The alleged infringer asserted that the patent was invalid under § 102(b) because Keystone had offered to sell to a city a wall system having a pin-connected geo-grid more than one year

400. 5 F.3d 1477, 28 U.S.P.Q.2d (BNA) 1343 (Fed. Cir. 1993).

401. See *Atlantic Thermoplastics Co. v. Faytex Corp.*, 5 F.3d 1477, 1483 n.1, 28 U.S.P.Q.2d (BNA) 1343, 1348 n.1 (Fed. Cir. 1993) (Rader, J., dissenting).

402. *Id.* at 1483, 28 U.S.P.Q.2d (BNA) at 1348.

403. *Id.* at 1482, 28 U.S.P.Q.2d (BNA) at 1348 (citing *King Instrument Corp. v. Otari Corp.*, 767 F.2d 853, 859-60, 226 U.S.P.Q. (BNA) 402, 406 (Fed. Cir. 1985), *cert. denied*, 475 U.S. 1016 (1986)).

404. *Id.* at 1483, 28 U.S.P.Q.2d (BNA) at 1348 (citing *UMC Elec. Co. v. United States*, 816 F.2d 647, 656, 2 U.S.P.Q.2d (BNA) 1465, 1471-72 (Fed. Cir. 1987), *cert. denied*, 484 U.S. 1025 (1988)).

405. *Id.* (citing *Manville Sales Corp. v. Paramount Sys., Inc.*, 917 F.2d 544, 549-50, 16 U.S.P.Q.2d (BNA) 1587, 1591-92 (Fed. Cir. 1990)).

406. 997 F.2d 1444, 27 U.S.P.Q.2d (BNA) 1297 (Fed. Cir. 1993).

407. *Keystone Retaining Wall Sys., Inc. v. Westrock, Inc.*, 997 F.2d 1444, 1446, 27 U.S.P.Q.2d (BNA) 1297, 1298 (Fed. Cir. 1993) (challenging summary judgment).

408. *Id.*

409. *Id.*, 27 U.S.P.Q.2d (BNA) at 1298-99.

before Keystone filed its U.S. patent application.⁴¹⁰ Keystone conceded that it had offered to sell the city a wall system, but disputed that this wall system embodied the claimed invention.⁴¹¹

As explained by the Federal Circuit, for an on-sale bar to be triggered, a device, either anticipating or rendering obvious the claimed invention, must have been on sale or offered for sale primarily for profit more than one year prior to the critical date, and the device must have been operable at that time.⁴¹² But the claimed invention need not be reduced to practice to trigger the on-sale bar.⁴¹³ "The entirety of the circumstances surrounding the sale, or offer to sell, including the stage of development and the nature of the invention, must be balanced against the policies underlying the on-sale bar of section 102(b)."⁴¹⁴

The court noted that the claimed invention required that the geo-grid be attached to the retaining wall blocks by using the same aligning pins and by interconnecting the blocks.⁴¹⁵ The district court had found that one of the proposals submitted to the city, before the critical date, alluded to connection of the geo-grid; the district court also found that there was no evidence that any means other than pins had been contemplated or proposed by Keystone.⁴¹⁶ The Federal Circuit pointed out, however, that the proposals submitted by Keystone did not expressly specify that pins aligning and interconnecting the blocks would anchor the geo-grid.⁴¹⁷ Thus, considering the totality of the circumstances, the court found that a genuine issue of material fact existed regarding whether an embodiment of the claimed invention was offered for sale before the critical date.⁴¹⁸ The court reversed the district court's granting of summary judgment on the issue of invalidity under 35 U.S.C. § 102(b).⁴¹⁹

In *Paragon Podiatry Laboratory, Inc. v. KLM Laboratories, Inc.*,⁴²⁰ a district court's grant of summary judgment of invalidity under 35 U.S.C. § 102(b) was also challenged.⁴²¹ Here, however, the patent holder, Paragon, did not claim that a device embodying the patented

410. *Id.* at 1447, 27 U.S.P.Q.2d (BNA) at 1299.

411. *Id.* at 1452, 27 U.S.P.Q.2d (BNA) at 1303.

412. *Id.* at 1451, 27 U.S.P.Q.2d (BNA) at 1303.

413. *Id.* at 1452, 27 U.S.P.Q.2d (BNA) at 1303.

414. *Id.*

415. *Id.*, 27 U.S.P.Q.2d (BNA) at 1304.

416. *Id.*

417. *Id.*

418. *Id.* at 1453, 27 U.S.P.Q.2d (BNA) at 1304.

419. *Id.*

420. 984 F.2d 1182, 25 U.S.P.Q.2d (BNA) 1561 (Fed. Cir. 1993).

421. *Paragon Podiatry Lab., Inc. v. KLM Lab., Inc.*, 984 F.2d 1182, 25 U.S.P.Q.2d (BNA) 1561, 1562 (Fed. Cir. 1993).

invention had been sold before the critical date.⁴²² Paragon only challenged the district court's decision on summary judgment that the sales were not for experimental purposes and, therefore, did not fall within the so-called experimental-use exception to the on-sale bar.⁴²³

The district court found that Paragon had published price lists and letters offering for sale the orthotic device claimed in the patent before the critical date.⁴²⁴ The district court also held that none of the price lists and letters referred to experimental testing, and that, as admitted by Paragon, about three hundred of the devices had been sold prior to the critical date without Paragon maintaining any control over the devices or placing any restriction on their use.⁴²⁵ In response to the motion for summary judgment, Paragon had submitted: an affidavit of the inventor averring that he considered the sales as being for experimental, rather than commercial, purposes; a declaration by a patent attorney averring that he was informed during pendency of the patent application that the sales were for testing purposes; and a declaration of a Paragon officer averring that the sales were limited and that he called on podiatrists to monitor results and check complaints.⁴²⁶ Nonetheless, the district court concluded that Paragon's sales activities were not for legitimate experimental purposes.⁴²⁷

On appeal, Paragon argued that the evidence it had submitted in response to the motion for summary judgment was sufficient to raise a genuine issue of fact, material to the experimental use issue, and that the grant of summary judgment was therefore improper.⁴²⁸ The Federal Circuit disagreed, finding that the facts and surrounding circumstances, when considered in combination, pointed to only one possible conclusion—that the sales were commercial in nature and fell within the statutory bar.⁴²⁹

Regarding the inventor's affidavit and the patent attorney's declaration, the court explained that intent to experiment is merely

422. *Id.* at 1185-86, 25 U.S.P.Q.2d (BNA) at 1564.

423. *Id.* at 1186, 25 U.S.P.Q.2d (BNA) at 1564. The term "exception" is somewhat of a misnomer in this context. The issue is whether a claimed invention was "on sale" within the meaning of the statute, and not the dual issue of whether the invention was "on sale" and, if so, whether the sale was primarily for experimental purposes. *Id.* at 1185 n.3, 25 U.S.P.Q.2d (BNA) at 1563 n.3.

424. *Id.* at 1185, 25 U.S.P.Q.2d (BNA) at 1563.

425. *Id.*, 25 U.S.P.Q.2d (BNA) at 1564.

426. *Id.* at 1186, 25 U.S.P.Q.2d (BNA) at 1564.

427. *See id.* at 1185, 25 U.S.P.Q.2d (BNA) at 1564 (granting summary judgment).

428. *Id.* at 1186, 25 U.S.P.Q.2d (BNA) at 1564.

429. *See id.*, 25 U.S.P.Q.2d (BNA) at 1564-66 (concluding that no dispute as to any material fact regarding commercial nature of sales existed).

a fact to be taken into account in resolving the ultimate legal question and that the expression by an inventor of his subjective intent to experiment, particularly after institution of litigation, is generally of minimal value.⁴³⁰ Although the court observed that the patent attorney's declaration, at best, showed that the inventor's statements were not litigation-driven, therefore providing some credence to the inventor's averments, the court noted that the inventor's expressed intent of experimentation was assumed for purposes of deciding the motion.⁴³¹

But an inventor's subjective intent to experiment, standing alone, does not establish experimental use. Given sales made in an ordinary commercial environment, in which the goods are placed outside the control of the inventor, the inventor's secretly held subjective intent, even if true, is unavailing unless supported by objective evidence.⁴³² The court found there to be a lack of objective evidence of experimental use.⁴³³

To assert experimental use, the Supreme Court has indicated that the inventor must clearly have kept control over his invention in the course of its testing.⁴³⁴ Moreover, the assertion of sales for experimentation, at a minimum, requires that the customers be made aware of the experimentation.⁴³⁵ Here, Paragon sold the devices as fully tested, without any control being retained by the inventor over the devices, and without any disclosure to either the doctors or their patients about their involvement in experimental testing.⁴³⁶

The declaration of Paragon's officer did not alter the non-experimental nature of the sales from the viewpoint of the purchasing doctors or the public.⁴³⁷ The court noted that the declaration did not state any activity not normally associated with a regular commercial sale.⁴³⁸ The receipt and processing of commercial customer complaints did not transform unrestricted sales made outside the one-year grace period of § 102(b) into permissible sales activity.⁴³⁹

430. *Id.*, 25 U.S.P.Q.2d (BNA) at 1565 (citing *TP Lab., Inc. v. Professional Positioners, Inc.*, 724 F.2d 965, 972, 220 U.S.P.Q. (BNA) 577, 583 (Fed. Cir.), *cert. denied*, 469 U.S. 826 (1984)).

431. *Id.* at 1187, 25 U.S.P.Q.2d (BNA) at 1565.

432. *Id.* (quoting *LaBounty Mfg., Inc. v. United States Int'l Trade Comm'n*, 958 F.2d 1066, 1072, 22 U.S.P.Q.2d (BNA) 1025, 1029 (Fed. Cir. 1992)).

433. *Id.*, 25 U.S.P.Q.2d (BNA) at 1565-66.

434. *Id.*, 25 U.S.P.Q.2d (BNA) at 1565 (quoting *In re Hamilton*, 882 F.2d 1576, 1580, 11 U.S.P.Q.2d (BNA) 1890, 1893 (Fed. Cir. 1989) (citing *City of Elizabeth v. American Nicholson Pavement Co.*, 97 U.S. 126, 136 (1877))).

435. *Id.* at 1188, 25 U.S.P.Q.2d (BNA) at 1565.

436. *Id.*, 25 U.S.P.Q.2d (BNA) at 1565-66.

437. *Id.*, 25 U.S.P.Q.2d (BNA) at 1565.

438. *Id.* at 1187, 25 U.S.P.Q.2d (BNA) at 1565-66.

439. *Id.* at 1187-88, 25 U.S.P.Q.2d (BNA) at 1565-66.

The court rejected Paragon's argument that the limitation of the sales to low-volume purchases objectively showed that the sales were intended to be for testing purposes.⁴⁴⁰ The court said that this fact may be relevant to determining whether the scope of the inventor's testing was appropriate, but only where other evidence indicates that the sales were restricted and controlled as appropriate for experimental use.⁴⁴¹ Because the evidence did not show that the sales were appropriately restricted and controlled and, in any event, even a single sale outside the grace period may be sufficient to invoke § 102(b), Paragon's evidence was insufficient to negate the bar.⁴⁴²

Thus, none of the objective evidence proffered by Paragon indicated that the sales of the devices were for anything other than a primarily commercial purpose.⁴⁴³ There being no *material* factual dispute regarding the commercial nature of the sales, the Federal Circuit affirmed the district court's judgment.⁴⁴⁴

b. 35 U.S.C. § 102(d)

Like 35 U.S.C. § 102(b), 35 U.S.C. § 102(d) is an absolute bar to patentability.⁴⁴⁵ Section 102(d) applies where a U.S. patent application is filed more than one year after a corresponding foreign application has been filed and the foreign application issues as a patent before the U.S. filing date.⁴⁴⁶ *In re Kathawala*⁴⁴⁷ concerned questions regarding the interpretation of § 102(d) and resulted in a noteworthy interpretation of the term "invention" as used in the statute.⁴⁴⁸

The invention claimed in the U.S. application in question related to a group of compounds capable of inhibiting a key enzyme in the biosynthesis of cholesterol.⁴⁴⁹ Kathawala had initially filed a U.S. application on November 22, 1982, claiming most of the compounds

440. *Id.* at 1188, 25 U.S.P.Q.2d (BNA) at 1565.

441. *Id.*

442. *Id.*, 25 U.S.P.Q.2d (BNA) at 1565-66.

443. *Id.*

444. *Id.*, 25 U.S.P.Q.2d (BNA) at 1566.

445. See 35 U.S.C. § 102(d) (1988) (prohibiting grant of patent where patent was issued in foreign country more than 12 months prior to application for patent being filed in United States).

446. Specifically, 35 U.S.C. § 102(d) precludes issuance of a valid patent when "the invention was first patented or caused to be patented . . . by the applicant or his legal representatives or assigns in a foreign country prior to the date of the application for patent in this country on an application for patent . . . filed more than 12 months before the filing of the application in the United States." 35 U.S.C. § 102(d).

447. 9 F.3d 942, 28 U.S.P.Q.2d (BNA) 1785 (Fed. Cir. 1993).

448. See generally *In re Kathawala* 9 F.3d 942, 944-47, 28 U.S.P.Q.2d (BNA) 1785, 1785-89 (Fed. Cir. 1993) (discussing §102(d) claim interpreting term "invention").

449. *Id.* at 944, 28 U.S.P.Q.2d (BNA) at 1785.

of the U.S. application.⁴⁵⁰ On November 21, 1983, Kathawala filed counterpart applications in Greece and Spain, which contained expanded claims covering the compounds claimed in the U.S. application as well as certain derivatives of those compounds.⁴⁵¹ Kathawala then filed the U.S. application in question on April 11, 1985, as a continuation-in part (CIP) of the earlier U.S. application.⁴⁵² The CIP claimed the compounds claimed in the Greek and Spanish applications.⁴⁵³

The Greek patent issued on October 2, 1984, and the Spanish patent issued on January 21, 1985.⁴⁵⁴ The specifications of the Greek and Spanish patents were substantially the same as the specification of the CIP.⁴⁵⁵ The Greek patent contained claims directed to the compounds, compositions, methods of use, and processes for making the compounds, while the Spanish patent contained claims to a process for making the compounds.⁴⁵⁶

Because Kathawala filed his CIP more than one year after he filed his corresponding foreign applications and after the foreign applications issued as patents, the examiner rejected the CIP claims under § 102(d).⁴⁵⁷ The Board affirmed the examiner's rejection.⁴⁵⁸

On appeal, Kathawala argued that the Greek and Spanish patents were not prior art under § 102(d).⁴⁵⁹ With respect to the Greek patent, Kathawala did not dispute that the Greek patent contained claims directed to the same invention as that claimed in his CIP.⁴⁶⁰ Kathawala argued that his invention was not "patented" in Greece.⁴⁶¹ He argued that the compound, composition, and method-of-use claims that were in the Greek patent were invalid under Greek patent law because they were directed to non-statutory subject matter.⁴⁶² The Federal Circuit did not agree that the validity of the Greek claims under Greek patent law determined whether the invention was "patented" in Greece within the meaning of § 102(d).⁴⁶³

450. *Id.*, 28 U.S.P.Q.2d (BNA) at 1786.

451. *Id.*

452. *Id.*

453. *Id.*

454. *Id.*

455. *Id.*

456. *Id.*

457. *Id.*

458. *Id.*

459. *Id.* at 945, 28 U.S.P.Q.2d (BNA) at 1786-87.

460. *Id.*, 28 U.S.P.Q.2d (BNA) at 1786.

461. *Id.*

462. *Id.*, 28 U.S.P.Q.2d (BNA) at 1786-87.

463. *Id.*, 28 U.S.P.Q.2d (BNA) at 1787.

The court explained that the controlling fact for purposes of § 102(d) was that the Greek patent contained claims directed to the same invention as that of the CIP.⁴⁶⁴ The court reasoned that the PTO should be able to accept at face value the granting of a foreign patent claiming subject matter corresponding to that claimed in a U.S. application without having to consider the fine points of foreign law.⁴⁶⁵ Refusing to allow Kathawala to escape the consequences of his own actions in prosecuting the foreign applications, the court held that the validity of the foreign claims was not relevant to the § 102(d) inquiry.⁴⁶⁶

Regarding the Spanish patent, which the court considered in rejecting the compound claims of the CIP, Kathawala argued that although the Spanish patent was granted and enforceable prior to the CIP filing date, the Spanish patent was not published, and therefore not "patented" until after that date.⁴⁶⁷ The court rejected this argument, citing precedent holding that an invention is "patented" on the date that it becomes enforceable, not on the date it becomes publicly available.⁴⁶⁸ Thus, the public availability of the foreign patent before the U.S. filing date was also held to be irrelevant to the § 102(d) inquiry.⁴⁶⁹ Kathawala further argued that the "invention" patented in Spain was not the same "invention" recited in the CIP claims at issue, because the former was directed to a process of making the compounds while the latter was directed to the compounds themselves.⁴⁷⁰ The court rejected this argument as well.⁴⁷¹

The court noted that the word "invention" may have many meanings and, in the present context, must have a meaning consistent with the policy and purpose behind § 102(d)—to encourage the filing of applications in the United States within a year of the foreign filing of a counterpart application.⁴⁷² The court noted that Kathawala had asserted that he claimed only the process in Spain because "pharmaceutical compositions and methods of use were not

464. *Id.*

465. *Id.*

466. *Id.*

467. *Id.*

468. *See id.* at 945-46, 28 U.S.P.Q.2d (BNA) at 1787 (citing *In re Monks*, 588 F.2d 308, 310, 200 U.S.P.Q. (BNA) 129, 131 (C.C.P.A. 1978) (stating that "patented" means "formal bestowal of patent rights"); *In re Talbott*, 443 F.2d 1397, 170 U.S.P.Q. (BNA) 281 (C.C.P.A. 1971) (holding that "foreign patent need not be publicly available" to be "patented")).

469. *Id.* at 946, 28 U.S.P.Q.2d (BNA) at 1787-88.

470. *Id.*, 28 U.S.P.Q.2d (BNA) at 1788.

471. *Id.*

472. *Id.*

patentable under Spanish patent law during the relevant time."⁴⁷³ The court did not permit him to evade the statutory bar by arguing that the Spanish Patent Office would not have allowed claims to other aspects of the invention.⁴⁷⁴ The court found that "it would be contrary to the policy of the statute to permit an applicant to file a foreign application on an invention that may be claimed by four related types of claims, obtain a grant of whatever patent rights were available in the foreign country, and then file an application in the United States, after the foreign patent has issued and more than one year after the foreign filing date on the same invention, with claims directed to those aspects of the invention which were unpatentable in the foreign country."⁴⁷⁵

The court, therefore, held that when an applicant files a foreign application fully disclosing his invention and having the potential to claim his invention in a number of different ways, the reference in § 102(d) to "invention . . . patented" necessarily includes all *disclosed* aspects of the invention.⁴⁷⁶ Accordingly, the court affirmed the Board's rejection of the CIP claims under § 102(d) based on the Greek and Spanish patents.⁴⁷⁷

c. 35 U.S.C. § 102(e)

Section 102(e) provides, *inter alia*, that an applicant is not entitled to a patent if the invention was described in a patent granted on a U.S. application by another filed before the applicant's invention.⁴⁷⁸ In *In re Ziegler*,⁴⁷⁹ the Federal Circuit affirmed the Board's decision that Ziegler's patent application claims were unpatentable under 35 U.S.C. § 102(e).⁴⁸⁰

On appeal, Ziegler did not challenge the Board's finding that the disclosure of a patent reference, which issued from an application filed before Ziegler's U.S. filing date, anticipated Ziegler's claimed invention.⁴⁸¹ Ziegler, however, challenged the Board's finding that the cited patent qualified as prior art under § 102(e),⁴⁸² arguing

473. *Id.* at 947, 28 U.S.P.Q.2d (BNA) at 1788.

474. *Id.*

475. *Id.*

476. *Id.*, 28 U.S.P.Q.2d (BNA) at 1788-89.

477. *Id.*, 28 U.S.P.Q.2d (BNA) at 1789.

478. See 35 U.S.C. § 102(e) (1988) (prohibiting grant of patents in these circumstances).

479. 992 F.2d 1197, 26 U.S.P.Q.2d (BNA) 1600 (Fed. Cir. 1993).

480. *In re Ziegler*, 992 F.2d 1197, 1203, 26 U.S.P.Q.2d (BNA) 1600, 1606 (Fed. Cir. 1993).

481. *Id.* at 1200, 26 U.S.P.Q.2d (BNA) at 1603.

482. Section 102(e) provides that an applicant shall be entitled to a patent unless "the invention was described in a patent granted on an application . . . by another filed in the United States before the invention thereof by the applicant . . ." 35 U.S.C. § 102(e) (1988).

that he had established entitlement to the priority date of his earlier-filed German application under 35 U.S.C. § 119,⁴⁸³ and that the priority date was before the filing date of the cited patent.⁴⁸⁴

The claims of the application, which was a continuation of a patent application, were directed to polypropylene having specified characteristics.⁴⁸⁵ The Board had found that Ziegler's German application did not enable one skilled in the art to use the claimed polypropylene pursuant to the first paragraph of 35 U.S.C. § 112.⁴⁸⁶ A foreign application must meet the requirements of 35 U.S.C. § 112, first paragraph, for a later-filed U.S. application, to be entitled to the benefit of the foreign filing date under 35 U.S.C. § 119.⁴⁸⁷ Therefore, the Board held that Ziegler failed to show entitlement to the German priority date and thus failed to overcome the rejection for anticipation.⁴⁸⁸

Assuming that the Board's determination was based on the how-to-use prong of the enablement requirement of 35 U.S.C. § 112, first paragraph, the court stated that resolving the issue entailed answering two questions: "(1) What utility is disclosed by the German application? and (2) Does the stated utility satisfy 35 U.S.C. § 101?"⁴⁸⁹

Ziegler's German application asserted that the claimed polypropylene was "plastic-like."⁴⁹⁰ Regarding this assertion, the court noted that its predecessor, the Court of Customs and Patent Appeals (C.C.P.A.), had squarely held in *Anderson v. Natta*,⁴⁹¹ that the disclosure in Ziegler's German application that a polymer, such as polypropylene, is "plastic-like," was an insufficient assertion of utility.⁴⁹²

The remaining disclosure in the German application relied on by Ziegler—that the polypropylene was solid and could be pressed into a flexible film with a characteristic infrared spectrum—was also found

483. See *Ziegler*, 992 F.2d at 1200, 26 U.S.P.Q.2d (BNA) at 1603 (citing *Wagoner v. Barger*, 463 F.2d 1377, 1380, 175 U.S.P.Q. (BNA) 85, 87 (C.C.P.A. 1972), and noting that applicant bears burden of establishing entitlement to priority date).

484. *Id.*

485. *Id.* at 1199, 26 U.S.P.Q.2d (BNA) at 1602.

486. *Id.* at 1201, 26 U.S.P.Q.2d (BNA) at 1603.

487. See *Yasuko Kawai v. Metlesics*, 480 F.2d 880, 885-89, 178 U.S.P.Q. (BNA) 158, 162-65 (C.C.P.A. 1973) (providing standard for establishment of later filed U.S. application to benefit of foreign filing date).

488. *Ziegler*, 992 F.2d at 1200-01, 26 U.S.P.Q.2d (BNA) at 1603.

489. *Id.* at 1200, 26 U.S.P.Q.2d (BNA) at 1603.

490. *Id.* at 1201, 26 U.S.P.Q.2d (BNA) at 1603-04.

491. 480 F.2d 1392, 178 U.S.P.Q. (BNA) 458 (C.C.P.A. 1973). This case arose from an interference involving Ziegler's patent application.

492. *Ziegler*, 992 F.2d at 1201, 26 U.S.P.Q.2d (BNA) at 1604-05.

insufficient to establish utility.⁴⁹³ The court followed the reasoning of two cases, *Petrocarbon Ltd. v. Watson*⁴⁹⁴ and *Anderson v. Natta*,⁴⁹⁵ where statements that a polymer formed a film were found insufficient to establish practical utility.⁴⁹⁶ The court, therefore, concluded that the Board's determination that Ziegler's German application failed to set forth a practical utility for the claimed polypropylene was not clearly erroneous.⁴⁹⁷ Consequently, the court held that Ziegler was not entitled to the German priority date.⁴⁹⁸ Because Ziegler failed to antedate the patent reference, the anticipation rejection under § 102(e) was affirmed.⁴⁹⁹

d. 35 U.S.C. § 102(f)

Section 102(f) provides that a person is not entitled to a patent if "he did not himself invent the subject matter sought to be patented."⁵⁰⁰ Thus, if one patent applicant derived the invention from another, the former is barred under 35 U.S.C. § 102(f) from obtaining a valid patent.⁵⁰¹ As evident from the case summaries in Part III below, derivation is an issue that may come up in an interference between two parties claiming the same invention.⁵⁰²

493. *Id.* at 1201-03, 26 U.S.P.Q.2d (BNA) at 1604.

494. 247 F.2d 800, 114 U.S.P.Q. (BNA) 94 (D.C. Cir. 1957) (stating that word "film" by itself does not connote particular use).

495. 480 F.2d 1392, 1395-97, 178 U.S.P.Q. (BNA) 458, 460-61 (C.C.P.A. 1973) (rejecting Anderson's assertion of actual reduction to practice of polymer and holding that polymer lacked utility). In *Anderson*, the only utility asserted for the alleged reduction to practice was as a film, but the court found a discernible difference between a small quantity of polymer pressed into a film for infrared scanning, a procedure that must have been standard practice, and a film practically useful in applications for which thermoplastic film is suitable. *Id.* The Federal Circuit in *Ziegler* rejected Ziegler's argument that *Anderson* was inapposite because Ziegler relied on a constructive, rather than an actual, reduction to practice. *Ziegler*, 992 F.2d at 1202 n.10, 26 U.S.P.Q.2d (BNA) at 1604 n.10. The court explained that the principle that the product must be stated to have a practical utility is the same in both cases. *Id.*

496. *Ziegler*, 992 F.2d at 1202-03, 26 U.S.P.Q.2d (BNA) at 1604. The court also distinguished *Standard Oil Co. v. Montedison, S.P.A.*, 494 F. Supp. 370, 206 U.S.P.Q. (BNA) 676 (D. Del. 1980), *aff'd*, 664 F.2d 356, 212 U.S.P.Q. (BNA) 327 (3d Cir. 1981), where a disclosure that a polymer had use in applications where any solid plastic is used was found to meet the utility requirement. The court based its finding on an expert's testimony that, from this disclosure, there was no question that one could mold various useful articles. *Ziegler*, 992 F.2d at 1202-03, 26 U.S.P.Q.2d (BNA) at 1604.

497. *Ziegler*, 992 F.2d at 1203, 26 U.S.P.Q.2d (BNA) at 1605.

498. *Id.*

499. *Id.*, 26 U.S.P.Q.2d (BNA) at 1606.

500. 35 U.S.C. § 102(f) (1988).

501. *Id.*

502. See 37 C.F.R. § 1.625 (1993) (stating that proving derivation requires preliminary statement that includes name of opponent, date of first drawing, date of first written description, date of first disclosure, date of conception, and date of communication to opponent).

e. 35 U.S.C. § 102(g)

As observed in *Texas Instruments, Inc. v. United States International Trade Commission*,⁵⁰³ a patent claim may be invalid as anticipated under § 102(g) due to prior conception and reduction to practice by another claimed invention.⁵⁰⁴ If such a prior conception and reduction to practice by another is embodied in a claim of an application or patent, an "interference" proceeding may be initiated to determine priority of inventorship under § 102(g), i.e. to determine which party is entitled to a patent claiming the common invention.⁵⁰⁵

In determining priority of invention in an interference proceeding under § 102(g), "there shall be considered not only the respective dates of invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other."⁵⁰⁶ Decisions dealing with interference issues are summarized herein at Part IV.

4. 35 U.S.C. § 103

In addition to establishing the novelty requirement, the provisions of § 102 are also used to define "prior art" for purposes of determining whether the nonobviousness requirement of § 103 has been satisfied.⁵⁰⁷ To be applicable under § 103, such prior art must be

503. 988 F.2d 1165, 26 U.S.P.Q.2d 1018 (Fed. Cir. 1993).

504. See *Texas Instruments, Inc. v. United States Int'l Trade Comm'n*, 988 F.2d 1165, 1177, 26 U.S.P.Q.2d (BNA) 1018, 1028 (Fed. Cir. 1993) (upholding Commission's finding that there was no anticipation because other party's invention was not reduced to practice until after reduction to practice of Texas Instrument's patented invention). 35 U.S.C. § 102(g) provides that an applicant is not entitled to a patent if, before the applicant's invention, "the invention was made in this country by another who had not abandoned, suppressed, or concealed it." 35 U.S.C. § 102(g) (1988).

505. Priority of invention under § 102(g) is akin to derivation in that both concepts focus on inventorship and may be resolved in an interference, but they are distinct concepts. See *Price v. Symsek*, 988 F.2d 1187, 1190, 26 U.S.P.Q.2d (BNA) 1031, 1033 (Fed. Cir. 1993).

506. 35 U.S.C. § 102(g).

507. See 35 U.S.C. § 103 (1988). Section 103 provides:

A person shall be entitled to a patent unless—(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States, or (c) he has abandoned the invention, or (d) the invention was first patented or caused to be patented, or was the subject of an inventor's certificate, by the applicant or his legal representatives or assigns in a foreign country prior to the date of the application for patent in this country on an application for patent or inventor's certificate filed more than twelve months before the filing of the application in the United States, or (e) the invention was described in a patent granted on an application for patent by another filed in the

"analogous" to the claimed invention, as shown in the next case.

a. Scope of the art

*Wang Laboratories, Inc. v. Toshiba Corp.*⁵⁰⁸ arose from a patent infringement suit, which involved two patents having claims regarding single in-line memory modules (SIMMs), and was brought by Wang against Toshiba and NEC.⁵⁰⁹ The jury awarded damages to Wang, finding that both Toshiba and NEC infringed the patents, but that only NEC's infringement was willful.⁵¹⁰ Both defendants filed post-trial motions for judgment notwithstanding the verdict (JNOV) and the plaintiff moved to amend the judgment as to damages.⁵¹¹ The district court denied the motions.⁵¹² Toshiba and NEC appealed the district court's denial of JNOV on the issues of validity and infringement, while Wang cross-appealed the district court's refusal to amend the judgment as to damages.⁵¹³

After discussing the standard of review used for a denial of JNOV on infringement and validity issues,⁵¹⁴ the court turned to the issue of whether the patent claims in suit were invalid for obviousness under 35 U.S.C. § 103.⁵¹⁵ The court affirmed the holding of nonobviousness, concluding that the prior art relied on by appellants was not analogous to the claimed invention.⁵¹⁶

United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent, or (f) he did not himself invent the subject matter sought to be patented, or (g) before the applicant's invention thereof the invention was made in this country by another who had not abandoned, suppressed, or concealed it. In determining priority of invention there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.

Id. See generally DONALD S. CHISUM, PATENTS, § 5.03[3] (1993) (discussing nonobviousness with respect to "content of the prior art" and "sources of prior art").

508. 993 F.2d 858, 26 U.S.P.Q.2d (BNA) 1767 (Fed. Cir. 1993).

509. *Wang Lab., Inc. v. Toshiba Corp.*, 993 F.2d 858, 860-61, 26 U.S.P.Q.2d (BNA) 1767, 1769-70 (Fed. Cir. 1993).

510. *Id.* at 860, 26 U.S.P.Q.2d (BNA) at 1770.

511. *Id.*

512. *Id.*

513. *Id.* at 860-61, 26 U.S.P.Q.2d (BNA) at 1770.

514. *Id.* at 863, 26 U.S.P.Q.2d (BNA) at 1772 (noting that fact findings reviewed under substantial evidence standard require affirmance unless appellants show that: (i) reasonable persons could not, in light of evidence before them, have found fact necessary to support jury's verdict; or (ii) facts properly found cannot in law support jury's verdict). The court further noted that in reviewing the evidence from a denial of JNOV, the court must consider all of the evidence in a light most favorable to the nonmover, without determining or substituting the court's choice for that of the jury between conflicting elements in evidence. *Id.*

515. *Id.*

516. *Id.*, 26 U.S.P.Q.2d (BNA) at 1772-73.

The Federal Circuit noted that nonobviousness is a legal conclusion that has factual underpinnings, including the scope and content of the prior art, which, having been genuinely disputed, must be presumed to have been resolved by the jury in favor of Wang.⁵¹⁷ The court, determining that the jury instructions concerning analogous art were adequate, presumed that the jury found that the prior art primarily relied on by appellants, which also related to SIMMs,⁵¹⁸ was not analogous to the claimed subject matter, i.e., not relevant to a consideration of obviousness under § 103.⁵¹⁹

The court therefore presumed that the jury answered in the negative both of the following questions, one of which must be answered in the affirmative for prior art to be considered analogous:

(1) Is the art from the "same field of endeavor as the claimed invention, regardless of the problem addressed" by the invention?

(2) If the art is "not within the same field of endeavor," is it "still reasonably pertinent to the particular problem" being solved?⁵²⁰

The jury's negative answers to the questions in the test were reviewed to determine whether the finding of nonanalogous art was supported by substantial evidence.⁵²¹

Concerning the first question, the court observed that the prior art related to memory circuits in which modules of varying sizes could be added or replaced, while the patents at issue pertained to compact modular memories.⁵²² The court stated that the prior art was not in the same field of endeavor as the claimed invention simply because both related to memories and, without further explanation, concluded that the jury could reasonably have found that the prior art was not in the same field of endeavor.⁵²³

Turning to the second question, the test for analogous art, the court pointed out that Wang's technical expert testified that the prior art was "not pertinent to the field of personal computers for which Wang's SIMMs were designed."⁵²⁴ Although Wang's patents did not refer specifically to the term "personal computer," the expert testified that the intended use of the claimed SIMMs was apparent from the

517. *Id.* at 863-64, 26 U.S.P.Q.2d (BNA) at 1772 (citing *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 U.S.P.Q. (BNA) 459, 467 (1966)).

518. *Id.* at 864, 26 U.S.P.Q.2d (BNA) at 1772.

519. *Id.*

520. *Id.*, 26 U.S.P.Q.2d (BNA) at 1773 (citing *In re Clay*, 966 F.2d 656, 658-59, 23 U.S.P.Q.2d (BNA) 1058, 1060 (Fed. Cir. 1992)).

521. *See id.* (analyzing jury's application of analogous art test to subject matter in this case).

522. *Id.*

523. *Id.*

524. *Id.*

entire context of the patents.⁵²⁵ In comparison, the prior art SIMMs were developed for use in a larger, programmable controller of industrial machinery and could not be used in a personal computer.⁵²⁶ Wang's expert also testified that the prior art taught the use of Static Random-Access-Memories (SRAMs), whereas the Wang patents taught the use of Dynamic Random-Access-Memories (DRAMs), which were primarily used in personal computers.⁵²⁷ After noting such differences between the intended uses and objectives of the claimed SIMMs modules and those of the prior art SIMMs modules, the court concluded that substantial evidence supported the jury's finding that the prior art was not reasonably pertinent to the problem solved.⁵²⁸

Thus, the court found that the jury's finding of nonanalogous art was supported by substantial evidence.⁵²⁹ Because the prior art primarily relied on by Toshiba and NEC was nonanalogous, the court affirmed the jury's verdict that the Wang patents were not invalid for obviousness.⁵³⁰

b. Content of the art

For a claim to be rendered *prima facie* obvious based on two or more prior art references, the references not only have to be analogous to the claimed invention, but there must be some motivation or incentive contained in the prior art references for combining their teachings.⁵³¹ Moreover, even if there is motivation or incentive to selectively combine certain teachings of the prior art, a *prima facie* case of obviousness will not be established unless the teachings are sufficient to suggest the claimed invention.⁵³² The

525. *Id.*

526. *Id.*

527. *Id.*

528. *Id.* at 865, 26 U.S.P.Q.2d (BNA) at 1773.

529. *Id.*

530. *See id.* at 865 n.9, 26 U.S.P.Q.2d (BNA) at 1774 n.9 (noting further that even if prior art were analogous, there was substantial evidence supporting jury's presumed findings that prior art lacked suggestion to combine teachings thereof as urged by Toshiba and NEC, and that claimed invention was commercially successful).

531. *See, e.g.,* ACS Hospital Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 U.S.P.Q. (BNA) 929, 933 (Fed. Cir. 1984) ("Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. Under section 103, the teachings of the references can be combined *only* if there is some suggestion or incentive.").

532. *See, e.g., In re Rijckaert*, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d (BNA) 1955, 1956 (Fed. Cir. 1993) (stating that examiner's failure to establish *prima facie* case based on teachings that suggest claimed invention, should not result in rejection); *In re Bell*, 991 F.2d 781, 783, 26 U.S.P.Q.2d (BNA) 1529, 1531 (Fed. Cir. 1993) ("A *prima facie* case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed [invention] to a person of ordinary skill in the art.") (emphasis added).

PTO must identify where the suggestion appears in the prior art.⁵³³ Thus, the PTO's rejection of a claim for obviousness will not be upheld where, as in *In re Rijckaert*,⁵³⁴ the PTO asserts that a claim limitation is inherent in a prior art reference but fails to show that the limitation necessarily, rather than possibly, flows from the reference.⁵³⁵

*In re Raynes*⁵³⁶ illustrates that the suggestion does not have to be explicit in the prior art.⁵³⁷ Raynes claimed an interactive automobile servicing system comprising, *inter alia*, fuel pumps, "means for displaying video programming and price/quantity information regarding the amount of fuel dispensed," and "means for providing the video programming to the pumps."⁵³⁸ The Board had affirmed the examiner's obviousness rejection of the claimed system based on a combination of a primary reference—a patent disclosing a system having a light emitting diode (LED) or liquid crystal display (LCD) rather than the claimed video display means coupled to the video programming means—and a secondary reference—a technical encyclopedia mentioning that LED and LCD displays may eventually replace the relatively bulky cathode-ray tubes (CRT) displays.⁵³⁹ The Federal Circuit agreed that a person of ordinary skill in the art would have obviously replaced the displays of the systems disclosed in the primary reference with a video display, such as a CRT, "for the use of

Only if a *prima facie* case of obviousness is established does the burden of coming forward with evidence or argument, e.g., evidence relating to objective indicia of nonobviousness, such as unexpected results or commercial success having a nexus to the claimed invention, shift to an applicant. See *Rijckaert*, 9 F.3d at 1532, 28 U.S.P.Q.2d (BNA) at 1957. While such evidence weighs in favor of nonobviousness, however, the lack of it does not weigh in favor of obviousness. See *Miles Lab., Inc. v. Shandon Inc.*, 997 F.2d 870, 878, 27 U.S.P.Q.2d (BNA) 1123, 1129 (Fed. Cir. 1993) (citing *Custom Accessories, Inc. v. Jeffrey-Allan Indus., Inc.*, 807 F.2d 955, 960, 1 U.S.P.Q.2d (BNA) 1196, 1199 (Fed. Cir. 1986)).

533. See *Rijckaert*, 9 F.3d at 1533, 28 U.S.P.Q.2d (BNA) at 1957; see also *In re Yates*, 663 F.2d 1054, 1057, 211 U.S.P.Q. (BNA) 1149, 1151 (C.C.P.A. 1981) (finding need for PTO to produce supporting references of suggestion).

534. 9 F.3d 1531, 28 U.S.P.Q. 2d (BNA) 1955 (Fed. Cir. 1993).

535. See *Rijckaert*, 9 F.3d at 1533-34, 28 U.S.P.Q.2d (BNA) at 1957 (discussing basis for reversal of obviousness rejection where PTO failed to show necessary relation between limitation and prior art). Moreover, that which is inherent is not necessarily known; obviousness cannot be predicated on what is unknown. *Id.* at 1534, 28 U.S.P.Q.2d (BNA) at 1957 (citing *In re Spormann*, 363 F.2d 444, 448, 150 U.S.P.Q. (BNA) 449, 452 (C.C.P.A. 1966)).

536. 7 F.3d 1037, 28 U.S.P.Q.2d (BNA) 1630 (Fed. Cir. 1993).

537. See *In re Raynes*, 7 F.3d 1037, 1038-40, 28 U.S.P.Q.2d (BNA) 1630, 1630-32 (Fed. Cir. 1993) (affirming PTO's rejection for obviousness); see also *Ex parte Clapp*, 227 U.S.P.Q. (BNA) 972, 973 (PTO Bd. App. 1985) (explaining that to support conclusion that claimed combination is directed to obvious subject matter, either references must expressly or impliedly suggest claimed combination or examiner must present convincing line of reasoning as to why artisan would have found claimed invention obvious in light of teachings of references).

538. *Raynes*, 7 F.3d at 1038-39, 28 U.S.P.Q.2d (BNA) at 1630.

539. *Id.* at 1039, 28 U.S.P.Q.2d (BNA) at 1631.

video to display programming and other information is so ubiquitous to warrant judicial notice."⁵⁴⁰

In *In re Bell*,⁵⁴¹ the Federal Circuit reviewed *de novo*⁵⁴² the Board's affirmation of an examiner's rejection under 35 U.S.C. § 103 of claims directed to nucleic-acid molecules (DNA and RNA) containing sequences that code for human insulin-like growth factors (IGF) I and II.⁵⁴³ The Board had affirmed the examiner's rejection of the claims as being obvious based on a pair of primary publications disclosing the amino-acid sequences of IGF-I and IGF-II, combined with a secondary patent disclosing a general method for isolating a gene for which at least a short amino-acid sequence of the encoded protein was known.⁵⁴⁴ The Board reasoned that, even though a protein and the corresponding DNA are not structurally similar, they are nevertheless linked through genetic code, and therefore the gene is rendered obvious when the amino-acid sequence is known.⁵⁴⁵ In view of the secondary patent reference teaching the cloning method, the Board concluded that there was no reason to believe that the ordinary artisan, having the amino-acid sequences of the target proteins, would have been unable to predictably clone, without undue experimentation, the target DNA sequences.⁵⁴⁶

The Federal Circuit refused to accept the Board's conclusion that the established relationship in the genetic code between a nucleic acid and the protein it encodes makes a gene *prima facie* obvious over its correspondent protein.⁵⁴⁷ The court noted that this proposition, in effect, amounted to a rejection based on the primary publications alone.⁵⁴⁸ The court also noted that the PTO had not contradicted

540. *Id.* at 1040, 28 U.S.P.Q.2d (BNA) at 1631-32. The dissent, however, took the position that a video display was not an obvious substitute for an LED or LCD display, apparently considering that the artisan would not have, as a matter of common sense, weighed factors such as size, expense, and display capabilities in selecting a suitable means for displaying the desired information. *Id.* at 1040-41, 28 U.S.P.Q.2d (BNA) at 1132-33 (Lourie, J., dissenting). Because the prior art did not mention substituting a CRT for an LED or LCD display, but indicated a general preference for LED or LCD displays compared to CRT displays, the dissent would have reversed the Board's decision. *Id.* at 1041, 28 U.S.P.Q.2d (BNA) at 1632-33.

541. 991 F.2d 781, 26 U.S.P.Q.2d (BNA) 1529 (Fed. Cir. 1993).

542. The court reviews an obviousness determination by the Board *de novo*. *In re Vaeck*, 947 F.2d 488, 493, 20 U.S.P.Q.2d (BNA) 1438, 1442 (Fed. Cir. 1991).

543. *In re Bell*, 991 F.2d 781, 782, 26 U.S.P.Q.2d (BNA) 1529, 1530 (Fed. Cir. 1993).

544. *Id.* at 783, 26 U.S.P.Q.2d (BNA) at 1530-31. Because the claims were directed to compositions, the court ignored the PTO's emphasis on the similarities between Bell's method for making the claimed sequences, which was disclosed in the specification, and the method disclosed in the secondary reference. *Id.* at 785, 26 U.S.P.Q.2d (BNA) at 1531.

545. *Id.* at 783, 26 U.S.P.Q.2d (BNA) at 1530.

546. *Id.*, 26 U.S.P.Q.2d (BNA) at 1530-31 (citing Board's decision).

547. *Id.* at 784, 26 U.S.P.Q.2d (BNA) at 1531.

548. *Id.* (concluding that possibility of hypothesis does not mean that hypothesis was obvious).

Bell's argument that, in the case of IGF, the amino-acid sequences of the primary publications could be coded for by more than ten³⁶ nucleotide sequences, only a few of which corresponded to the claimed human sequences.⁵⁴⁹ Considering the vast number of possibilities suggested by the publications and their failure to suggest which of those possibilities was the human sequence, the court concluded that the primary publications failed to render the claimed sequence *prima facie* obvious.⁵⁵⁰

The court further concluded that the secondary reference failed to cure the deficiencies of the primary publications.⁵⁵¹ In fact, the court determined that the secondary reference tended to teach away from the claimed invention.⁵⁵² Bell's probe had twenty-three nucleotides based on a sequence of eight amino acids, none of which was unique; in contrast, the secondary reference taught that it was counterproductive to use a primer having more than fourteen to sixteen nucleotides unless the known amino-acid sequence had four to five amino acids coded for by unique codons. The secondary reference suggested that it was advantageous to design a probe based on an amino-acid sequence specified by unique codons.⁵⁵³ Because the primary publications showed that IGF-I only had one amino acid with a unique codon and IGF-II had none, the secondary reference was considered to teach away from the claimed sequences.⁵⁵⁴

The court rejected the PTO's argument that the secondary reference suggested that the cloning method disclosed therein could be easily applied to isolate genes for an array of proteins.⁵⁵⁵ The court found that there was no suggestion in the secondary reference of how to apply its teachings to amino-acid sequences without unique codons.⁵⁵⁶ Finding that the prior art lacked the requisite teaching or suggestion to combine the teachings to produce the claimed sequences, the court reversed the Board's decision affirming the examiner's rejection of the claims under 35 U.S.C. § 103.⁵⁵⁷

549. *Id.*

550. *Compare id.* (relying on assertions of Rinderknecht regarding number of possible nucleic acid sequences) with *In re Fine*, 837 F.2d 1071, 1075, 5 U.S.P.Q.2d (BNA) 1596, 1599 (Fed. Cir. 1988) (stating that "obvious to try" is not a legitimate test of patentability").

551. *Bell*, 991 F.2d at 784, 26 U.S.P.Q.2d (BNA) at 1531-32.

552. *Id.*, 26 U.S.P.Q.2d (BNA) at 1532.

553. *Id.*

554. *Id.*

555. *Id.* at 785, 26 U.S.P.Q.2d (BNA) at 1532.

556. *Id.*

557. *Id.* (citing *In re Fine*, 837 F.2d 1071, 1075, 5 U.S.P.Q.2d (BNA) 1596, 1599 (Fed. Cir. 1988) (stating that obviousness "cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination") (quoting *ACS Hosp. Sys. v. Montefiore Hosp.*, 732 F.2d 1572, 1577, 221 U.S.P.Q.

The *Rayne* and *Bell* cases, which involved utility patent applications, addressed issues of patentability under § 103.⁵⁵⁸ The remaining cases in this subsection involve design patents or applications for design patents.⁵⁵⁹ As these cases show, § 103 applies to the determination of obviousness of a claimed design.⁵⁶⁰ "For a rejection of a claim of a design patent application under 35 U.S.C. § 103, the references must suggest the overall appearance of the particular design claimed."⁵⁶¹

As the court explained in *In re Harvey*,⁵⁶² if the combination of the references suggests only the components of a claimed design, but not the overall appearance of the design, a rejection for obviousness is improper.⁵⁶³ Harvey had appealed from the Board's decision affirming the final rejections of the claims of Harvey's two design applications under § 103.⁵⁶⁴ Each claimed design was directed to a vase formed by the intersection of two geometric solids.⁵⁶⁵ The claimed designs had been rejected based on a combination of prior art designs, including a prior art Harvey vase as the primary reference, which the Board analyzed as a basic design concept of the intersection of two solids.⁵⁶⁶

The Federal Circuit found, contrary to the Board's conclusion, that the prior art Harvey vase was not a proper primary reference (i.e., basic design) because the disclosed vase was not basically the same as the claimed designs.⁵⁶⁷ The court held that the Board, in relying on the prior art Harvey vase as a design concept rather than for its

(BNA) 929, 933 (Fed. Cir. 1984)).

558. See *supra* notes 536-57 and accompanying text (discussing application of § 103).

559. See *infra* notes 562-600 and accompanying text.

560. *In re Klein*, 987 F.2d 1569, 1570, 26 U.S.P.Q.2d (BNA) 1133, 1134 (Fed. Cir. 1993) (citing *Litton Sys., Inc. v. Whirlpool Corp.*, 728 F.2d 1423, 1440, 221 U.S.P.Q. (BNA) 97, 108 (Fed. Cir. 1984), for proposition that tests for determining validity of design patent issued under 35 U.S.C. § 171 are same as those for determining validity of utility patent issued under 35 U.S.C. § 101).

561. *Klein*, 987 F.2d at 1574, 26 U.S.P.Q.2d (BNA) at 1136 (citing *In re Chu*, 813 F.2d 378, 382, 1 U.S.P.Q.2d (BNA) 1662, 1663 (Fed. Cir. 1987)).

562. 12 F.3d 1061, 29 U.S.P.Q.2d (BNA) 1206 (Fed. Cir. 1993).

563. *In re Harvey*, 12 F.3d 1061, 1063, 29 U.S.P.Q.2d (BNA) 1206, 1208 (Fed. Cir. 1993) (citing *In re Carlson*, 983 F.2d 1032, 1038, 25 U.S.P.Q.2d (BNA) 1207, 1212 (Fed. Cir. 1992); *In re Sung Nam Cho*, 813 F.2d 378, 382, 1 U.S.P.Q.2d (BNA) 1662, 1663 (Fed. Cir. 1987)).

564. *Id.* at 1062, 29 U.S.P.Q.2d (BNA) at 1207.

565. *Id.*

566. *Id.*

567. See *id.* at 1063-64, 29 U.S.P.Q.2d (BNA) at 1208-09 (finding that major modifications would be needed to make prior art vase same as claimed designs); see also *In re Rosen*, 673 F.2d 388, 391, 213 U.S.P.Q. (BNA) 347, 349 (C.C.P.A. 1982) (stating that basic design has design characteristics that are "basically the same" as those of claimed design).

design characteristics, improperly mixed principles of obviousness for utility patents with those for design patents.⁵⁶⁸

The court addressed the sufficiency of the teachings of the prior art cited in an obviousness rejection of a claimed design in *In re Klein*.⁵⁶⁹ The claim⁵⁷⁰ was directed to a shingle design having notched top and lower layers, the notches forming tabs with the lower layer, the shingle design was mounted so that its notches were offset to the right of the notches of the top layer.⁵⁷¹ The claim encompassed plural alternative embodiments; thus, if any one embodiment within the scope of the claim was rendered obvious, then the § 103 rejection would be upheld.⁵⁷²

The Board had determined that a combination of two utility patents rendered the claimed design obvious.⁵⁷³ With respect to the first prior art reference, the Board had concluded that one of the reference's drawing figures, which showed a shingle with darker lines on the bottom and right side of the tabs as compared with the left side, disclosed a shingle having an offset appearance as in one of the embodiments depicted in Klein's application.⁵⁷⁴ Yet, the Board based its rejection not on this reference alone, but in combination with another reference, "apparently because of a felt need to do so."⁵⁷⁵

With the Board's reliance on a combination of two references belying its statements regarding the first one, the court sharply

568. *Harvey*, 12 F.3d at 1064-65, 29 U.S.P.Q.2d (BNA) at 1209 (stating that rule in *In re Glavas*, 230 F.2d 447, 450, 109 U.S.P.Q. (BNA) 50, 52 (C.C.P.A. 1956), and *In re Mann*, 861 F.2d 1581, 1582, 8 U.S.P.Q.2d (BNA) 2030, 2031 (Fed. Cir. 1988)—that focus in considering prior art for purposes of determining patentability of designs is on appearances, not uses—was being extended one step further to require focus on actual appearances, not design concepts).

The court further held that even if the Board correctly applied the standard of obviousness, its conclusion "would still be erroneous because the Board misconstrued the combined teachings and combinability of the prior art, and improperly compared the visual impressions of selected features, rather than the visual impression of the work as a whole." *Harvey*, 12 F.3d at 1064, 29 U.S.P.Q.2d (BNA) at 1209. The court also determined that even if there was a suggestion in the prior art to combine certain characteristics, the Board's decision could not stand because its factual findings, that the visual differences between the prior art and the claimed designs are minor, were clearly erroneous. *Id.* at 1065-66, 29 U.S.P.Q.2d (BNA) at 1210; see *In re Carter*, 673 F.2d 1378, 1380, 213 U.S.P.Q. (BNA) 625, 626 (C.C.P.A. 1982) (noting that if prior-art designs are to be modified in more than one respect to render claimed design obvious, then those modifications must be *de minimis* in nature and unrelated to design's overall aesthetic appearance).

569. 987 F.2d 1569, 26 U.S.P.Q.2d (BNA) 1133 (Fed. Cir. 1993).

570. Only one claim is permitted in a design patent. See 37 C.F.R. § 1.153 (1993) ("[M]ore than one claim is neither required nor permitted.").

571. *In re Klein*, 987 F.2d 1569, 1571, 26 U.S.P.Q.2d (BNA) 1133, 1134 (Fed. Cir. 1993).

572. *Id.* at 1570, 26 U.S.P.Q.2d (BNA) at 1134 (supporting Board's interpretation of rule).

573. *Id.*

574. *Id.* at 1572, 26 U.S.P.Q.2d (BNA) at 1135.

575. *Id.* at 1573, 26 U.S.P.Q.2d (BNA) at 1135.

criticized the Board's characterization of this reference as "wholly unjustified" and "in a class with wishful thinking."⁵⁷⁶ The court was unable to perceive any offset appearance or blackened left sides of the tabs or notches.⁵⁷⁷ Rather, the court recognized the darker lines used in the reference's drawing as a conventional drafting practice.⁵⁷⁸

In using the first reference as prior art, said the court, the Board had impermissibly used hindsight to take a drafting practice, required in patent drawings, found in a utility patent and construed this practice as a suggestion for an ornamental design.⁵⁷⁹ The court determined that the first reference simply disclosed a shingle having an outline similar to the claimed top layer, which was but one element of the claimed design.⁵⁸⁰

Moving on to the second reference, the court noted that the Board failed to make clear how it was relying on this reference.⁵⁸¹ The court, therefore, turned to the examiner's detailed rejection for guidance, but found that the examiner's reliance on the second reference was misplaced: the examiner had admitted that even the hypothetical shingle strip resulting from his postulated combination of the references was "not identical to the claimed design in all details"; the examiner had applied an erroneous "distinctiveness" standard of patentability; and the examiner had looked to the second reference using impermissible hindsight.⁵⁸²

The court then culled the second reference, particularly Figure 3, which the Board had alluded to in its decision, for suggestions of the claimed design.⁵⁸³ Instead of finding any such suggestion, the court found that it had no resemblance to the claimed design.⁵⁸⁴ Perceiving no suggestion of the claimed design in the cited references, the court reversed the Board's decision affirming the examiner's rejection for obviousness under § 103.⁵⁸⁵

576. *Id.*

577. *Id.*

578. *See id.*, 26 U.S.P.Q.2d (BNA) at 1135-36 (citing patent office practice rules). The rule, which has been in effect for over 100 years, is now embodied in the patent regulations. *See* 37 C.F.R. § 1.84(d)(2) (1993) ("Heavy lines on the shade side of objects should preferably be used The light should come from the upper left-hand corner at an angle of 45°.").

579. *Klein*, 987 F.2d at 1573, 26 U.S.P.Q.2d (BNA) at 1136.

580. *Id.*

581. *Id.* at 1574, 26 U.S.P.Q.2d (BNA) at 1136.

582. *Id.*

583. *Id.*

584. *Id.* at 1575, 26 U.S.P.Q.2d (BNA) at 1136.

585. *Id.*, 26 U.S.P.Q.2d (BNA) at 1136-37.

In *L.A. Gear, Inc. v. Thom McAn Shoe Co.*,⁵⁸⁶ the Federal Circuit similarly considered the sufficiency of the prior art in determining the validity of a claimed design under § 103.⁵⁸⁷ The district court had found Melville liable for infringement of L.A. Gear's claimed shoe design, and had rejected Melville's affirmative defense of invalidity of the claimed design under 35 U.S.C. § 103.⁵⁸⁸

Specifically, Melville had asserted twenty-two prior art references as showing or suggesting the various features that made up the claimed design and had argued that the claimed design was readily reconstructed from the elements of these references.⁵⁸⁹ The district court found that all of the isolated elements of the claimed design were disclosed, but concluded that there was no teaching or suggestion of the claimed design as a visual whole in the prior art.⁵⁹⁰

The Federal Circuit agreed, pointing out that § 103 mandates that not only the individual elements, but also the ornamental quality of the combination, be suggested in the prior art.⁵⁹¹ The court noted that the district court had found that the *combination* of the particular elements of the claimed design was not known in the prior art, and emphasized that "a reconstruction of known elements does not invalidate a design patent, absent some basis whereby a designer of ordinary skill would be led to create this particular design."⁵⁹² The court found no error in the district court's determination that no such basis could be discerned in the prior art.⁵⁹³ Furthermore, the commercial success of L.A. Gear's patented design and Melville's copying of the claimed design were cited as secondary indicia of nonobviousness.⁵⁹⁴ The Federal Circuit therefore affirmed the district court's holding that the design patent was not invalid under § 103.⁵⁹⁵

Finally, in *In re Carlson*,⁵⁹⁶ the court affirmed the Board's decision that a claimed bottle design was unpatentable under 35 U.S.C.

586. 988 F.2d 1117, 27 U.S.P.Q.2d (BNA) 1913 (Fed. Cir. 1993).

587. See *L.A. Gear, Inc. v. Thom McAn Shoe Co.*, 988 F.2d 1117, 1124, 27 U.S.P.Q.2d (BNA) 1913, 1917-18 (Fed. Cir. 1993) (addressing obviousness under § 103).

588. *Id.*

589. *Id.*, 27 U.S.P.Q.2d (BNA) at 1918.

590. *Id.*

591. *Id.*, 27 U.S.P.Q.2d (BNA) at 1917-18.

592. *Id.*, 27 U.S.P.Q.2d (BNA) at 1918.

593. *Id.*

594. *Id.*

595. *Id.*

596. 983 F.2d 1032, 25 U.S.P.Q.2d (BNA) 1207 (Fed. Cir. 1992), as revised on petition for rehearing, Feb. 1, 1993.

§ 103.⁵⁹⁷ Carlson argued that none of the cited references showed the symmetrical design depicted in his design patent application.⁵⁹⁸ The Federal Circuit rejected this argument on the ground that the designer of ordinary skill could understand the potential use of a symmetrical design.⁵⁹⁹ The court held that, in an area where designs are intentionally asymmetric, a symmetrical design is obvious as the "expected" design and, accordingly, affirmed the decision of the Board.⁶⁰⁰

5. 35 U.S.C. § 112, ¶ 1

a. Written description requirement

In *Wang Laboratories, Inc. v. Toshiba Corp.*,⁶⁰¹ the Federal Circuit also addressed the issue of whether the Wang patents satisfied the written description requirement of 35 U.S.C. § 112, first paragraph, which issue was raised on appeal by NEC, but not Toshiba.⁶⁰² The court noted that the test for determining if this requirement has been met asks whether the disclosure reasonably conveys to the skilled worker that the inventor had possession of the claimed subject matter as of the filing date of the application.⁶⁰³ Noting that this question is one of fact, the court determined whether there was substantial evidence that supported the jury's verdict that the written description requirement was met.⁶⁰⁴

NEC had argued that the recitation of "support means for supporting the memory module at an angle with respect to the printed circuit motherboard," which was added to the claims by amendment, was not supported by the original disclosure of the Wang patents.⁶⁰⁵ The court first pointed out that a patent specification is directed to those of ordinary skill in the art.⁶⁰⁶ After further noting

597. *In re Carlson*, 983 F.2d 1032, 1039, 25 U.S.P.Q.2d (BNA) 1207, 1212 (Fed. Cir. 1992), as revised on petition for rehearing, Feb. 1, 1993.

598. *See id.* at 1038, 25 U.S.P.Q.2d (BNA) at 1212 (noting that Carlson argued that Bundesanzeiger entry did not specifically refer to dual-compartment containers).

599. *Id.*

600. *Id.* at 1038-39, 25 U.S.P.Q.2d (BNA) at 1212.

601. 993 F.2d 858, 26 U.S.P.Q.2d (BNA) 1767 (Fed. Cir. 1993).

602. *See Wang Lab., Inc. v. Toshiba Corp.*, 993 F.2d 858, 865-66, 26 U.S.P.Q.2d (BNA) 1767, 1774 (Fed. Cir. 1993) (considering written description issue under § 112).

603. *Id.* at 865, 26 U.S.P.Q.2d (BNA) at 1774 (citing *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1563, 19 U.S.P.Q.2d (BNA) 1111, 1116 (Fed. Cir. 1993)).

604. *Id.*

605. *Id.* at 865-66, 26 U.S.P.Q.2d (BNA) at 1774.

606. *Id.* at 866, 26 U.S.P.Q.2d (BNA) at 1774 (citing *In re Hayes Microcomputer Prods., Inc. Patent Litig.*, 982 F.2d 1527, 1533, 25 U.S.P.Q.2d (BNA) 1241, 1245 (Fed. Cir. 1992)).

that drawings alone may provide the required written description,⁶⁰⁷ the court observed that Wang's expert and the inventor had testified that terminal leads, illustrated in the drawings, function as the recited support means.⁶⁰⁸ These witnesses had further testified that a person of ordinary skill in the art would know that leadless SIMMs include a row of terminals, not shown in the drawings, that would function as the recited support means.⁶⁰⁹ The court, therefore, held that substantial evidence supported the verdict and that NEC failed to show that the district court's denial of JNOV on the issue regarding the written description requirement was incorrect.⁶¹⁰

b. Enablement requirement

In *In re Ziegler*,⁶¹¹ the Federal Circuit affirmed the Board's decision that Ziegler's U.S. patent application was not entitled to the benefit of the filing date of Ziegler's prior German application because the priority application failed to enable one "skilled in the art" to use the claimed invention⁶¹² as required by the first paragraph of 35 U.S.C. § 112.⁶¹³ The court upheld the Board's determination that Ziegler's German patent application failed to disclose a practical utility for the claimed polypropylene and, hence, failed to satisfy the how-to-use prong of the enablement requirement.⁶¹⁴

In *In re Wright*,⁶¹⁵ the Federal Circuit considered another question of enablement. Wright sought to overturn a § 112 rejection determining that the scope of the enabling disclosure failed to support the full scope of the appealed claims, a type of rejection that is frequently characterized as being for "undue breadth."⁶¹⁶

Wright's claimed invention was directed to processes for creating live, nonpathogenic vaccines for use against pathogenic RNA viruses, the vaccines produced by these processes, and methods for protecting

607. *Id.* (citing *Vas-Cath*, 935 F.2d at 1565, 19 U.S.P.Q.2d (BNA) at 1118).

608. *Id.*

609. *Id.*

610. *Id.*

611. 992 F.2d 1197, 26 U.S.P.Q.2d (BNA) 1600 (Fed. Cir. 1993).

612. *In re Ziegler*, 992 F.2d 1197, 2000-03, 26 U.S.P.Q.2d (BNA) 1600, 1603-06 (Fed. Cir. 1993).

613. See 35 U.S.C. § 112, para. 1 (1988). To satisfy the enablement requirement, sufficient information must be disclosed by the applicant to "allow someone skilled in the art to make and use" the claimed invention. *Id.*

614. See *Ziegler*, 992 F.2d at 1200-03, 26 U.S.P.Q.2d (BNA) at 1605-06 (concluding that Ziegler's German application failed to satisfy requirement for asserting characteristics or practical use of invention with sufficient specificity to qualify for patent, thus precluding use of foreign patent application potentially providing patentee additional year of determining practical utility before required to file in United States under § 119).

615. 999 F.2d 1557, 27 U.S.P.Q.2d (BNA) 1510 (Fed. Cir. 1993).

616. *In re Wright*, 999 F.2d 1557, 1560, 27 U.S.P.Q.2d (BNA) 1510, 1511 (Fed. Cir. 1993).

living organisms against RNA viruses by using some of these claimed vaccines.⁶¹⁷ Wright's specification provided a general description of these processes, vaccines, and methods of their use, but only gave a single working example. This example described the production of a recombinant vaccine that conferred immunity against an RNA tumor virus in chickens known as Prague Avian Sarcoma Virus.⁶¹⁸ The examiner had allowed claims directed to processes for producing a vaccine against this specific virus, but Wright sought allowance of the broader claims on appeal.⁶¹⁹ Concerning the claims on appeal, the Board, affirming the examiner's rejection under § 112, had held that these broader claims reading on vaccines against all pathogenic RNA viruses were "not supported by an enabling disclosure because, given the breadth of the claims, the unpredictability in the art, and the limited guidance provided by Wright's specification, one of ordinary skill" had to unduly experiment in order to practice the claimed invention.⁶²⁰

As a preliminary matter, the court noted that, when rejecting a claim under the enablement provision of § 112, the PTO bears the initial burden of presenting a reasonable explanation for why the full scope of the claims is not adequately enabled.⁶²¹ After the PTO meets its burden, the burden shifts to the applicant to provide suitable proofs that the specification is enabling.⁶²²

The court found that the PTO had, in fact, met its initial burden by setting forth a reasonable basis as to why the claims were not enabled by the general description and the specification's single working example.⁶²³ The court noted that the examiner and Board were correct in their observation that: (1) the appealed claims were directed to vaccines, methods of making them, and methods of their use, and by definition these vaccines must trigger an immunoprotective response, not just an antigenic response; (2) many of the claims attempted to cover any and all nonpathogenic vaccines and processes for creating such vaccines eliciting immunoprotective activity in *any* animal toward *any* RNA virus; and (3) many of the

617. *Id.* at 1559, 27 U.S.P.Q. (BNA) at 1511.

618. *Id.*

619. *Id.*

620. *See id.* at 1560-61, 27 U.S.P.Q.2d (BNA) at 1511-12 (agreeing with examiner's view that Wright's broad claims for vaccines against all pathogenic RNA viruses were not supported by limited guidance provided in application).

621. *See id.* at 1561-62, 27 U.S.P.Q. (BNA) at 1513 (noting Board found that description of invention in application was nothing more "than an invitation to experiment").

622. *Id.* at 1562, 27 U.S.P.Q.2d (BNA) at 1513 (citing *In re Marzocchi*, 439 F.2d 220, 223-24, 169 U.S.P.Q. (BNA) 367, 369-70 (C.C.P.A. 1971)).

623. *Id.*

claims embraced vaccines against AIDS viruses, whereas no successful AIDS virus vaccine had been developed.⁶²⁴

The court further found that Wright failed to rebut the PTO's *prima facie* case of enablement with sufficient proof that the specification was enabling as of the filing date of his application, for both the broadest and narrowest claims on appeal.⁶²⁵ The court cited an article published about five years after Wright's effective filing date⁶²⁶ which supported the PTO's position that an artisan, at the time of Wright's invention, would have reasonably doubted "that all living organisms could be immunized against infection by any pathogenic RNA virus by" inoculation with Wright's claimed vaccines.⁶²⁷

Wright pointed to a few AIDS virus vaccines carrying SIV and HIV envelope genes that he had developed since the filing of his application that successfully conferred protective immunity to the tested animals.⁶²⁸ The court, however, found this evidence insufficient to rebut the PTO's assertions regarding undue experimentation, and indicated that even a decade later, the art was not as predictable as Wright argued it was at the time of his filing.⁶²⁹

Affidavits submitted on Wright's behalf, in his attempted rebuttal, were also of no avail.⁶³⁰ The affidavits were found to fail in their purpose because they merely contained unsupported conclusory statements as to the ultimate legal conclusion.⁶³¹

Nor was the court persuaded by the fact that the claims limited to avian tumor viruses were adequately supported by an enabling disclosure.⁶³² The court found that Wright had failed to establish that, as of his filing date, an artisan would have reasonably believed that Wright's success with a particular strain of avian RNA virus "could be extrapolated with a reasonable expectation of success" to other avian RNA viruses within the scope of the narrower claims.⁶³³ Wright also

624. *Id.*

625. *Id.*

626. *See id.* (supporting examiner's and Board's use of 1988 article indicating that AIDS retroviruses, representing only subset of all RNA viruses, were known to have divergent virus envelopes and show great genetic diversity).

627. *Id.*

628. *Id.* at 1562-63, 27 U.S.P.Q.2d (BNA) at 1514.

629. *Id.* at 1563, 27 U.S.P.Q.2d (BNA) at 1514.

630. *Id.* (declining to address presented arguments because no specific arguments were originally set forth regarding affidavits in brief to Board).

631. *Id.*

632. *Id.* at 1564, 27 U.S.P.Q.2d (BNA) at 1515.

633. *Id.*

failed to point out with particularity any scientific literature that existed as of his filing date to support his position.⁶³⁴

Thus, with respect to all of the appealed claims, the court affirmed the PTO's position and rejected Wright's arguments.⁶³⁵ Consequently, the Federal Circuit affirmed the Board's decision that the claims were unpatentable under the first paragraph of 35 U.S.C. § 112.⁶³⁶

In *Morton International, Inc. v. Cardinal Chemical Co.*,⁶³⁷ the Federal Circuit reviewed, on remand,⁶³⁸ the district court's holding that Morton's patent claims were invalid under § 112.⁶³⁹ The claims in question were directed to organotin mercaptoalkyl carboxylic-acid ester sulfide compounds having a specific bonding, referred to as "partial connectivity," and containing ten to forty-two weight percent tin and eight to forty-two percent sulfur by weight.⁶⁴⁰ The patent specification provided over fifty examples for preparing the claimed compounds having partial connectivity.⁶⁴¹ But the district court found that the examples in the patent specification produced a mixture of alkyltin mercaptides and alkyltin sulfides, rather than the claimed compounds.⁶⁴² Moreover, the district court found that even using sophisticated analytical instruments and model systems, there was no evidence that compounds within the scope of the claims existed.⁶⁴³

The Federal Circuit determined that the district court's findings were supported by the record.⁶⁴⁴ The court held that the defendant, Cardinal, had met its burden of establishing lack of enablement by clear and convincing evidence, and that Morton had failed to rebut this evidence, which it could have done, for example, by showing that the exemplified procedures would indeed produce the claimed connectivity in the resulting compounds.⁶⁴⁵ Consequently, the

634. *Id.*

635. *Id.*

636. *Id.*, 27 U.S.P.Q.2d (BNA) at 1516. For another case similarly upholding the Board's affirmation of an enablement rejection of a claimed method for producing a mammalian peptide, see *In re Goodman*, 11 F.3d 1046, 29 U.S.P.Q.2d (BNA) 2010 (Fed. Cir. 1993).

637. 5 F.3d 1464, 28 U.S.P.Q.2d (BNA) 1190 (Fed. Cir. 1993).

638. See *Cardinal Chem. Co. v. Morton Int'l, Inc.*, 113 S. Ct. 1967, 26 U.S.P.Q.2d (BNA) 1721 (1993) (remanding for consideration of validity issue previously held moot by Federal Circuit due to initial finding of noninfringement).

639. See *Morton Int'l, Inc. v. Cardinal Chem. Co.*, 5 F.3d 1464, 28 U.S.P.Q.2d (BNA) 1190 (Fed. Cir. 1993) (reversing previous court of appeals decision vacating district court's decision).

640. *Id.* at 1467, 28 U.S.P.Q.2d (BNA) at 1192.

641. *Id.* at 1469, 28 U.S.P.Q.2d (BNA) at 1194.

642. *Id.*

643. *Id.*

644. *Id.* at 1469-70, 28 U.S.P.Q.2d (BNA) at 1194.

645. *Id.* at 1470, 28 U.S.P.Q.2d (BNA) at 1194.

Federal Circuit affirmed the district court's judgment that the claims were not supported by an enabling disclosure.⁶⁴⁶

6. 35 U.S.C. § 112, ¶ 2

In *Morton International*, the Federal Circuit also affirmed the district court's finding that Morton's patent claims were invalid for failing to meet the definiteness requirement of 35 U.S.C. § 112.⁶⁴⁷ The court found that the record supported the district court's conclusion that because the claimed compounds could not be identified by known analytical methods, skilled workers would be unable to determine if a particular compound fell within the scope of the claim.⁶⁴⁸

In *North American Vaccine, Inc. v. American Cyanamid Co.*,⁶⁴⁹ the Federal Circuit, after affirming the district court's holding of noninfringement,⁶⁵⁰ considered whether the claims at issue in National Research Council of Canada's (NRC's) patent, which was licensed to North American Vaccine, were properly held to be invalid for indefiniteness under 35 U.S.C. § 112.⁶⁵¹ The appealed claims were both dependent on the same claim, which was directed to antigenic-polysaccharide-protein conjugates, each conjugate having the protein covalently linked to the terminal portion of the polysaccharide without significant crosslinking.⁶⁵² The district court concluded that the claims were indefinite.⁶⁵³ The court based its decision on the parties' stipulation that a few categories of the specific polysaccharides recited in the dependent claims, when treated according to the patent's teachings, would yield molecules having linkages along their backbones; these molecules were outside the scope of the claim on which they depended, as interpreted by the court.⁶⁵⁴

646. *Id.*

647. *See id.* (observing that second paragraph of 35 U.S.C. § 112 requires specifications to particularly point out and distinctly claim subject matter applicant regards as her invention in order to ensure that claims will not be found invalid for indefiniteness).

648. *See id.* (citing *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1576, 1 U.S.P.Q.2d (BNA) 1081, 1088 (Fed. Cir. 1986), and noting that to find claim invalid for indefiniteness requires determination of whether skilled artisans would understand what is claimed when claim is read with knowledge of specification).

649. 7 F.3d 1571, 28 U.S.P.Q.2d (BNA) 1333 (Fed. Cir. 1993).

650. *North Am. Vaccine, Inc. v. American Cyanamid Co.*, 7 F.3d 1571, 1578, 28 U.S.P.Q.2d (BNA) 1333, 1338 (Fed. Cir. 1993). The noninfringement decision is discussed in Part IV.A below.

651. *See id.* at 1578-80, 28 U.S.P.Q.2d (BNA) at 1338-40. The court, citing *Cardinal Chem. Co. v. Morton Int'l, Inc.*, 113 S. Ct. 1967, 1967, 26 U.S.P.Q.2d (BNA) 1721, 1721 (1993), indicated that it was desirable to also review the decision of invalidity. *Id.*

652. *Id.* at 1573-74, 28 U.S.P.Q.2d (BNA) at 1334.

653. *Id.* at 1576, 28 U.S.P.Q.2d (BNA) at 1337.

654. *Id.*

On appeal, NRC argued that the parties' stipulation of the possible inoperativeness of some species was an insufficient basis for holding the claims invalid and that Cyanamid had failed to meet its burden of proving indefiniteness.⁶⁵⁵ The Federal Circuit agreed, concluding that the stipulation was not equivalent to an admission that skilled artisans would not be reasonably apprised of the scope of the claims.⁶⁵⁶ The specification clearly indicated that the claimed invention was directed to conjugates having a protein linkage at a single terminal portion of the polysaccharide.⁶⁵⁷ The court pointed out that the mere failure of certain species to meet the objects of the invention did not show that those skilled in the art could not determine the scope of the claims.⁶⁵⁸ The court suggested that skilled artisans would recognize that "if a species within a dependent claim" did not meet the limitations of the independent claim, it would not be within the scope of the dependent claim.⁶⁵⁹ Consequently, the Federal Circuit reversed the district court's holding of invalidity under the second paragraph of § 112.⁶⁶⁰

B. *Special Patentability Requirements*

Certain types of patents, such as design, reissue, and plant patents, must fulfill special requirements in addition to patentability under §§ 102 and 103 and other standard requirements noted above.⁶⁶¹ The cases below illustrate some of the requirements peculiar to design patents and reissue patents.

1. *Design patents*

Under 35 U.S.C. § 171, "[w]hoever invents any new, original and ornamental design for an article of manufacture may obtain a patent therefore, subject to the conditions and requirements of this title," and "[t]he provisions of this title relating to patents for inventions

655. *Id.* at 1579, 28 U.S.P.Q.2d (BNA) at 1339.

656. *See id.* (finding that defendant failed to meet its burden under clear and convincing evidence standard by disputing meaning of claims that were not so unclear as to be held invalid under § 112).

657. *Id.*

658. *See id.* (establishing that this fact *would* be relevant to possible invalidity for inoperativeness under § 101 or nonenablement under § 112, first paragraph, issues that were not before court).

659. *Id.*

660. *Id.* at 1580, 28 U.S.P.Q.2d (BNA) at 1340; *see also* *Miles Lab., Inc. v. Shandon Inc.*, 997 F.2d 870, 875, 27 U.S.P.Q.2d (BNA) 1122, 1126 (Fed. Cir. 1993) (indicating argument that claim does not describe workable invention is not relevant to definiteness under 35 U.S.C. § 112, because "[t]he invention's operability may say nothing about a skilled artisan's understanding of the bounds of a claim").

661. 35 U.S.C. § 171 (1988); *see supra* Part II.A.3-4.

shall apply to patents for designs, except as otherwise noted.”⁶⁶² Thus, as reflected by *In re Klein*,⁶⁶³ discussed above,⁶⁶⁴ a claimed design must not only be new, but also must be unobvious.⁶⁶⁵ The next case illustrates another requirement imposed by § 171—that the claimed design be ornamental, rather than functional.⁶⁶⁶

In *L.A. Gear, Inc. v. Thom McAn Shoe Co.*,⁶⁶⁷ the court considered the question of invalidity of a design patent for an athletic shoe on the basis of functionality of the design.⁶⁶⁸ Melville Corporation, one of the defendants that L.A. Gear had charged with infringing the design patent at issue, presented the affirmative defense of invalidity, arguing that the claimed design was functional.⁶⁶⁹ Noting that “a design patent is directed to the appearance of an article of manufacture” and that a claimed design cannot be “essential to the use of the article,” the court rejected Melville’s assertion that the patent was invalid for claiming a functional design.⁶⁷⁰

The court agreed with Melville that each of the elements making up the claimed design had a utilitarian purpose, but pointed out that this is not the relevant inquiry in determining the functionality of the design—the relevant inquiry being an evaluation of the functionality of the design *as a whole*.⁶⁷¹ The court emphasized that a question of particular importance in determining whether a combination of utilitarian elements constitutes an ornamental design is whether the function of the elements can be performed in any way other than by the claimed design.⁶⁷² Finding that the district court had correctly determined that numerous alternative constructions were available to provide the same functional result as that in the claimed design, the Federal Circuit affirmed the district court’s decision that the claimed design was primarily ornamental and that the design patent, therefore, was not invalid for functionality.⁶⁷³

662. 35 U.S.C. § 171.

663. 987 F.2d 1569, 26 U.S.P.Q.2d (BNA) 1133 (Fed. Cir. 1993).

664. See *supra* text accompanying notes 560-61 and 569-85.

665. *In re Klein*, 987 F.2d 1569, 1570, 26 U.S.P.Q.2d (BNA) 1133, 1134 (Fed. Cir. 1993).

666. 35 U.S.C. § 171.

667. 988 F.2d 1117, 25 U.S.P.Q.2d (BNA) 1913 (Fed. Cir. 1993).

668. *L.A. Gear, Inc. v. Thom McAn Shoe Co.*, 988 F.2d 1117, 1123-24, 25 U.S.P.Q.2d (BNA) 1913, 1917 (Fed. Cir. 1993).

669. *Id.* at 1123, 25 U.S.P.Q.2d (BNA) at 1917.

670. *Id.*

671. *Id.*

672. *Id.* (agreeing with Melville that elements of disputed design serve utilitarian purpose, but disagreeing that utility overshadows combination of elements thus allowing consideration of ornamental design of combined elements).

673. *Id.* at 1123-24, 25 U.S.P.Q.2d (BNA) at 1917.

2. *Reissue patents*

While 35 U.S.C. § 171 governs design patents, 35 U.S.C. § 251 governs reissue patents. Under § 251, if an "error" that arose without any deceptive intent is discovered in a patent, whether it be a design or utility patent, the patentee may file a reissue application to correct the error.⁶⁷⁴ If the requirements for a reissue application are met, § 251 provides that the patentee will be granted a reissue patent "for the unexpired term of the original patent."⁶⁷⁵

Thus, as noted in *In re Morgan*,⁶⁷⁶ § 251 authorizes the Commissioner to reissue a patent only for the unexpired part of the term of the original patent.⁶⁷⁷ Morgan had applied four times for reissue of its patent; the present appeal involved the fourth reissue application.⁶⁷⁸ The original patent, however, had expired on August 19, 1992, while the present appeal was pending.⁶⁷⁹ On October 7, 1992, "after briefing and a few days before the scheduled oral hearing, the Commissioner moved to dismiss the appeal, arguing that there was no 'unexpired' term for which he had authority to reissue the patent" and, therefore, the case was moot.⁶⁸⁰ The Federal Circuit agreed and granted the Commissioner's motion to dismiss.⁶⁸¹

The court noted that, according to the unambiguous language of § 251, "the Commissioner has authority to reissue a patent only 'for the unexpired part of the term of the original patent.'"⁶⁸² Morgan argued that § 251 should not be strictly construed and should be applied in light of the reissue provision's general remedial nature.⁶⁸³ According to Morgan, the underlying intent of § 251 "was to prohibit the *initiation* of the reissue proceeding after expiration of the original patent," and the phrase "for the unexpired term of the original patent" was not meant to terminate a reissue proceeding that had been properly initiated during the term of the original patent.⁶⁸⁴ Morgan noted that under 37 C.F.R. § 1.510(a), reexamination proceedings, which are remedial in nature, may proceed "during the period of enforceability of a patent," and argued that the reissue

674. 35 U.S.C. § 251 (1988); *see also* 37 C.F.R. §§ 1.171-1.179 (1993).

675. 35 U.S.C. § 251.

676. 990 F.2d 1230, 26 U.S.P.Q.2d (BNA) 1392 (Fed. Cir. 1993).

677. *In re Morgan*, 990 F.2d 1230, 1231, 26 U.S.P.Q.2d (BNA) 1392, 1393 (Fed. Cir. 1993).

678. *Id.* at 1230-31, 26 U.S.P.Q.2d (BNA) at 1392-93.

679. *Id.* at 1231, 26 U.S.P.Q.2d (BNA) at 1393.

680. *Id.*

681. *Id.*

682. *Id.*

683. *Id.*

684. *Id.* at 1231-32, 26 U.S.P.Q.2d (BNA) at 1393 (emphasis added).

provision should be interpreted to permit similar treatment.⁶⁸⁵ Morgan further argued that a strict reading of § 251 would be "inconsistent with 35 U.S.C. § 286, which permits a patentee to bring an infringement action up to six years after expiration of the reissue patent."⁶⁸⁶

The court rejected a construction of § 251 to implicitly include the term "enforceable," a construction that would authorize the Commissioner to reissue the patent for the enforceable, unexpired part of the term of the original patent.⁶⁸⁷ Because the original patent in this case had expired, however, there was no "unexpired part," regardless of whether such part would have been enforceable.⁶⁸⁸

The court found Morgan's interpretation of § 251, that it authorizes reissue where the proceedings were initiated during the unexpired term of the patent, to be "contrary to the explicit language of that section."⁶⁸⁹ The court noted that while the reissue statute does not expressly require termination proceedings when a patent expires, it is the inevitable consequence of that provision that the patent can no longer be reissued.⁶⁹⁰

With respect to Morgan's argument that a strict interpretation of § 251 is inconsistent with § 286, the court stated that this argument was "not without some force because a patent does have value beyond its expiration date."⁶⁹¹ Noting, however, that the issue was if the Commissioner had the authority to reissue a patent once the original patent had expired, and not if a patentee could file a complaint for infringement after the reissue patent expired, the court found that it was compelled by the plain and unambiguous language of § 251 to hold that a patent may no longer be reissued after it expires.⁶⁹² The court, therefore, declined to force the Commissioner to involve his equitable powers and process the reissue application for three reasons: because the Commissioner could not possibly abuse his discretion; because the process could not, as a matter of law, result in a reissued patent; and because there was no evidence that the PTO

685. *Id.* at 1232, 26 U.S.P.Q.2d (BNA) at 1393 (arguing that because both reissue and reexamination are remedial and because PTO proceeds with reexamination proceedings after expiration, court should accord same treatment to reissue proceedings).

686. *Id.*

687. *Id.*

688. *Id.*

689. *Id.*

690. *Id.*

691. *Id.*

692. *Id.* (holding that after expiration, patents may be sued on, but not reissued).

had unduly prolonged the processing of Morgan's reissue application.⁶⁹³

Thus, one requirement of a reissue patent under 35 U.S.C. § 251 is that it must be granted before the term of the original patent expires. The next case illustrates another requirement imposed by § 251—the oft-litigated requirement of reissue “error.”⁶⁹⁴

In *Mentor Corp. v. Coloplast, Inc.*,⁶⁹⁵ the court considered on appeal the denial of a motion for judgment as a matter of law that claims six through nine, added during patent reissue, were invalid under 35 U.S.C. § 251. Following a jury verdict, the district court had entered judgment against Coloplast, Inc., holding, *inter alia*, that Mentor's reissue patent was not invalid and that all original and reissue claims of the patent were willfully infringed.⁶⁹⁶

Coloplast argued on appeal, as in its Rule 50(b) motion, that claims six through nine of the reissue patent were valid because they were “not based on ‘error’ within the meaning of section 251.”⁶⁹⁷ Whether the statutory requirement of “error” has been met is an issue of law that the court reviews *de novo*.⁶⁹⁸ The underlying factual inquiries, in contrast, are reviewed for substantial evidence.⁶⁹⁹ Although the error requirement generally is liberally construed, the reissue statute does not give a patentee a second opportunity to prosecute anew his original application.⁷⁰⁰ “The recapture rule bars a patentee from acquiring, by reissue, claims that are of the *same* or *broader scope* than claims cancelled from the original application.”⁷⁰¹

The originally claimed invention related to a condom catheter used on male patients suffering from incontinence.⁷⁰² Claims one

693. *Id.*, 26 U.S.P.Q.2d (BNA) at 1393-94. Morgan spent 15 years prosecuting the four reissue applications. In the first application, the claims were rejected under 35 U.S.C. § 103, with the C.C.P.A. affirming that rejection. *Id.* at 1230-31, 26 U.S.P.Q.2d (BNA) at 1392. The second application, a continuation reissue application, was abandoned. *Id.* at 1231, 26 U.S.P.Q.2d at 1392. In the third application, the Board affirmed a rejection under § 103 over the same references relied on in the first application. *Id.* Finally, in the fourth application, the present one, the Board affirmed, *inter alia*, a rejection under § 103 based on the same references relied on in the previous applications. *Id.*

694. *Mentor Corp. v. Coloplast, Inc.*, 998 F.2d 992, 27 U.S.P.Q.2d (BNA) 1521 (Fed. Cir. 1993).

695. 998 F.2d 992, 27 U.S.P.Q.2d (BNA) 1521 (Fed. Cir. 1993).

696. *Mentor*, 998 F.2d at 993, 27 U.S.P.Q.2d (BNA) at 1522.

697. *Id.* at 994, 27 U.S.P.Q.2d (BNA) at 1524.

698. *Id.*

699. *Id.* (citing *Ball Corp. v. United States*, 729 F.2d 1429, 1439, 221 U.S.P.Q. (BNA) 289, 297 (Fed. Cir. 1984)).

700. *Id.* at 995, 27 U.S.P.Q.2d (BNA) at 1524 (citing *In re Weiler*, 790 F.2d 1576, 1582, 229 U.S.P.Q. (BNA) 673, 677 (Fed. Cir. 1986); *In re Wilder*, 736 F.2d 1516, 1519, 222 U.S.P.Q. (BNA) 369, 371 (Fed. Cir. 1984), *cert. denied*, 469 U.S. 1209 (1985)).

701. *Id.* (citing *Ball Corp.*, 729 F.2d at 1436, 221 U.S.P.Q. (BNA) at 295).

702. *Id.* at 993, 27 U.S.P.Q.2d (BNA) at 1523.

through four of the reissue patent, which corresponded to the claims of the original patent, were directed to "a catheter having a pressure sensitive adhesive on a nonstick (release) layer located on the outer surface of a condom sheath prior to it being rolled up, such that on rolling the sheath outwardly, the adhesive on the outer surface" would come into contact with and stick to the inner surface.⁷⁰³ When unrolled, the adhesive on the release layer on the outer surface would be transferred to the inner surface.⁷⁰⁴

Within two years of issuance of the original patent, Mentor filed a broadening reissue application with an attorney declaration⁷⁰⁵ stating that the original patent claimed less than Mentor had a right to claim.⁷⁰⁶ The original claims did not read literally on catheters manufactured "using a process in which the adhesive is applied to the inner latex surface of the sheath at the time of manufacture, before the device was rolled."⁷⁰⁷ The declaration averred that the error arose because the prosecuting attorney assumed that manufacturing catheters by applying the adhesive to the inner surface was "too impractical to be commercially feasible."⁷⁰⁸ Mentor therefore added new claims six through nine, which lacked "the requirement of transfer of adhesive from the outer layer to the inner layer."⁷⁰⁹ The patent was ultimately reissued with original claims one through four and new claims six through nine.⁷¹⁰

Coloplast argued that its motion for judgment of invalidity as a matter of law had been improperly denied because reissue claims six through nine, which did "not include the adhesive transfer limitation, impermissibly" recaptured "what Mentor deliberately surrendered" in prosecuting the original patent and, therefore, Mentor's error was not correctable under § 251.⁷¹¹ Thus, Coloplast contended that Mentor's reissue claims violated the recapture rule.⁷¹²

The court agreed with Coloplast, explaining that "[e]rror under the reissue statute does not include a deliberate decision to surrender

703. *Id.*

704. *Id.*

705. *See* 37 C.F.R. § 1.175 (1993) (identifying requirements necessary to reissue oath or declaration).

706. *Mentor*, 998 F.2d at 996, 27 U.S.P.Q.2d (BNA) at 1525.

707. *See id.* (explaining that broadening reissue patent application was filed within two-year statutory period of § 251, which provides that "[n]o reissued patent shall be granted enlarging the scope of the claims of the original patent unless applied for within two years from the grant of the original patent").

708. *Id.*

709. *Id.*

710. *Id.*

711. *Id.* at 996-97, 27 U.S.P.Q.2d (BNA) at 1525-26.

712. *Id.*

specific subject matter" to overcome prior art because, as a result of this decision, the public is entitled to practice the surrendered subject matter.⁷¹³ The court noted that although "[t]he recapture rule does not apply in situations in which there is no evidence that the amendment of the original claims was in any regard an admission" that the original scope of the claims was not in fact patentable, that was not the situation here.⁷¹⁴

Claim one of Mentor's original patent application did not require "transfer" of adhesive from the outer layer to an inner layer.⁷¹⁵ During prosecution of the original patent application, Mentor responded to an examiner's rejection of the claims over prior art by replacing claim one with a new independent claim seven requiring transfer from the outer layer to the inner layer.⁷¹⁶ After another prior art rejection was made, Mentor responded by amending claim seven to further require that this transfer occur as the sheath was rolled up and then unrolled and argued that this feature patentably distinguished the claims over the prior art.⁷¹⁷ The original patent was subsequently issued with claim one of the patent corresponding to claim seven of the application.⁷¹⁸

As noted above, Mentor's reissue application added claims six through nine, all of which lacked the limitation of adhesive transfer from the outer to inner layer.⁷¹⁹ The examiner rejected the reissue claims based on prior art, and Mentor responded by submitting detailed information on commercial success.⁷²⁰ The patent was then reissued with original claims one through four and new claims six through nine.⁷²¹

The Federal Circuit concluded that reissue claim six, which did "not include the adhesive transfer limitation, impermissibly" recaptured "what was deliberately surrendered in the prosecution of the original application."⁷²² To obtain allowance, Mentor narrowed its claims originally filed in the patent application by adding the adhesive transfer limitation and was therefore precluded from recapturing what

713. *Id.* at 996, 27 U.S.P.Q.2d (BNA) at 1525.

714. *Id.* at 995, 27 U.S.P.Q.2d (BNA) at 1525 (citing *Seattle Box Co. v. Industrial Crating & Packing, Inc.*, 731 F.2d 818, 826, 221 U.S.P.Q. (BNA) 568, 574 (Fed. Cir. 1984)).

715. *Id.*, 27 U.S.P.Q.2d (BNA) at 1524.

716. *Id.* at 995-96, 27 U.S.P.Q.2d (BNA) at 1524-25.

717. *Id.*

718. *Id.* at 996, 27 U.S.P.Q.2d (BNA) at 1525.

719. *Id.*

720. *Id.*

721. *Id.*

722. *See id.* (observing that reissue claims did not contain rolling and unrolling adhesive transfer limitation that was deliberately surrendered to overcome rejection of prior claim due to prior art issue).

it deliberately surrendered.⁷²³ Mentor argued that the recapture rule was avoided because reissue claims six through nine, although broader than the original claims in some respects, were materially narrower in other respects.⁷²⁴ The court noted that "reissue claims that are broader in certain respects and narrower in others may," indeed, avoid the recapture rule if they are broader in a way that does not try to reclaim that which was surrendered during an earlier application.⁷²⁵ Because the reissue claims were broader "in a manner directly pertinent" to the surrendered subject matter and the added limitations did not narrow the reissue claims materially compared to their broadening, the court held that the recapture rule applied.⁷²⁶ Because reissue claims six through nine did not meet the legal requirement for reissue error, the Federal Circuit reversed the district court's denial of the motion for judgment of invalidity on claims six through nine.⁷²⁷

III. INTERFERENCE LAW AND PRACTICE

In general, an interference is a proceeding where priority between two or more parties claiming the same patentable invention is determined.⁷²⁸ In other words, an interference is a proceeding where priority of inventorship is determined.⁷²⁹ Interferences may be

723. *Id.*

724. *Id.*

725. *Id.*

726. *Id.*

727. *Id.* at 997, 27 U.S.P.Q.2d (BNA) at 1526.

728. See 35 U.S.C. § 102(g) (1988) (laying out conditions of patentability entitlement where priority is in question and giving list of factors to consider, including respective dates of conception and reduction to practice, and also requiring consideration of reasonable diligence of inventor first to conceive but last to reduce to practice).

729. See *Beech Aircraft Corp. v. EDO Corp.*, 990 F.2d 1237, 26 U.S.P.Q.2d (BNA) 1572 (Fed. Cir. 1993). In *Beech*, the Federal Circuit held that the district court, apparently confusing the concepts of inventorship and ownership, erred in vacating a Board decision resolving an interference between the parties. *Id.* at 1248-49, 26 U.S.P.Q.2d (BNA) at 1582-83. The case at bar presented a question concerning ownership of patent rights. *Id.* at 1239, 26 U.S.P.Q.2d (BNA) at 1574. The district court, in a previous litigation between the parties, had ruled on a question of ownership. *Id.* at 1241-42, 26 U.S.P.Q.2d (BNA) at 1576. Additionally, a previous interference in the PTO had resulted in a determination by the Board regarding priority of invention. *Id.* at 1239, 26 U.S.P.Q.2d (BNA) at 1574. In the present case, the district court vacated the PTO's interference decision, explaining that it was "restating" its previous ruling from the prior litigation regarding the contractual rights of the parties. *Id.* at 1244, 26 U.S.P.Q.2d (BNA) at 1579. In reversing the district court's order vacating the PTO's interference decision, the Federal Circuit stated that the district court had engaged in "faulty legal analysis" when it concluded that any determination of who had title in the subject matter involved in the interference "could serve as a basis for vacating the PTO's interference decision" regarding who was the first to invent the subject matter. *Id.* at 1248, 26 U.S.P.Q.2d (BNA) at 1582.

instituted in a district court action or in a PTO proceeding.⁷³⁰

A. *Priority and Derivation Issues*

In *Price v. Symsek*,⁷³¹ the Federal Circuit distinguished the concept of priority of invention from the concept of derivation.⁷³² "Priority goes to the first party to reduce an invention to practice, unless the other party can show that it was the first to conceive the invention and that it exercised reasonable diligence in later reducing that invention to practice."⁷³³ In contrast, a party asserting derivation "must establish prior conception of the claimed subject matter and communication of that conception to the adverse claimant."⁷³⁴

Price arose from an interference provoked by Price's filing of a patent application containing claims copied from Symsek's patent almost a year after its issuance.⁷³⁵ Price sought to prove that Symsek had derived the subject matter of the count from him or, alternatively, that Price was the prior inventor because he had conceived the subject matter of the count before Symsek and had been reasonably diligent in reducing it to practice.⁷³⁶ The Board held that Symsek was entitled to its patent claims corresponding to the interference count because Price had failed to establish beyond a reasonable doubt his conception prior to Symsek's conception.⁷³⁷ In so holding, the Board ruled that a witness' declaration did not corroborate a drawing because the witness did not attribute the drawing to Price or indicate that she had any understanding of its content or significance.⁷³⁸ Thus, Price's testimony that a drawing illustrating the subject matter of the count was not corroborated.⁷³⁹ Price appealed, arguing that the Board had erred in requiring Price to prove the elements of

730. See, e.g., 35 U.S.C. § 291 (1988) (providing that "[t]he owner of an interfering patent may have relief against the owner of another by civil action"); *id.* § 135(a) (providing that "[w]henever an application is made for a patent which, in the opinion of the Commissioner, would interfere with any pending application, or with any unexpired patent, an interference may be declared"); 37 C.F.R. § 1.601 (1993) (noting that interference proceedings in PTO are governed by 37 C.F.R. §§ 1.601-1.690).

731. 988 F.2d 1187, 26 U.S.P.Q.2d (BNA) 1031 (Fed. Cir. 1993).

732. *Price v. Symsek*, 998 F.2d 1187, 1190, 26 U.S.P.Q.2d (BNA) 1031, 1033 (Fed. Cir. 1993).

733. *Id.*; see also 35 U.S.C. § 102(g) (1988) (regarding conditions of patentability entitlement when priority is at issue).

734. *Price*, 998 F.2d at 1190, 26 U.S.P.Q.2d (BNA) at 1033; see also 35 U.S.C. § 102(f) (providing limit to patentability where applicant did not invent subject matter for which she is seeking patent).

735. *Price*, 998 F.2d at 1189, 26 U.S.P.Q.2d (BNA) at 1032.

736. *Id.* at 1190, 26 U.S.P.Q.2d (BNA) at 1033.

737. *Id.*

738. *Id.* at 1195, 26 U.S.P.Q.2d (BNA) at 1037.

739. *Id.*

priority or derivation beyond a reasonable doubt⁷⁴⁰ and in refusing to consider documentary evidence whose existence was corroborated as of the relevant date.⁷⁴¹

Noting that the issue regarding the quantum of proof required for an applicant to establish priority or derivation in an interference with an issued patent was one of first impression in the Federal Circuit,⁷⁴² the court held that the correct standard of proof is "clear and convincing," and not "beyond a reasonable doubt."⁷⁴³ The court found no reasonable justification for extending the criminal standard of "beyond a reasonable doubt" into the field of patent law, and found that the societal interests derived from the statutory presumption of patent validity require a higher standard than the civil standard of "a preponderance of the evidence."⁷⁴⁴ Thus, although the Board correctly placed the burden of proving conception on Price, the junior party,⁷⁴⁵ the court held that the Board had erred in requiring Price to satisfy this burden beyond a reasonable doubt.⁷⁴⁶ The court found that this error was not harmless and that it apparently had led the Board to impose an unreasonable requirement of corroboration.⁷⁴⁷

The court noted that proof of conception requires corroboration of an inventor's testimony,⁷⁴⁸ and that, in this situation, a "rule of reason" analysis is applied, where all pertinent evidence is evaluated to determine whether the requirement of corroboration has been met.⁷⁴⁹ The court found that the Board had extended the corroboration requirement beyond reasonable bounds.⁷⁵⁰

The court explained that, although evidence regarding what the drawing would mean to a person of ordinary skill in the art may help the Board to evaluate a drawing, the content of a drawing does not

740. *Id.* at 1190-91, 26 U.S.P.Q.2d (BNA) at 1033-34.

741. *Id.* at 1195, 26 U.S.P.Q.2d (BNA) at 1037.

742. *Id.* at 1191, 26 U.S.P.Q.2d (BNA) at 1034.

743. *Id.* at 1194, 26 U.S.P.Q.2d (BNA) at 1036.

744. *Id.* at 1193, 26 U.S.P.Q.2d (BNA) at 1035; *cf. Lamont v. Berguer*, 7 U.S.P.Q.2d (BNA) 1580, 1582 (Bd. Pat. App. & Int. 1988); *Okada v. Hitotsumachi*, 16 U.S.P.Q.2d (BNA) 1789, 1790 (Comm'r Pat. & Tm. 1990) (positing that statutory presumption of validity does not apply in interference proceeding).

745. *See* 37 C.F.R. § 1.657 (1993) (stating that rebuttable presumption exists in favor of party with earliest filing date or effective filing date and that burden of proof is on party contending otherwise).

746. *Price*, 988 F.2d at 1194, 26 U.S.P.Q.2d (BNA) at 1036.

747. *Id.*

748. *See id.* (articulating unequivocal case law holding that inventor's testimony regarding priority or derivation can not, standing alone, reach level of clear and convincing evidence).

749. *Id.* at 1195, 26 U.S.P.Q.2d (BNA) at 1037.

750. *Id.*

require corroboration.⁷⁵¹ Only an inventor's testimony must be corroborated before it can be considered.⁷⁵² Thus, the court held that the Board had erred in requiring the content of the drawing, a physical exhibit, to be corroborated,⁷⁵³ and determined that the witness' declaration, if believed, corroborated the preparation of the drawing before Symsek's date of conception.⁷⁵⁴ The court, therefore, vacated the Board's decision and remanded the case for the Board to determine whether Price had established conception and the other elements of priority or derivation "under the clear and convincing evidence standard."⁷⁵⁵

The court visited the issue of whether the burden of proving the conception element of a party's case for priority had been met in *Fiers v. Revel*.⁷⁵⁶ This case, which arose from a three-way interference among three patent applicants (Fiers, Sugano, and Revel), also addressed the issue of entitlement to the benefit of an earlier-filed application for the purpose of establishing priority of invention.⁷⁵⁷

Sugano, having filed a U.S. patent application on October 27, 1980, claimed the benefit of, *inter alia*, a March 19, 1980, Japanese filing date; Fiers, having filed a U.S. patent application on April 3, 1981, sought to establish priority based on a prior conception coupled with diligence to a British filing date of April 3, 1980; and Revel, having filed a U.S. patent application on September 28, 1982, claimed the benefit of a November 21, 1979, Israeli filing date.⁷⁵⁸ The count in controversy covered DNA consisting essentially of a DNA that codes for human fibroblast beta-interferon polypeptide.⁷⁵⁹

The Board decided that Sugano was entitled to a judgment of priority, holding that: (1) Sugano was entitled to the benefit of the Japanese filing date; "(2) although Fiers was entitled to the benefit of the British filing date, he had not proved conception" of the subject matter prior to that date; and (3) Revel was not entitled to the benefit of the Israeli filing date.⁷⁶⁰ In general, these holdings hinged on whether there had been a disclosure or recognition of the complete nucleotide sequence of a DNA coding for beta-interferon.⁷⁶¹

751. *Id.*

752. *Id.*

753. *Id.* at 1195-96, 26 U.S.P.Q.2d (BNA) at 1037.

754. *Id.* at 1196, 26 U.S.P.Q.2d (BNA) at 1038.

755. *Id.*

756. 984 F.2d 1164, 25 U.S.P.Q.2d (BNA) 1601 (Fed. Cir. 1993).

757. *Fiers v. Revel*, 984 F.2d 1164, 1164-65, 25 U.S.P.Q.2d (BNA) 1601, 1603 (Fed. Cir. 1993).

758. *Id.* at 1167, 25 U.S.P.Q.2d (BNA) at 1603.

759. *Id.* at 1166, 25 U.S.P.Q.2d (BNA) at 1603.

760. *Id.* at 1167-68, 25 U.S.P.Q.2d (BNA) at 1603.

761. *Id.* at 1168, 25 U.S.P.Q.2d (BNA) at 1604.

The Federal Circuit first addressed Fiers' case for priority.⁷⁶² The court rejected Fiers' argument that proof of an enabling method for preparing the DNA of the count was sufficient to establish conception of the DNA, and noted that conception of a DNA, like conception of any chemical substance, requires a definition of that substance other than by its functional utility.⁷⁶³ The court therefore affirmed the Board's holding that Fiers' proof of conception of a method that enabled one of ordinary skill in the art to make the DNA of the count was insufficient to establish conception of the DNA count.⁷⁶⁴

Turning to Revel's case for priority, the court noted that Revel had the burden of proving entitlement to the filing date of the earlier-filed Israeli application by establishing that this application met the requirements of 35 U.S.C. § 112, first paragraph.⁷⁶⁵ The Board held that the Israeli application satisfied neither the written-description requirement nor the enablement requirement of 35 U.S.C. § 112.⁷⁶⁶ The court held that Revel failed to prove that its Israeli application met the written-description requirement because the application did not demonstrate that the disclosed method for isolating the DNA in question actually worked and, therefore, the application failed to establish that Revel had possession of the invention.⁷⁶⁷ The court did not address the issue of whether the application satisfied the enablement requirement.⁷⁶⁸

Finally, the court addressed Sugano's case for priority based on its Japanese filing date.⁷⁶⁹ The court stated that once the sufficiency of Sugano's specification had been accepted by the Examiner, Sugano had no additional burden to prove by extrinsic evidence that his application was enabling. Consequently, the burden was on Fiers to demonstrate that Sugano's application was not enabling.⁷⁷⁰ The

762. *Id.*

763. *Id.* at 1168-69, 25 U.S.P.Q.2d (BNA) at 1604 (citing *Amgen Inc. v. Chugai Pharmaceutical Co.*, 927 F.2d 1200, 1206, 18 U.S.P.Q.2d (BNA) 1016, 1021 (Fed. Cir. 1991) (ruling that chemical structure or defining method of preparation by physical, chemical, or other distinguishing characteristic must be present in order to establish conception)).

764. *Id.* at 1169, 25 U.S.P.Q.2d (BNA) at 1605 (rejecting Fiers' argument that controlling issue was whether his method was enabling).

765. *Id.*

766. *Id.* at 1170, 25 U.S.P.Q.2d (BNA) at 1605.

767. *Id.* at 1170-71, 25 U.S.P.Q.2d (BNA) at 1605-06 (dismissing Revel's claim and declining to accept his argument that written description requirement was satisfied via correspondence between language of count and language of specification).

768. *Id.* at 1171 n.12, 25 U.S.P.Q.2d (BNA) at 1606 n.12.

769. *Id.* at 1171, 25 U.S.P.Q.2d (BNA) at 1606.

770. *Id.* at 1172, 25 U.S.P.Q.2d (BNA) at 1607 (citing *Weil v. Fritz*, 601 F.2d 551, 555, 202 U.S.P.Q. (BNA) 447, 450 (C.C.P.A. 1979)). The court in *Weil* explained that "any party making the assertion that a U.S. patent specification . . . fails . . . to comply with § 112 bears the burden of persuasion." 601 F.2d at 555, 202 U.S.P.Q.2d (BNA) at 450 (emphasis added) (indicating that

court concluded that Sugano's disclosure was enabling because it detailed a method for obtaining a DNA coding for beta-interferon, and held that the Board was correct in finding that Fiers showed no persuasive evidence to question the veracity of the statements contained in the specification.⁷⁷¹ After indicating that Sugano's Japanese application, in setting forth a thorough and complete nucleotide sequence of a DNA coding for beta-interferon, satisfied the written description requirement, the court held that Sugano was entitled to the Japanese filing date and therefore affirmed the Board's decision on priority.⁷⁷²

B. Other Patentability Issues

In addition to priority and derivation issues, other patentability issues may also be determined in an interference action before the Board.⁷⁷³ These other issues of patentability may be raised by a party,⁷⁷⁴ or, as in the following case, *sua sponte* by an examiner-in-chief (EIC).⁷⁷⁵

In *In re Van Geuns*,⁷⁷⁶ the Federal Circuit affirmed the Board's decision that the claims of Van Geuns' application designated as corresponding to the count⁷⁷⁷ were unpatentable for obviousness

once Sugano's sufficiency of specifications is determined, burden shifts to opposing party to challenge entitlement to Japanese application date and finding that was not done in this case). Revel had the burden of proving entitlement to the benefit of his earlier-filed Israeli application date. *Fiers*, 984 F.2d at 1169, 25 U.S.P.Q.2d (BNA) at 1605. To meet this burden, Revel was required to prove that his application met the requirements of 35 U.S.C. § 112. *Id.*; see also 37 C.F.R. § 1.633(f)-(g) (1993) (outlining preliminary motions that party may file, including motion to be accorded benefit of filing date of earlier application filed in United States or abroad and motion to attack benefit accorded opponent in notice declaring interference of filing date of earlier applications filed in United States or abroad). Compare *Kubota v. Shibuya*, 999 F.2d 517, 27 U.S.P.Q.2d (BNA) 1418 (Fed. Cir. 1993), which is discussed in Part III.C below.

771. See *Fiers*, 984 F.2d at 1172, 25 U.S.P.Q.2d (BNA) at 1607 (noting that apparently statements in Sugano's specification represented, in effect, that disclosed method produced described DNA and that DNA coded for beta-interferon).

772. *Id.*

773. See 37 C.F.R. § 1.633(a) (1993) (establishing that party may file preliminary motion for judgment on ground that opponent's claim corresponding to count is not patentable to opponent, except motion cannot be based on priority of invention by moving party as against any opponent or derivation by opponent from moving party).

774. See generally *id.* § 1.633 (outlining acceptable preliminary motions).

775. *Id.* § 1.610(e) (giving examiner-in-chief *sua sponte* discretion to determine proper course of conduct in interference for any situation not specifically assigned in 37 C.F.R. § 1.610); *id.* § 1.641 (noting that examiner-in-chief may take action if unpatentability discovered). In a decision dated October 15, 1993, Commissioner Lehman authorized Board members (EICs) to use the new title "Administrative Patent Judge" (APJ). 1156 O.G. 32 (Nov. 9, 1993).

776. 988 F.2d 1181, 26 U.S.P.Q.2d (BNA) 1057 (Fed. Cir. 1993).

777. See 37 C.F.R. § 1.601(f) (1993) (defining "count" as interfering subject matter between applications or between applications and patents, and adding that any claim that corresponds to count is claim involved in interference within meaning of 35 U.S.C. § 135(a)).

under 35 U.S.C. § 103.⁷⁷⁸ The EIC had moved *sua sponte* under 37 C.F.R. §§ 1.610(e) and 1.633(a) for judgment on the ground that the subject matter of the count was unpatentable under 35 U.S.C. § 103.⁷⁷⁹ After the parties responded to the show-cause notice under 37 C.F.R. § 1.640(d), took testimony, filed briefs, and appeared in a hearing before the Board, the Board determined that the subject matter of the count was unpatentable for obviousness.⁷⁸⁰ The Board, therefore, held all of the claims of the parties designated as corresponding to the count, including claims 21-47 of Van Geuns, to be unpatentable for obviousness because they stood or fell with the count.⁷⁸¹ Van Geuns appealed.⁷⁸²

As a preliminary matter, the court noted that the Board should determine patentability with reference to a specific claim or claims, rather than the count.⁷⁸³ As pointed out by the Federal Circuit, an interference count is merely a "vehicle for contesting priority of invention and determining what evidence is relevant to priority."⁷⁸⁴ Because claim 42 of the Van Geuns application, however, corresponded exactly to the count, the Federal Circuit viewed the Board's decision as finding that claim to be unpatentable for obviousness.⁷⁸⁵ Reviewing the legal conclusion of unpatentability under 35 U.S.C. § 103 *de novo* and the underlying factual findings under the clearly erroneous standard,⁷⁸⁶ the court determined that the Board did not err in concluding that claim 42 would have been obvious.⁷⁸⁷

Turning to the issue of unpatentability of claims 21-41 and 43-47, the Federal Circuit stated that, as a general proposition, the PTO's position is:

that claims designated as corresponding to a count stand or fall with the patentability of the subject matter of the count is overbroad. The rules for determining patentability in an interference proceeding and the scope of a party's admission when claims

778. *In re* Van Geuns, 988 F.2d 1181, 1185, 26 U.S.P.Q.2d (BNA) 1057, 1059 (Fed. Cir. 1993).

779. *Id.* at 1183, 26 U.S.P.Q.2d (BNA) at 1058.

780. *Id.*

781. *Id.* at 1184, 26 U.S.P.Q.2d (BNA) at 1058.

782. *Id.* at 1183, 26 U.S.P.Q.2d (BNA) at 1058.

783. *Id.* at 1184, 26 U.S.P.Q.2d (BNA) at 1058.

784. *Id.*, 26 U.S.P.Q.2d (BNA) at 1058-59 (citing *Case v. CPC Int'l, Inc.*, 730 F.2d 745, 749, 221 U.S.P.Q. (BNA) 196, 200 (Fed. Cir. 1984) (ruling that "count" and "claim" are not interchangeable words to use when claiming invention); *Squires v. Corbett*, 560 F.2d 424, 433, 194 U.S.P.Q. (BNA) 513, 519 (C.C.P.A. 1977)).

785. *Id.*, 26 U.S.P.Q.2d (BNA) at 1059.

786. *See id.* (citing *In re* Woodruff, 919 F.2d 1575, 1577, 16 U.S.P.Q.2d (BNA) 1934, 1935 (Fed. Cir. 1990)).

787. *Id.* at 1186, 26 U.S.P.Q.2d (BNA) at 1061.

are designated as corresponding to the count must be considered.⁷⁸⁸

The court noted that when an interference is declared between an application and a patent the PTO must, pursuant to 37 C.F.R. § 1.606, designate the claims that define the same patentable invention as the count as corresponding to the count.⁷⁸⁹ Thus, based on the definition of "the same patentable invention" given at 37 C.F.R. § 1.601(n), the PTO must designate as corresponding to the count those claims that are the same as the count or obvious in view of the count, assuming the count is prior art with respect to such claims.⁷⁹⁰

As noted by the court, a party may contest the PTO's "designation of particular claims as corresponding to a count" by filing a preliminary motion under 37 C.F.R. § 1.633(c)(4).⁷⁹¹ The court indicated that if a party does not timely contest the designation of claims, then the party has effectively conceded that all of the designated claims would be anticipated, at least rendered or obvious, if the count was actually prior art to the claims.⁷⁹² In dictum, the Federal Circuit stated that if prior art actually were to anticipate the subject matter defined by a count, then it follows from 37 C.F.R. § 1.601(n) that all claims designated as corresponding to a count would be unpatentable for anticipation or obviousness.⁷⁹³ The court, however, was not persuaded that this logic should be extended another step.⁷⁹⁴

The court explained that, where prior art does not anticipate, but only renders obvious, the subject matter of a count, the prior art does not disclose every limitation of the count.⁷⁹⁵ In such a case, although the claims designated as corresponding to the count have been conceded to be the same patentable invention as the count, they

788. *Id.* at 1185, 26 U.S.P.Q.2d (BNA) at 1059.

789. *Id.*, 26 U.S.P.Q.2d (BNA) at 1060.

790. *Id.* The rules do not require the PTO, in the first instance, to identify the legal and factual bases for designating claims as corresponding to a count. For example, if a claim of a party is designated as corresponding to the count on the basis of obviousness, assuming the count to be prior art, the rules do not require the PTO to provide the factual basis for the designation using the test for obviousness set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 U.S.P.Q. (BNA) 459 (1966).

791. *Van Geuns*, 988 F.2d at 1185, 26 U.S.P.Q.2d (BNA) at 1060; *see also* 37 C.F.R. § 1.637(c)(4)(ii) (1993) (stating that preliminary motion to designate that claim does not correspond to count must show that claim does not define same patentable invention declared in interference corresponding to count); *cf. id.* §§ 1.601(n), 1.606 (1993) (elaborating instance where invention is construed to be "same patentable invention" or is obvious with respect to another invention which is prior art).

792. *Van Geuns*, 988 F.2d at 1185, 26 U.S.P.Q.2d (BNA) at 1060.

793. *Id.* at 1185-86, 26 U.S.P.Q.2d (BNA) at 1060.

794. *Id.* at 1186, 26 U.S.P.Q.2d (BNA) at 1060.

795. *Id.*

are not necessarily the same patentable invention as the prior art.⁷⁹⁶ The Federal Circuit therefore concluded that:

a party to an interference, who has failed to timely contest the designation of claims corresponding to a count, has not conceded that claims corresponding to a count are anticipated or made obvious by the prior art when the subject matter of the count is determined to be unpatentable for obviousness.⁷⁹⁷

Van Geuns had failed to contest in time the designation of claims 22-41 and 43-47 as corresponding to the count.⁷⁹⁸ He had, however, argued these claims separately, although the rules did not specify whether a party may argue the patentability of claims separately to the EIC and the Board.⁷⁹⁹ Because the *inter partes* interference procedures for determining patentability essentially paralleled the usual *ex parte* procedures, the court concluded that a party to an interference could argue separately the "patentability of claims designated as corresponding to a count," but if the party did not so argue its claims separately, they stood or fell together.⁸⁰⁰

Applying these principles, the court held that Van Geuns' claims 22-41 and 43-47, which were designated as corresponding to the count and whose patentability was argued apart from that of the count, were not unpatentable simply because the subject matter of the count was unpatentable under 35 U.S.C. § 103.⁸⁰¹ Rather, the claims were unpatentable under 35 U.S.C. § 103 because, as found by the Board, the limitation argued by Van Geuns as distinguishing over the prior art would have been obvious in view of the prior art.⁸⁰²

Another case dealing with unpatentability issues under 35 U.S.C. §§ 102 and 103 in an interference context is *Davis v. Loesch*.⁸⁰³ *Davis* arose from an interference declared April 4, 1985,⁸⁰⁴ which is after

796. *Id.*

797. *Id.*

798. *Id.* at 1185, 26 U.S.P.Q.2d (BNA) at 1060.

799. *Id.* at 1185 n.2, 26 U.S.P.Q.2d (BNA) at 1060 n.2.

800. *Id.* at 1186, 26 U.S.P.Q.2d (BNA) at 1060 (citing 37 C.F.R. § 1.192(c)(5) (1993) (outlining situations for grouping of claims to stand or fall together unless statement that rejected claims do not stand or fall together is included in presentation of reasons why they are separately patentable); *In re King*, 801 F.2d 1324, 1325, 231 U.S.P.Q. (BNA) 136, 137 (Fed. Cir. 1986)).

801. *Id.*

802. *Id.* at 1185-86, 26 U.S.P.Q.2d (BNA) at 1060-61.

803. 998 F.2d 963, 27 U.S.P.Q.2d (BNA) 1440 (Fed. Cir. 1993).

804. *Davis v. Loesch*, 998 F.2d 963, 965, 27 U.S.P.Q.2d (BNA) 1440, 1442 (Fed. Cir. 1993) (declaring interference between defendant's pending continuation application and patent issued to plaintiff).

the February 11, 1985 date on which the new interference rules went into effect.⁸⁰⁵

The interfering subject matter related to a flameless apparatus that converts liquid nitrogen into gaseous nitrogen making it possible to pump nitrogen into an oil well.⁸⁰⁶ The interference involved Loesch's continuation application, which claimed priority based on a patent application filed March 31, 1980, and Davis' U.S. Patent No. 4,420,942 (the '942 patent), which issued from an application filed July 16, 1982, and Davis' application for reissue of the '942 patent on December 18, 1985.⁸⁰⁷ Loesch provoked the interference by presenting claims in the continuation claim copied from the '942 patent and the reissue application.⁸⁰⁸ Each party relied solely upon its respective filing date for proof of priority.⁸⁰⁹ Loesch was accorded the benefit of its March 31, 1980, filing date, and was, therefore, designated the senior party.⁸¹⁰

The Board concluded that: (1) the disclosure in Loesch's patent application, which issued as U.S. Patent No. 4,438,729 (the '729 patent), "supported all the material limitations" of the count;⁸¹¹ (2) "Davis' reissue claims 44-55 were not patentably distinct from the count";⁸¹² and (3) "Loesch was entitled to judgment on the ground that all of Davis' claims at issue, claims 1-5 and 41-43 of the '942 patent and claims 44-55 of the reissue application, were unpatentable to Davis under 35 U.S.C. § 102(e) and/or 35 U.S.C. § 103 [in view of] the disclosure of" Loesch's '729 patent.⁸¹³ Davis appealed and the Federal Circuit affirmed.⁸¹⁴

805. 37 C.F.R. §§ 1.601 to 1.690 (1993) (outlining governing rules on interference procedures in PTO that are to be construed to insure just, speedy, and inexpensive determination of each interference). Although the *Davis* interference was under the new rules, some of the issues raised by the parties—e.g., whether an opponent's disclosure supports the material limitations of the count, *Davis*, 998 F.2d at 965, 27 U.S.P.Q.2d (BNA) at 1443—hark back to practice under the old interference rules (37 C.F.R. § 1.201 *et seq.*). This is not surprising because the interference was declared shortly after the new rules went into effect.

806. *Davis*, 998 F.2d at 965, 27 U.S.P.Q.2d (BNA) at 1442.

807. *Id.*

808. *Id.*

809. *Id.*

810. *Id.*

811. *Id.*; see also 37 C.F.R. § 1.633(g) (1993) (noting situation where party can move to attack benefit accorded opponent for filing earlier application).

812. See *Davis*, 998 F.2d at 965, 27 U.S.P.Q.2d (BNA) at 1442 (concluding that claims are not obviously patentably distinct in 35 U.S.C. § 103 (1988)); see also 37 C.F.R. §§ 1.633(c)(4), 1.637(c)(4) (providing regulations under which party may move to redefine interference by designating claim as not corresponding to count).

813. See *Davis*, 998 F.2d at 965, 27 U.S.P.Q.2d (BNA) at 1442 (basing unpatentability on prior art reference under 35 U.S.C. § 102(e)); see also 37 C.F.R. § 1.633(a) (outlining grounds under which party can move for judgment that opponent's claim is not patentable to opponent).

814. *Davis*, 998 F.2d at 964-66, 27 U.S.P.Q.2d (BNA) at 1441-42.

The court agreed that the disclosure of the '729 patent supported the material limitations of the count.⁸¹⁵ Because the '729 patent therefore anticipated the count, the court agreed that the '729 patent anticipated claims 1, 4, 5, 41, and 42 of the '942 patent and claims 1, 4, 5, 41, 42, 50, 53, and 54 of the reissue application.⁸¹⁶

Concerning reissue claims 2, 3, 43-49, 51, 52, and 55, Davis argued that these claims were separately patentable because they recited a shell-and-tube heat exchanger in place of the commingling chamber of the embodiment of the apparatus disclosed in the '729 patent.⁸¹⁷ The court disagreed with Davis, noting that the '729 patent taught substituting a shell-and-tube heat exchanger for the commingling chamber, and that there was evidence that it would have been obvious to a person of ordinary skill in the art how to make the suggested substitution.⁸¹⁸ The court, therefore, affirmed the Board's determination of obviousness.⁸¹⁹

In *Davis*, the court also addressed a jurisdictional issue, which is discussed above in Part I. Other issues not relating to patentability raised in cases dealing with interferences are discussed in the following subsection.

C. Issues Relating to Procedure and Practice

*General Instrument Corp. v. Scientific-Atlanta*⁸²⁰ arose from an interference proceeding in the PTO wherein the Board decided Scientific-Atlanta (SA) was entitled to priority.⁸²¹ General Instrument (GI) appealed by filing an action under 35 U.S.C. § 146.⁸²²

815. *Id.* at 969, 27 U.S.P.Q.2d (BNA) at 1445.

816. *Id.* at 968, 27 U.S.P.Q.2d (BNA) at 1445. Although the court cited *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q.2d (BNA) 1913, 1920 (Fed. Cir.), *cert. denied*, 493 U.S. 853 (1989), for the proposition that a claimed invention is anticipated if every element is shown in a single prior art reference, *Davis*, 998 F.2d at 969, 27 U.S.P.Q.2d (BNA) at 1445, the court did not mention whether the Board's decision addressed how the disclosure of the '729 patent showed all elements of the Davis claims in question. Rather, the unpatentability of these claims apparently was premised on their designation as corresponding to the count. *Cf. In re Van Geuns*, 988 F.2d 1181, 26 U.S.P.Q.2d (BNA) 1057 (Fed. Cir. 1993) (ruling that claims whose patentability were argued apart from count, but were designated as corresponding to count, were not unpatentable due to subjective matter of count but, rather, due to prior art limitation argued by plaintiff and court holding that limitation could not be distinguished due to obviousness).

817. *Davis*, 998 F.2d at 968-69, 27 U.S.P.Q.2d (BNA) at 1445-46.

818. *Id.* at 969-70, 27 U.S.P.Q.2d (BNA) at 1446.

819. *Id.* at 970, 27 U.S.P.Q.2d (BNA) at 1446.

820. 995 F.2d 209, 27 U.S.P.Q.2d (BNA) 1145 (Fed. Cir. 1993).

821. *General Instrument Corp. v. Scientific-Atlanta*, 995 F.2d 209, 210, 27 U.S.P.Q.2d (BNA) 1145, 1145 (Fed. Cir. 1993).

822. *Id.*; see 35 U.S.C. § 146 (1988) (providing that "[a]ny party to an interference dissatisfied with the decision of the Board . . . may have remedy by civil action . . . unless he has appealed to . . . the Federal Circuit").

GI's appeal under § 146 was directed to the issue of patentability of SA's claims based on an alleged public use more than one year before the filing of SA's patent application.⁸²³ The basis for the alleged public use was a public demonstration of a product by the inventor named in SA's application that occurred over a year prior to its filing, which demonstration was disclosed by SA in its preliminary statement filed during the PTO proceedings.⁸²⁴ SA moved in limine to preclude all testimony regarding the alleged public use on the ground that the issue had not been raised before the Board and, therefore, could not be raised in the district court proceeding.⁸²⁵ The district court granted SA's motion and entered judgment in favor of SA.⁸²⁶

The questions the Federal Circuit addressed on appeal were (1) "whether the public use issue was raised before the Board for purposes of a subsequent appeal pursuant to [35 U.S.C. §] 146" and, if not, (2) "whether the district court properly excluded the testimony proffered" by GI.⁸²⁷ The Federal Circuit answered the first question in the negative and the second question in the affirmative.

The court noted that GI could not have made a preliminary motion for judgment under 37 C.F.R. § 1.633(a) based on the alleged prior use because SA's preliminary statement was not served on GI until after the deadline for filing preliminary motions had passed.⁸²⁸ The court found, however, that GI could have filed a belated preliminary motion for judgment, which likely would have met the good-cause requirement of 37 C.F.R. § 1.645(b).⁸²⁹ Not only did GI fail to file such a belated preliminary motion for judgment of unpatentability based on the alleged prior use, GI expressed disinterest in pursuing the matter, thereby waiving any interest in a decision by the Board on the issue.⁸³⁰ Because the EIC did not exercise his discretionary authority to take up the issue, the Federal Circuit held that the district court correctly decided that the issue of the alleged public use

823. *General Instrument*, 995 F.2d at 210, 27 U.S.P.Q.2d (BNA) at 1145-46.

824. *See id.* at 212-13, 27 U.S.P.Q.2d (BNA) at 1147 (noting that if demonstrated product had been SA's claimed invention, public demonstration would have made SA's claims covering invention unpatentable under 35 U.S.C. § 102(b)).

825. *Id.* at 210-11, 27 U.S.P.Q.2d (BNA) at 1146.

826. *Id.* at 211, 27 U.S.P.Q.2d (BNA) at 1146.

827. *Id.*

828. *Id.* at 213, 27 U.S.P.Q.2d (BNA) at 1147-48; *see also* 37 C.F.R. § 1.646(a)(1) (1993) (noting that preliminary statements are not served on opponent until ordered by EIC); *id.* § 1.631(a) (recognizing that service is typically ordered concurrent with EIC's decision on preliminary motions).

829. *General Instrument*, 995 F.2d at 213, 27 U.S.P.Q.2d (BNA) at 1148 (basing statement on fact that information underlying motion was not available any earlier in proceeding).

830. *Id.* at 214, 27 U.S.P.Q.2d (BNA) at 1148-49.

was not raised before the Board for purposes of the § 146 proceeding.⁸³¹

The court next turned to whether the district court erred in precluding evidence on the public use issue when that issue was not "raised before the Board."⁸³² The court initially noted that review of an interference proceeding under 35 U.S.C. § 146 is an equitable remedy⁸³³ and, accordingly, the district court may, when appropriate, exercise its discretion, and allow testimony on issues that were not raised before the Board.⁸³⁴ The Federal Circuit held that the district court did not abuse its discretion by granting SA's motion in limine, thus upholding denial of the admission of testimony on the issue of public use.⁸³⁵

*Kubota v. Shibuya*⁸³⁶ is another case that involved an issue relating to the allocation of the burden of proof under the new interference rules.⁸³⁷ In this case, the court addressed the issue of whether the moving party attacking the opponent's priority benefit accorded in the declaration of the interference under 37 C.F.R. § 1.633(g) bears the burden of proving that the opponent's earlier-filed application does not comply with the requirements of 35 U.S.C. § 112, first paragraph.⁸³⁸

Although Shibuya had been accorded the benefit of an earlier Japanese filing date and was designated the senior party when the interference was officially declared, the EIC granted Kubota's preliminary motion under 37 C.F.R. § 1.633(g), reversed the order of the parties making Shibuya the junior party, and required Shibuya to show cause as to why summary judgment should not be entered against him.⁸³⁹ After Shibuya responded to the show-cause order, the matter came before the Board, which reversed the EIC's decision and reinstated the benefit originally accorded to Shibuya on the

831. *Id.*, 27 U.S.P.Q.2d (BNA) at 1148. In reaching its decision, the court provided guidance for determining whether an issue has been raised for § 146 purposes, stating that, "[s]hort of [such] compliance with the regulations, issues may only be deemed raised for section 146 purposes if the record clearly demonstrates that the issue was undeniably placed before the [EIC], and one or more parties insisted that the issue be resolved in the process of deciding which of the parties was entitled to priority." *Id.*

832. *Id.*, 27 U.S.P.Q.2d (BNA) at 1149.

833. *See id.* (citing *Standard Oil Co. v. Montedison S.p.A.*, 540 F.2d 611, 616-17, 191 U.S.P.Q. (BNA) 657, 660-61 (3d Cir. 1976) (reviewing circumstances such as fraud where district court exercises its discretion by admitting testimony not raised before board)).

834. *Id.*

835. *Id.*

836. 999 F.2d 517, 27 U.S.P.Q.2d (BNA) 1418 (Fed. Cir. 1993).

837. *Kubota v. Shibuya*, 999 F.2d 517, 520, 27 U.S.P.Q.2d (BNA) 1418, 1420 (Fed. Cir. 1993).

838. *Id.* at 519, 27 U.S.P.Q.2d (BNA) at 1420.

839. *Id.*

ground that Kubota "failed to satisfy his burden of proving that Shibuya's Japanese application did not" meet the enablement and written-description requirements of § 112.⁸⁴⁰ Although Kubota previously asserted that Shibuya's Japanese application improperly incorporated essential material by reference to the disclosure of another foreign application,⁸⁴¹ the Board found that Kubota failed to present to the EIC any credible evidence that a person of ordinary skill in the art, upon reading the Japanese application, would be unable to make and use the invention of the count without resorting to the referenced disclosure.⁸⁴²

Affording deference to the Board's and Commissioner's⁸⁴³ interpretation that the new interference rules clearly place the burden of proof on a party filing a preliminary motion under 37 C.F.R. § 1.633(g), the court agreed that 37 C.F.R. §§ 1.637(g) and 1.639 supported placing such a burden,⁸⁴⁴ and that the old-rule "right to make" the claim cases did not apply.⁸⁴⁵ The Federal Circuit therefore affirmed the Board's decision that Kubota, as the moving party, bore the burden of proof.⁸⁴⁶

IV. INFRINGEMENT

In a typical patent infringement suit brought by a patent holder against an accused infringer, the court will be faced with two major issues: (1) whether the patent claims asserted by the patent owner are valid; and (2) whether these claims are infringed. Under 35 U.S.C. § 282, a patent is presumed valid, and therefore the burden is on the accused infringer to prove invalidity by clear and convincing evidence⁸⁴⁷ on one of the grounds discussed above in Part III.

840. *Id.*

841. *Id.*

842. *Id.*

843. An *amicus curiae* brief was filed by the Commissioner, urging the court to affirm the Board's decision.

844. *Id.* at 521, 27 U.S.P.Q.2d (BNA) at 1421.

845. *Id.*, 27 U.S.P.Q.2d (BNA) at 1422 (noting that old interference rules required that party who copied claims for purposes of provoking interference bore burden of proving by clear and convincing evidence that it had "right to make" claim).

846. *Id.* at 522, 27 U.S.P.Q.2d (BNA) at 1423. The PTO subsequently amended 37 C.F.R. § 1.637(a) to make explicit that a party filing a preliminary motion in an interference has the burden of proving that it is entitled to the relief sought in the motion. 58 Fed. Reg. 49,432 (1993).

847. See *Westvaco Corp. v. International Paper Co.*, 991 F.2d 735, 745-46, 26 U.S.P.Q.2d (BNA) 1353, 1362 (Fed. Cir. 1993) (affirming that plaintiff accused of infringement did not prove by clear and convincing evidence that patent was invalid with respect to asserted anticipation and obviousness claims, but finding clear error in district court ruling willful infringement).

In contrast, the burden is on the patent owner to prove infringement by a preponderance of the evidence.⁸⁴⁸ To prove infringement, the patent owner must show that every limitation of an asserted patent claim is found in the accused device, either literally or by an equivalent.⁸⁴⁹

Determining a question of patent infringement entails a two-step analysis: (1) construing the claims to determine their scope; and (2) comparing the properly construed claims with the accused structure to determine whether the claims encompass the accused structure.⁸⁵⁰

A. *The First Step of the Analysis*

The claims of the patent, which measure the invention at issue, are given the same meaning for purposes of both validity and infringement analyses.⁸⁵¹ Interpretation aids for determining the meaning of a claim include not only the claim language, but also the patent specification, prosecution history,⁸⁵² prior art, and other claims.⁸⁵³ The Federal Circuit applies a *de novo* standard in reviewing questions of claim interpretation, which are questions of law.⁸⁵⁴

848. See *Carroll Touch, Inc. v. Electro Mechanical Sys., Inc.*, 15 F.3d 1573, 1578, 27 U.S.P.Q.2d (BNA) 1836, 1840 (Fed. Cir. 1993) (citing *SmithKline Diagnostics, Inc. v. Helena Lab. Corp.*, 859 F.2d 878, 889, 8 U.S.P.Q.2d (BNA) 1468, 1477 (Fed. Cir. 1988) (stating that patent owner has burden to prove infringement by "preponderance of the evidence" and concluding, under doctrine of equivalents, that accused devices not shown to infringe by preponderance of evidence)).

849. See *id.* (stating that claim limitations cannot be ignored under doctrine of equivalents when determining infringement) (citing *Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931, 935, 4 U.S.P.Q.2d (BNA) 1737, 1739-40 (Fed. Cir. 1987) (en banc), *cert. denied*, 485 U.S. 961 (1988)). But a finding that a patent claim literally reads on an accused device does not necessarily end the infringement inquiry—an accused infringer may establish noninfringement under the reverse doctrine of equivalents by showing that its device "has been so far changed in principle that it performs the same or similar function in a substantially different way." *SRI Int'l v. Matsushita Elec. Corp. of Am.*, 775 F.2d 1107, 1123-24, 227 U.S.P.Q. (BNA) 577, 587 (Fed. Cir. 1985) (en banc); see also *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 608-09 (1950) (describing that doctrine of equivalents not always applied to benefit of patentee and that disputed device from combination of forms may restrict original claim and defeat patentee's infringement action).

850. See *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 1054, 5 U.S.P.Q.2d (BNA) 1434, 1441 (Fed. Cir. 1988) (using formula to determine whether literal infringement occurred and what scope of claims were in relation to disputed invention).

851. *SRI Int'l*, 775 F.2d at 1121, 227 U.S.P.Q. (BNA) at 585.

852. See *Lemelson v. General Mills, Inc.*, 968 F.2d 1202, 1206, 23 U.S.P.Q.2d (BNA) 1284, 1288 (Fed. Cir. 1992) (discussing importance of examining language specification and prosecution history of disputed claim, especially where disagreement exists as to language of claim and how interpreted).

853. *Carroll Touch*, 15 F.3d at 1577, 27 U.S.P.Q.2d (BNA) at 1839-40 (looking to specification to assist claim construction, noting prosecution history, and rejecting patentee's attempt to distinguish claim limitation as to construction).

854. *Id.*, 27 U.S.P.Q. 2d (BNA) at 1839; see also *Mentor Corp. v. Coloplast, Inc.*, 998 F.2d 992, 994, 27 U.S.P.Q.2d (BNA) 1521 (Fed. Cir. 1993).

*North American Vaccine, Inc. v. American Cyanamid Co.*⁸⁵⁵ involved a question of claim interpretation.⁸⁵⁶ National Research Council of Canada and its exclusive licensee, North American Vaccine (collectively NRC), filed suit against American Cyanamid Co., alleging patent infringement.⁸⁵⁷ The patent claims in question were directed to a vaccine component—an antigenic polysaccharide-protein conjugate—with the protein linked to a terminal portion of the polysaccharide without significant crosslinking.⁸⁵⁸ The district court found that Cyanamid's "HibTITER," a vaccine against *Haemophilus influenza* (H. flu) type b (Hib) bacteria, did not literally infringe the claims of NRC's patent based on its interpretation of the claimed "linkage to a terminal portion of the polysaccharide without significant crosslinking."⁸⁵⁹

Cyanamid's vaccine consisted of Hib polysaccharides linked to one or more proteins.⁸⁶⁰ Half of these molecules were monofunctional monomers, which each had a protein bound to a polysaccharide (no crosslinking), and the remaining molecules were difunctional dimers and trimers, which had two and three proteins, respectively, linked together by a polysaccharide (end-to-end crosslinking).⁸⁶¹ The district court, interpreting "conjugate" as embracing all the molecules in the mixture, had rejected NRC's argument that infringement was established on the basis of the monomers alone.⁸⁶² The district court had also construed "linkage to a terminal portion of the polysaccharide without significant crosslinking" to mean linkage at only one terminal portion of the polysaccharide, excluding all crosslinking, even end-to-end crosslinking.⁸⁶³ Because Cyanamid's HibTITER contained dimers and trimers having end-to-end crosslinking, the district court had held that these vaccines did not infringe NRC's patent.⁸⁶⁴

At oral argument, NRC indicated that it was not challenging the interpretation of the claim term "conjugate."⁸⁶⁵ NRC did argue, however, that the claim language in question was not limited to

855. 7 F.3d 1571, 28 U.S.P.Q.2d (BNA) 1333 (Fed. Cir. 1993).

856. *North Am. Vaccine, Inc. v. American Cyanamid Co.*, 7 F.3d 1571, 1573, 28 U.S.P.Q.2d (BNA) 1333, 1334 (Fed. Cir. 1993).

857. *Id.*

858. *Id.*

859. *Id.* at 1573-74, 28 U.S.P.Q.2d (BNA) at 1334-35.

860. *Id.* at 1574, 28 U.S.P.Q.2d (BNA) at 1334.

861. *Id.*, 28 U.S.P.Q.2d (BNA) at 1334-35.

862. *Id.* at 1574 n.1, 28 U.S.P.Q.2d (BNA) at 1335 n.1.

863. *Id.* at 1575, 28 U.S.P.Q.2d (BNA) at 1335.

864. *Id.*

865. *Id.* at 1574-75 n.2, 28 U.S.P.Q.2d (BNA) at 1335 n.2.

linkage at only a single terminal (monofunctionality), but included end-to-end crosslinking, with the phrase "without significant crosslinking" referring to crosslinking across the backbone of the polysaccharide, rather than at the ends.⁸⁶⁶ The Federal Circuit disagreed.⁸⁶⁷

Acknowledging that the term "a" in a claim may mean one or more, the court found that there was no indication in the specification that the inventors had intended "a" in the recited "a terminal portion" to have other than its ordinary singular meaning.⁸⁶⁸ The court rejected NRC's argument that the recitation of H. flu supported its proposed construction.⁸⁶⁹ The court determined that the evidence supported the district court's finding that H. flu did not necessarily yield difunctional molecules, and concluded that the specification supported the district court's interpretation that the claims were limited to linkages at only one terminal portion of the polysaccharide.⁸⁷⁰

Noting that neither the word "backbone" nor the concept of avoiding linking other than at multiple terminal portions appeared in the specification, the court also found no support for NRC's contention that "significant crosslinking" referred to crosslinking

866. *Id.* at 1575, 28 U.S.P.Q.2d (BNA) at 1336.

867. *Id.*

868. *Id.* at 1575-76, 28 U.S.P.Q.2d (BNA) at 1336; *see also* ZMI Corp. v. Cardiac Resuscitator, 844 F.2d 1576, 1579, 6 U.S.P.Q.2d (BNA) 1557, 1560 (Fed. Cir. 1988) (providing that words of claim will be given their ordinary meaning, unless it appears that inventor used them differently).

The dissent disagreed with the majority's interpretation that the article "a" was used to denote one terminal portion. *North American Vaccine*, 7 F.3d at 1581, 28 U.S.P.Q.2d (BNA) at 1341-42 (Rader, J., dissenting). Although the majority's opinion analyzed statements in the specification in interpreting the article "a," the dissent argued that the majority improperly relied on the inventors' earlier scientific writings that used the term "monofunctionality" even though the majority specifically rejected the district court's reliance on the earlier writings and stated that "[a] patent is to be interpreted by what it states rather than by what the inventor wrote in a scientific publication." *Id.* at 1578, 28 U.S.P.Q.2d (BNA) at 1341. Because the patent specification did not refer to monofunctionality, the dissent argued, the scientific writings actually showed that the inventors intended to claim polyfunctional molecules. *Id.* at 1581, 28 U.S.P.Q.2d (BNA) at 1342. The dissent suggested that the article "a" in the specification was used for grammatical correctness, not to denote the singular, and that the claim would have recited "a singular terminal portion" to denote the singular. *Id.*, 28 U.S.P.Q.2d (BNA) at 1340-41. Nothing in the specification, however, was cited in the dissent as showing that "a" was used in the plural sense. *Cf.* *Hoganas AB v. Dresser Indus., Inc.*, 9 F.3d 948, 951, 28 U.S.P.Q.2d (BNA) 1936, 1938-39 (Fed. Cir. 1993) (interpreting claimed "straw-shaped" element as requiring elements to be hollow in accordance with ordinary meaning of "straw," and stating that if patentee, "Hoganas, who was responsible for drafting and prosecuting the patent, intended something different, it could have prevented this result through clearer drafting").

869. *North American Vaccine*, 7 F.3d at 1577, 28 U.S.P.Q.2d (BNA) at 1337.

870. *Id.*

across the backbone of the polysaccharide.⁸⁷¹ Emphasizing the requirement that applicants disclose their inventions adequately and completely, the court concluded that "significant crosslinking" was intended to mean linking at more than one terminal.⁸⁷² The district court's holding of noninfringement was affirmed because it turned on the district court's claim interpretation, which was upheld.⁸⁷³

*Carroll Touch, Inc. v. Electro Mechanical Sys., Inc.*⁸⁷⁴ also involved a question of claim interpretation, specifically, the meaning of a limitation in a means-plus-function clause.⁸⁷⁵ Carroll Touch had filed a complaint alleging that Electro (EMS) infringed its patent.⁸⁷⁶ EMS answered by denying infringement and alleging patent invalidity, and counterclaimed for a declaration to that effect.⁸⁷⁷

The patent claims involved a photoelectric "touch input panel" for use over computer video display devices, such as a cathode-ray tube, that enable "a user to communicate with the computer by touching a location on the display screen that corresponds to a desired operation."⁸⁷⁸ A scanning infrared system consisting of a frame containing circuitry generates a grid of infrared light beams, the beams falling along a horizontal X-axis and a vertical Y-axis.⁸⁷⁹ To command a computer equipped with the claimed invention to perform a function, the user touches a display on the screen.⁸⁸⁰ The location of the touch is identified in terms of the grid coordinates defined by the X-axis and Y-axis beams that are interrupted by the touch.⁸⁸¹ "Information pertaining to the location of the object is then inputted to the computer, which subsequently executes an action responsive to the selected function or command."⁸⁸²

871. *Id.* at 1577-78, 27 U.S.P.Q.2d (BNA) at 1338. According to the dissent, "without significant crosslinking" referred to "many randomly activated functional groups", and not to crosslinking at a terminal portion of the polysaccharide." *Id.* at 1583, 28 U.S.P.Q.2d (BNA) at 1342 (Rader, J., dissenting).

872. *Id.* at 1578, 28 U.S.P.Q.2d (BNA) at 1340 (giving little weight to inventor's testimony that he intended invention to include difunctional molecules, explaining that such after-the-fact testimony is entitled to "little weight compared to the clear import of the patent disclosure").

873. *Id.*, 28 U.S.P.Q.2d (BNA) at 1338.

874. 15 F.3d 1573, 27 U.S.P.Q.2d (BNA) 1836 (Fed. Cir. 1993).

875. See 35 U.S.C. § 112, para. 6 (1988).

876. *Carroll Touch, Inc. v. Electro Mechanical Sys. Inc.*, 15 F.3d 1573, 1575, 27 U.S.P.Q.2d (BNA) 1836, 1838 (Fed. Cir. 1993).

877. *Id.* EMS also filed counterclaims alleging that Carroll Touch, in bringing its infringement suit, engaged in an anti-competitive scheme to restrain trade and committed acts of unfair competition and abuse of process. *Id.*

878. *Id.*

879. *Id.*

880. *Id.*

881. *Id.*

882. *Id.* at 1575-76.

The district court concluded that EMS did not infringe Carroll Touch's patent, either literally or under the doctrine of equivalents. Such a conclusion turned on the court's interpretation of the term "spaced apart" found in a means-plus-function limitation in claim 1.⁸⁸³ At trial, the district court heard "expert testimony presented by both parties regarding whether the accused devices met that limitation."⁸⁸⁴ The district court rejected EMS' witnesses' testimony "that although the light beams of the accused devices intersected, they were nevertheless 'spaced apart' within the meaning of" the claim.⁸⁸⁵

In reviewing the district court's interpretation of the claim limitation as requiring that the beam surfaces be totally spaced apart, i.e., non-intersecting, the Federal Circuit first noted that Carroll Touch disputed neither that all of the accused EMS devices had beam surfaces intersecting at varying degrees nor that one of the EMS devices using coplanar beam surfaces having total surface intersection did not infringe the patent at issue.⁸⁸⁶ Carroll Touch did contend, however, that the EMS devices using curved beam arrays were "within the claim limitation because such devices have beam surfaces that are spaced apart for most of their respective surface areas."⁸⁸⁷

More particularly, referring to the patent specification, Carroll Touch maintained that the claimed invention encompassed the use of curved beam surfaces positioned as closely "as possible to the display surface to eliminate" parallax and that some intersection of the beam surfaces necessarily would occur when so positioned.⁸⁸⁸ Thus, according to Carroll Touch's interpretation, the claim term "spaced apart" allowed for some intersection of the beam surfaces.⁸⁸⁹

The court first looked to the specification for assistance in construing the claim.⁸⁹⁰ The court stated that although the specifi-

883. *Id.* at 1576, 27 U.S.P.Q.2d (BNA) at 1839. The claim limitation read that: means for mounting said light sources and said photosensitive device on said housing to produce said sets of beams in two surfaces, *spaced apart along the direction normal to the plane of said opening*, counting means for each of said sets for counting a number of interrupted beams in each set, and means for producing output signals indicating the number counted by each counter.

Id. at 1577, 27 U.S.P.Q. 2d (BNA) at 1839. (emphasis added).

884. *Id.* at 1577, 27 U.S.P.Q. 2d (BNA) at 1839.

885. *Id.*

886. *Id.*

887. *Id.*

888. *Id.*, 27 U.S.P.Q.2d (BNA) at 1840.

889. *Id.*

890. *See id.* (noting that words are generally given their ordinary meaning, unless it appears from specification or prosecution history that they were used differently by inventor).

cation of the patent disclosed "the use of curved beam surfaces, it [did] not teach that the space between the beam surfaces should be minimized in order to diminish parallax."⁸⁹¹ Nor did "the specification indicate that use of curved beam surfaces necessarily results in intersection of the beam surfaces."⁸⁹²

Rather, the court found that the specification confirmed that the term "spaced apart" did not include devices having intersecting beam surfaces, the specification expressly disclosing that "the separation of the X and Y beam planes permits the apparatus to discriminate against small insects, and to calculate the difference in the time between interruption of the beam in the two...planes."⁸⁹³ Thus, the specification did not support an interpretation that the beam surfaces of the claimed invention intersect.

Next, the court determined that the prosecution history also undermined Carroll Touch's interpretation of the disputed "spaced apart" term.⁸⁹⁴ The examiner had rejected claim 1 as originally filed based on prior art describing X-Y array sensors and X-Y-Z array sensors, and Carroll Touch had responded by arguing that the prior art defined "merely one single plane of beams" as distinguished from the claimed invention, "which has two separate surfaces."⁸⁹⁵ The court found that in attempting to distinguish the claim requirement of "two separate surfaces, spaced apart" from the prior art, "Carroll Touch necessarily was arguing that the beam planes of the claimed invention do not intersect."⁸⁹⁶ The court therefore agreed with the district court's interpretation of the claim limitation in question.⁸⁹⁷

*Rawplug Co. v. Illinois Tool Works, Inc.*⁸⁹⁸ presented, *inter alia*, a question of claim interpretation in the context of the district court's judgment of noninfringement.⁸⁹⁹ One patent in suit claimed a single-piece, preshaped anchor having a shank with a "non-abrading surface" for securing fixtures to masonry.⁹⁰⁰ The district court

891. *Id.*

892. *Id.* at 1577-78

893. *Id.* at 1578 (quoting from disputed claim's specifications).

894. *Id.*

895. *Id.*

896. *Id.*

897. *Id.*

898. 11 F.3d 1036, 28 U.S.P.Q.2d (BNA) 1908 (Fed. Cir. 1993).

899. *Rawplug Co. v. Illinois Tool Works, Inc.*, 11 F.3d 1036, 1038, 28 U.S.P.Q.2d (BNA) 1908 (Fed. Cir. 1993).

900. 11 F.3d at 1036, U.S.P.Q.2d (BNA) at 1908.

interpreted the term "non-abrading" as excluding a slightly-abrading shank surface.⁹⁰¹

The Federal Circuit came to a different interpretation of the term "non-abrading" after considering it in light of other claim language, the patent specification, and the prosecution history.⁹⁰² The court observed that the specification stated that the shank was resilient and had a non-abrading bearing surface so that when it was driven into a tightly-fitting masonry hole it would not "score, chisel or otherwise mutilate the hole," but would "frictionally secure" the anchor in place, and that the claim contained similar language.⁹⁰³ The court found that this language, consistent with specified objects and advantages of the invention, suggested that at least some minimal abrasion was contemplated, with the friction or abrasion being such that it would not score, chisel, or mutilate the hole.⁹⁰⁴ The court further noted that its interpretation—that the "non-abrading" language did not preclude the surface exerting some friction on the hole's walls after the installed anchor regained its shape—was not inconsistent with the prosecution history.⁹⁰⁵ Thus, the court concluded that the district court's claim interpretation was erroneous.⁹⁰⁶

B. The Second Step of the Analysis

The second step of the infringement analysis involves comparing an accused device with the claim language as interpreted to ascertain whether the device falls within the claim's scope.⁹⁰⁷ Infringement cannot be established unless every limitation of a claim is met either literally or by an equivalent in the accused device.⁹⁰⁸

901. *Id.* at 1038, 28 U.S.P.Q.2d (BNA) at 1910 (reporting district court's conclusion that Illinois Tool Works' (ITW's) devices did not literally meet claim limitations because ITW's devices had serrations for enhancing frictional engagement, and therefore did not possess claimed "non-abrading" surfaces).

902. *Id.* at 1042-45, 28 U.S.P.Q.2d (BNA) at 1916-18 (focusing on fact that claims are "specifically crafted" for claiming innovative device *after installations* and, therefore, shape *before installation* is not as important as installed product detailed in claim language).

903. *Id.* at 1039, 28 U.S.P.Q.2d (BNA) at 1912.

904. *Id.*

905. *Id.* at 1044, 28 U.S.P.Q.2d (BNA) at 1916 (noting that "non-abrading" limitation term was added to application claims to distinguish them over prior art, which disclosed anchors having metal teeth and acknowledging that term must be interpreted consistently with other claim language).

906. *Id.* at 1044-45, 28 U.S.P.Q.2d (BNA) at 1917-18 (determining that ITW's shanks were slightly serrated for frictionally engaging wall of masonry hole, which did not score, chisel, or mutilate hole, and therefore holding that district court erred in concluding that no literal infringement existed).

907. *Carroll Touch, Inc. v. Electro Mechanical Sys., Inc.*, 15 F.3d 1573, 1576, 27 U.S.P.Q.2d (BNA) 1836, 1839 (Fed. Cir. 1993).

908. *Id.* (citing *Read Corp. v. Portec*, 970 F.2d 816, 821, 23 U.S.P.Q.2d (BNA) 1426, 1432 (Fed. Cir. 1992)).

1. *Literal infringement*

Literal infringement results when an accused device contains all the limitations specified in the claims.⁹⁰⁹ In *International Visual Corp. v. Crown Metal Manufacturing Co.*,⁹¹⁰ the Federal Circuit reviewed the district court's granting of summary judgment that Crown's GRIPPER device did not literally infringe IVC's patented device.⁹¹¹ IVC argued that the district court made several errors in interpreting the literal scope of the claims, and the Federal Circuit agreed.⁹¹²

The court held that the district court misconstrued the claims in question by reading into them unrecited limitations.⁹¹³ For example, the district court erroneously interpreted claims to require one recited element to be "separate and apart" from another where there was no such limitation and, to the contrary, the claims required "integral[] connect[ion]."⁹¹⁴ The district court further erred by reading into the claims another limitation found in IVC's commercial embodiment of the invention, a plastic housing, which limitation was not recited in the claims, but instead was disclosed in the patent specification as being a preferred embodiment.⁹¹⁵ Because the district court's grant of summary judgment of noninfringement was based on an erroneous claim construction, the Federal Circuit reversed and remanded for further proceedings.⁹¹⁶

In *Morton International, Inc. v. Cardinal Chemical Co.*,⁹¹⁷ the court revisited on remand the district court's holding of noninfringement.⁹¹⁸ The Federal Circuit determined that the district court had properly required Morton to identify the compounds in Cardinal's mixtures allegedly within the scope of Morton's

909. *Id.*

910. 991 F.2d 768, 26 U.S.P.Q.2d (BNA) 1588 (Fed. Cir. 1993).

911. *International Visual Corp. v. Crown Metal Mfg. Co.*, 991 F.2d 768, 770, 26 U.S.P.Q.2d (BNA) 1588, 1589-90 (Fed. Cir. 1993).

912. *Id.* at 771-72, 26 U.S.P.Q.2d (BNA) at 1591-92.

913. *Id.*

914. *Id.* at 771, 26 U.S.P.Q.2d (BNA) at 1591.

915. *Id.* at 771-72, 26 U.S.P.Q.2d (BNA) at 1591 ("Infringement is determined on the basis of the claims, not on the basis of a comparison with the patentee's commercial embodiment of the claimed invention.") (quoting *ACS Hosp. Sys., Inc. v. Montefiore Hosp.*, 732 F.2d 1572, 1578, 221 U.S.P.Q. (BNA) 929, 933 (Fed. Cir. 1984)).

916. *Id.* at 772, 26 U.S.P.Q.2d (BNA) at 1591-92. The district court's application of the doctrine of equivalents was also found to be erroneous because it was based on the erroneous claim interpretation, and therefore, remand was deemed appropriate. *Id.*, 26 U.S.P.Q.2d (BNA) at 1592.

917. 5 F.3d 1464, 28 U.S.P.Q.2d (BNA) 1190 (Fed. Cir. 1993).

918. *Morton Int'l, Inc. v. Cardinal Chem. Co.*, 5 F.3d 1464, 1466, 28 U.S.P.Q.2d (BNA) 1190, 1191 (Fed. Cir. 1993). The court had previously affirmed the lower court's judgment of noninfringement and therefore vacated its judgment of invalidity as moot, which vacatur was overturned by the Supreme Court. See *supra* notes 1-21 and accompanying text.

patent claims, to confirm their existence.⁹¹⁹ The court pointed out that every limitation in the claims had to be met. Of these limitations, the existence of the claimed compounds having partial connectivity was the essence of the dispute.⁹²⁰ The court found that this existence was never established.⁹²¹

The court upheld the district court's rejection of Morton's evidence pertaining to its "building-block" theory.⁹²² According to this theory, the existence of the claimed compounds in Cardinal's mixtures was established by NMR results showing the presence of chemical moieties or compound fragments combining to form certain compounds, some of which were assumed to be compounds having the claimed partial connectivity.⁹²³ The court determined that the district court considered the conflicting testimony of the parties' experts on the NMR results, and specifically considered and rejected Morton's theory.⁹²⁴ The court found that Morton's theory was merely speculative because a number of compounds could not be identified using the NMR results.⁹²⁵ The court held that Morton had not met its burden of showing that every claim limitation, in particular the recited partial connectivity, was found in Cardinal's accused compounds, either literally or by an equivalent.⁹²⁶

In *Miles Laboratories, Inc. v. Shandon Inc.*,⁹²⁷ the court found error in the district court's finding that Shandon's accused apparatus literally infringed the light-microscopy processing apparatus claimed in Miles' patent.⁹²⁸ The district court construed the claimed "cabinet" to mean a single enclosure for components of the apparatus.⁹²⁹ The district court determined that the accused apparatus had three modules together forming a single cabinet.⁹³⁰ The district court,

919. *Morton*, 5 F.3d at 1468-69, 28 U.S.P.Q.2d (BNA) at 1193-94.

920. *Id.*

921. *Id.* at 1468, 28 U.S.P.Q.2d (BNA) at 1193. Morton relied on *In re Breslow*, 616 F.2d 516, 205 U.S.P.Q. (BNA) 221 (C.C.P.A. 1980), which held that compounds that were conceded to exist need not be isolated to be claimed. *Morton*, 5 F.3d at 1468, 28 U.S.P.Q.2d (BNA) at 1193. The Federal Circuit distinguished this case on the basis that the existence of this compound was at issue. *Id.*

922. *Morton*, 5 F.3d at 1469, 28 U.S.P.Q.2d (BNA) at 1194.

923. *Id.*

924. *Id.*

925. *Id.*

926. *Id.*

927. 997 F.2d 870, 27 U.S.P.Q.2d (BNA) 1123 (Fed. Cir. 1993), *cert. denied*, 114 S. Ct. 943 (1994).

928. *Miles Lab., Inc. v. Shandon Inc.*, 997 F.2d 870, 876, 27 U.S.P.Q.2d (BNA) 1123, 1127 (Fed. Cir. 1993), *cert. denied*, 114 S. Ct. 943 (1994).

929. *Id.*

930. *Id.*

therefore, concluded that the claimed "cabinet" limitation, as every other claim limitation, was found in the accused apparatus.⁹³¹

On appeal, Shandon argued that the district court had misconstrued the cabinet limitation as defining an enclosure for the various components of the apparatus.⁹³² Looking to the patent claims, specification, and drawings, and further referring to a dictionary definition of "cabinet," the Federal Circuit determined that the district court properly construed the claim term.⁹³³ The court concluded, however, that the district court erred in finding that the accused apparatus had one, not three, cabinets.⁹³⁴ Because the accused apparatus had more than a single enclosure for the various components, the court held that the district court erred in finding literal infringement.⁹³⁵

2. *Infringement under the doctrine of equivalents*

Even when an accused device does not literally infringe a patent claim, a court may nonetheless find infringement under the doctrine of equivalents.⁹³⁶

a. *The tripartite function-way-result test*

In deciding whether an accused device infringes under the doctrine of equivalents, the familiar three-prong test is applied to determine equivalence—whether the accused device performs substantially the same overall function, in substantially the same way, to obtain substantially the same overall result as the claimed invention.⁹³⁷ The cases below illustrate the application of various prongs of this tripartite test.

In *Miles Laboratories*,⁹³⁸ the Federal Circuit upheld the district court's finding of infringement under the doctrine of equivalents.⁹³⁹

931. *Id.*

932. *Id.*, 27 U.S.P.Q.2d (BNA) at 1126.

933. *Id.*, 27 U.S.P.Q.2d (BNA) at 1127 (citing WEBSTER'S NEW WORLD DICTIONARY 193 (3d college ed. 1988)).

934. *Id.* (citing WEBSTER'S NEW WORLD DICTIONARY 872 (defining "module" as "any set of units, as cabinets, designed to be arranged or joined in a variety of ways")).

935. *Id.*

936. *Valmont Indus., Inc. v. Reinke Mfg. Co., Inc.*, 983 F.2d 1039, 1042-43, 25 U.S.P.Q.2d (BNA) 1451, 1451-52 (Fed. Cir. 1993).

937. *Id.* at 1043, 25 U.S.P.Q.2d (BNA) at 1455 (citing *Pennwalt Corp. v. Durand-Wayland Inc.*, 833 F.2d 931, 934, 4 U.S.P.Q.2d (BNA) 1737, 1739 (Fed. Cir. 1987) (en banc), *cert. denied*, 485 U.S. 961 (1988)).

938. 997 F.2d 870, 27 U.S.P.Q.2d (BNA) 1123 (Fed. Cir. 1993), *cert. denied*, 114 S. Ct. 943 (1994).

939. *Miles Lab. v. Shandon Inc.*, 997 F.2d 870, 876, 27 U.S.P.Q.2d (BNA) 1123, 1127-28 (Fed. Cir. 1993), *cert. denied*, 114 S. Ct. 943 (1994).

Shandon argued that the district court had not determined that its accused apparatus achieved "substantially the same result" as the claimed apparatus and contended that the intended result of the patented apparatus was the unification of the various components.⁹⁴⁰ Shandon alleged that by separating the components into three cabinets, instead of one cabinet as claimed, its apparatus achieved safety and operational advantages over the claimed apparatus.⁹⁴¹

The court countered that Shandon's apparatus, like that claimed, attained enclosure of the components—a result that did not change merely because Shandon had separated components into three discrete cabinets.⁹⁴² Because the limitations and functions of a claimed apparatus, not an accused apparatus, constitute the proper frame of reference for the doctrine of equivalents, Shandon could not escape infringement simply because its apparatus performed functions or achieved results in addition to those of the claimed apparatus.⁹⁴³ After observing that the patent did not require the cabinet to contain all components and finding that Shandon's apparatus achieved substantially the same result as that claimed—an entirely closed system—the court concluded that there was no error in the finding of infringement under the doctrine of equivalents.⁹⁴⁴

b. Limitations on the doctrine

Satisfaction of the tripartite function-way-result test under the doctrine of equivalents will not necessarily result in a finding of infringement. Other factors, such as the proximity of the prior art and arguments made prosecuting the application in an attempt to persuade the examiner of patentability, may limit application of the doctrine of equivalents.

*International Visual Corp. v. Crown Metal Manufacturing Co.*⁹⁴⁵ illustrates how the prior art may impact the infringement analysis.⁹⁴⁶

940. *Id.* at 876-77, 27 U.S.P.Q.2d (BNA) at 1127.

941. *Id.* at 877, 27 U.S.P.Q.2d (BNA) at 1127. The claim had a "single cabinet" limitation. *Id.* at 876, 27 U.S.P.Q.2d (BNA) at 1127.

942. *Id.*

943. *Id.*, 27 U.S.P.Q. (BNA) at 1128 (citing *Insta-Foam Prods., Inc. v. Universal Foam Sys., Inc.*, 906 F.2d 698, 702, 15 U.S.P.Q.2d (BNA) 1295, 1298 (Fed. Cir. 1990)).

944. *Id.*

945. 991 F.2d 768, 26 U.S.P.Q.2d (BNA) 1588 (Fed. Cir. 1993).

946. *International Visual Corp. v. Crown Metal Mfg. Co.*, 991 F.2d 768, 772, 26 U.S.P.Q.2d (BNA) 1588, 1591 (Fed. Cir. 1993). Prior art, one limitation on the doctrine of equivalents, refers to "whether an asserted range of equivalents would cover what is already in the public domain." *Wilson Sporting Goods Co. v. David Geoffrey & Assocs.*, 904 F.2d 677, 683, 14 U.S.P.Q.2d (BNA) 1942, 1948 (Fed. Cir.), *cert. denied*, 498 U.S. 992 (1990). If such a range is already in the public domain, the claim cannot be infringed because a "patentee [cannot] . . .

In this case, the Federal Circuit reversed the district court's granting of summary judgment that Crown's GRIPPER device did not infringe IVC's patented device.⁹⁴⁷ The district court erroneously read a limitation into the claims,⁹⁴⁸ causing it to incorrectly draft the hypothetical claim of the *Wilson Sporting Goods*⁹⁴⁹ test.⁹⁵⁰ Thus, the district court erred in applying the hypothetical claim analysis, which the Federal Circuit explained is an optional way of evaluating whether prior art limits the application of the doctrine of equivalents.⁹⁵¹

A patent's prosecution history may also limit application of the doctrine of equivalents.⁹⁵² Prosecution history estoppel is a policy-oriented limitation to the range of equivalents available to a patentee, preventing the patentee from extending the range of a claimed invention to cover subject matter relinquished during prosecution.⁹⁵³ As a general proposition, the estoppel is based on a showing that a patent applicant made an amendment to the claim in question to distinguish over cited prior art.⁹⁵⁴ Such an amendment, however, "is not the *sine qua non* to establish prosecution history estoppel. . . . [U]nmistakable assertions made. . . to the [PTO] in support of patentability, whether or not required to secure allowance of the claim,"⁹⁵⁵ may also operate as an estoppel.⁹⁵⁶

preempt a product that was in the public domain prior to the invention." *Id.* at 684, 14 U.S.P.Q.2d (BNA) at 1948; *see also*, *Wang Lab., Inc. v. Toshiba Corp.*, 993 F.2d 858, 866-67, 26 U.S.P.Q.2d (BNA) 1767, 1775 (Fed. Cir. 1993) (discussing fact that prosecution history estoppel is another limitation on doctrine of equivalents).

947. *International Visual*, 991 F.2d at 770, 26 U.S.P.Q.2d (BNA) at 1590; *see supra* notes 909-16 and accompanying text (discussing Federal Circuit's reversal of district court's summary judgment).

948. *International Visual*, 991 F.2d at 771, 26 U.S.P.Q.2d (BNA) at 1591.

949. 904 F.2d 677, 14 U.S.P.Q.2d (BNA) 1942 (Fed. Cir.), *cert. denied*, 498 U.S. 992 (1990).

950. *International Visual*, 991 F.2d at 772, 26 U.S.P.Q.2d (BNA) at 1592 (Fed. Cir. 1993) (reversing summary judgement and remanding for further proceedings consistent with court's claim interpretation).

951. *Id.*, 26 U.S.P.Q.2d (BNA) at 1591 (relating that approach requires visualization of claim that is hypothetically larger than scope of issued claim and determination as to whether such larger claim would have been patentable over prior art).

952. *Texas Instruments, Inc. v. United States Int'l Trade Comm'n*, 988 F.2d 1165, 1173, 26 U.S.P.Q.2d (BNA) 1018, 1024 (Fed. Cir. 1993).

953. *Id.* (citing *Loctite Corp. v. Ultraseal Ltd.*, 781 F.2d 861, 870, 228 U.S.P.Q. (BNA) 90, 96 (Fed. Cir. 1985)).

954. *Id.* at 1174, 26 U.S.P.Q.2d (BNA) at 1025 (citing *Hughes Aircraft Co. v. United States*, 717 F.2d 1351, 1362, 219 U.S.P.Q. (BNA) 473, 481 (Fed. Cir. 1983)).

955. *Id.*

956. *Id.* at 1774-75, 26 U.S.P.Q.2d (BNA) at 1025 (holding that assertions in prosecution history emphasizing criticality of claim limitation for both patentability and operability, which included statements in invention disclosure form filed in patent application, estopped Texas Instruments from asserting that device not having claimed limitation infringed under doctrine of equivalents).

In *Wang Laboratories, Inc. v. Toshiba Corp.*,⁹⁵⁷ the Federal Circuit determined whether prosecution history estoppel barred application of the doctrine of equivalents.⁹⁵⁸ The two patents in suit, U.S. Patent Nos. 4,656,605 and 4,727,513 (the '605 and '513 patents), which were assigned to Wang, each had a claim 1 directed to a memory module for installation on a printed circuit motherboard comprising, *inter alia*, the following elements: eight data memory chips for storing digital data; a ninth memory chip for storing error detection and correction information associated with the eight data memory chips; and an epoxy-glass printed circuit board substrate having a length and width adequate for mounting thereon the nine memory chips only in a single row.⁹⁵⁹ Claim 1 of the '605 patent, which was the only claim of this patent, further required that the ninth memory chip be interconnected with the other eight, while dependent claim 2 of the '513 patent contained a similar limitation.⁹⁶⁰ The accused devices of Toshiba and NEC included: (1) classic nine-chip memory modules having eight data chips and one error detection chip arranged in a single row on a printed circuit board substrate; (2) three-pack modules having three chips arranged in a single row, two half-bytes, each of which would read and store four bits of information, and a parity chip, which detects error; and (3) lateral modules having nine chips arranged in more than a single row.⁹⁶¹

The jury had found that: (1) the classic modules infringed claim 1 of the '513 patent literally and claim 1 of the '605 and claim 2 of the '513 patent under the doctrine of equivalents; (2) the three-pack modules infringed claim 1 of both patents under the doctrine of equivalents; and (3) the lateral modules also infringed claim 1 of both patents under the doctrine of equivalents.⁹⁶² Toshiba and NEC appealed the part of the judgment finding that the sale of the lateral and three-pack memory modules infringed claim 1 of both patents under the doctrine of equivalents.⁹⁶³

Specifically, Toshiba argued that because Wang had added the claim limitations that the modules comprise nine memory chips and that the nine chips are mounted only in a single row to overcome

957. 993 F.2d 858, 26 U.S.P.Q.2d (BNA) 1767 (Fed. Cir. 1993).

958. *Wang Lab., Inc. v. Toshiba Corp.*, 993 F.2d 858, 866-68, 26 U.S.P.Q.2d (BNA) 1767, 1775-76 (Fed. Cir. 1993).

959. *Id.* at 860-61, 26 U.S.P.Q.2d (BNA) at 1770.

960. *Id.* at 861-62, 26 U.S.P.Q.2d (BNA) at 1770-71.

961. *Id.* at 862, 26 U.S.P.Q.2d (BNA) at 1771.

962. *Id.*

963. *Id.* at 866, 26 U.S.P.Q.2d (BNA) at 1774.

prior art rejections, prosecution history estoppel barred expanding the claims' scope under the doctrine of equivalents such that they would cover either the three-pack modules, which had only three memory chips, or the lateral modules, which did not have the memory chips mounted only in a single row.⁹⁶⁴ NEC had raised the defense of such prosecution history estoppel only with respect to its three-pack modules.⁹⁶⁵ After noting that an issue not raised by an appellant in its initial brief is normally waived, the Federal Circuit indicated that it would be unfair to give one appellant the benefit of an estoppel without giving it to another.⁹⁶⁶ Because no prejudice would result to Wang, the court exercised its discretionary authority and considered the defense of prosecution history estoppel for both the lateral and three-pack modules applicable to both NEC and Toshiba.⁹⁶⁷

The court first discussed the law regarding prosecution history estoppel, which is an equitable doctrine that bars a patentee from enforcing its claims against otherwise equivalent structures if those structures were excluded by claim limitations added to avoid prior art.⁹⁶⁸ In contrast, when determining whether prosecution history estoppel applies, a question of law,⁹⁶⁹ the court must consider not only the claim language that was changed, but also the reason for the change.⁹⁷⁰ The court noted that unmistakable assertions made by an applicant to the PTO in support of patentability, whether or not required to obtain allowance, also may operate to preclude the patentee from asserting equivalency, and that the prosecution history is examined as a whole in determining whether estoppel applies.⁹⁷¹

Because Wang argued that the '513 patent claims were patentable for the same reasons the '605 patent claim was allowed, the court examined the prosecution history of the parent application to determine whether prosecution history estoppel applied to both patents.⁹⁷² In a first Office Action, the PTO rejected the claims of

964. *Id.*, 26 U.S.P.Q.2d (BNA) at 1775.

965. *Id.*

966. *Id.*

967. *Id.*

968. *Id.* (citing *Mannesmann Demag Corp. v. Engineered Metal Prods. Co.*, 793 F.2d 1279, 1284, 230 U.S.P.Q. (BNA) 45, 48 (Fed. Cir. 1986)).

969. *Id.* at 867, 26 U.S.P.Q.2d (BNA) at 1775 (citing *LaBounty Mfg., Inc. v. United States Int'l Trade Comm'n*, 867 F.2d 1572, 1576, 9 U.S.P.Q.2d (BNA) 1995, 1998 (Fed. Cir. 1989)).

970. *Id.* at 866-67, 26 U.S.P.Q.2d (BNA) at 1775 (citing *Vaupel Textilmaschinen KG v. Meccanica Euro Italia S.p.A.*, 944 F.2d 870, 882, 20 U.S.P.Q.2d (BNA) 1045, 1054 (Fed. Cir. 1991)).

971. *Id.* at 867, 26 U.S.P.Q.2d (BNA) at 1775 (citing *Texas Instruments, Inc. v. United States Int'l Trade Comm'n*, 988 F.2d 1165, 1174, 26 U.S.P.Q.2d (BNA) 1018, 1025 (Fed. Cir. 1993)).

972. *Id.* at 867 n.11, 26 U.S.P.Q.2d (BNA) at 1775 n.11.

Wang's parent application under 35 U.S.C. § 103 based on a prior art reference disclosing a memory module with multiple rows of nine chips.⁹⁷³ Wang responded to this rejection with an amendment adding a claim limitation requiring the memory chips to be mounted in a single row, accompanied by remarks noting this new claim limitation and pointing out that the reference did not have memory chips mounted in a single row.⁹⁷⁴ The court emphasized that after a second Office Action, Wang filed a preliminary amendment in a file-wrapper-continuation application cancelling the previous claims and adding a new claim, which recited "an epoxy-glass printed circuit board substrate having a length and width adequate for mounting thereon *only* in a single row said nine memory chips."⁹⁷⁵ The court concluded that the "single row" claim limitation and the "only" claim language were added to overcome the prior art rejection.⁹⁷⁶

To no avail, Wang contended that the prosecution history did not exclude substrates having memory chips mounted in two rows, but rather the prior art restricted the size of the substrate to not larger than that upon which nine chips could be mounted.⁹⁷⁷ The court concluded that while a two-row construction may not read on the prior art, Wang was nonetheless estopped from asserting that the claims read on structures not having nine chips in a single row.⁹⁷⁸ The court explained that Wang chose to limit the scope of its claims to require that the memory chips be mounted "only in a single row" and twice relied on this limitation before the PTO to distinguish the claims over the prior art structure.⁹⁷⁹ The court, therefore, held that the district court erred in denying JNOV on the issue of infringement by the lateral modules under the doctrine of equivalents.⁹⁸⁰

For similar reasons, the court held that Wang was also estopped from asserting that the three-pack memory modules having less than nine chips infringed its claims.⁹⁸¹ Examining the prosecution

973. *Id.* at 867, 26 U.S.P.Q.2d (BNA) at 1775.

974. *Id.*, 26 U.S.P.Q.2d (BNA) at 1775-76.

975. *Id.*, 26 U.S.P.Q.2d (BNA) at 1776.

976. *Id.*

977. *Id.*

978. *Id.* at 867-68, 26 U.S.P.Q.2d (BNA) at 1776.

979. *Id.*

980. *Id.* at 868, 26 U.S.P.Q.2d (BNA) at 1776 (citing *Litton Sys., Inc. v. Whirlpool Corp.*, 728 F.2d 1423, 1439, 221 U.S.P.Q. (BNA) 97, 107 (Fed. Cir. 1984) ("A patent attorney is often faced with choices during a patent prosecution A patent attorney should not be able, however, to choose one course of action within the PTO with the anticipation that, if later checked, he or she can always choose an alternate course of prosecution in a trial")).

981. *Id.*

history, the court found that Wang limited the scope of its claims to require nine chips and relied on this limitation before the PTO to distinguish the claims over the prior art, including a reference to EDI teaching the use of eight chips.⁹⁸² Accordingly, the court reversed the part of the district court's judgment finding infringement of both patents under the doctrine of equivalents as applied to the lateral and three-pack modules.⁹⁸³

In *Haynes International, Inc. v. Jessop Steel Co.*,⁹⁸⁴ the court considered the district court's granting of summary judgment of noninfringement both literally and under the doctrine of equivalents.⁹⁸⁵ Haynes' patent in suit was directed to a corrosion-resistant nickel-based alloy containing chromium, molybdenum, and tungsten.⁹⁸⁶ Jessop had conceded that its accused alloy met all of the limitations of the claim at issue, except that it did not contain "about 22 [percent by weight] chromium."⁹⁸⁷ The district court determined that prosecution history estoppel precluded a range of equivalents covering Jessop's alloy, which contained 20.74 to 20.81 weight percent chromium.⁹⁸⁸

The application as originally filed had three claims specifying a chromium content: the independent claim recited a chromium weight content of "20 to 24" percent; a dependent claim recited a chromium content of "about 21 to 23" percent; and another dependent claim recited a chromium weight content of "about 22" percent.⁹⁸⁹ The examiner rejected these claims in view of prior art, the principal difference between the claimed subject matter and the cited prior art being that the claims recited a different but overlapping range of chromium content.⁹⁹⁰ In response, the applicant submitted an affidavit providing test results for an alloy containing 21.96 weight percent chromium, which were asserted to show unexpected results, but the examiner again rejected the claims.⁹⁹¹ The applicant appealed to the Board, which ruled that the examiner properly rejected the first two of the three claim limitations, but that the affidavit rebutted the *prima facie* case of obviousness of the claim

982. *Id.*

983. *Id.*

984. 8 F.3d 1573, 28 U.S.P.Q.2d (BNA) 1652 (Fed. Cir. 1993).

985. *Haynes Int'l, Inc. v. Jessop Steel Co.*, 8 F.3d 1573, 1575, 28 U.S.P.Q.2d (BNA) 1652, 1653 (Fed. Cir. 1993).

986. *Id.*

987. *Id.* at 1576, 28 U.S.P.Q.2d (BNA) at 1654.

988. *Id.*

989. *Id.*, 28 U.S.P.Q.2d (BNA) at 1654-55.

990. *Id.* at 1576-77, 28 U.S.P.Q.2d (BNA) at 1654-55.

991. *Id.* at 1577, 28 U.S.P.Q.2d (BNA) at 1655.

requiring about 22 weight percent chromium.⁹⁹² After the applicant rewrote the third claim in independent form and cancelled the two broader claims, the application was allowed.⁹⁹³

In light of this prosecution history, the Federal Circuit found that a reasonable competitor could have concluded that the applicant, by cancelling the first two claims, retaining only the narrower third claim, and failing to submit additional test data to attempt to procure the issuance of broader claims in a continuation or reissue application, gave up coverage that would have included Jessop's alloy.⁹⁹⁴ Thus, the court held that the prosecution history estopped Haynes from asserting that its patent claim covered Jessop's alloy under the doctrine of equivalents.⁹⁹⁵

In *Hoganas AB v. Dresser Industries, Inc.*,⁹⁹⁶ the court considered the effect of subject matter relinquished during prosecution and the prior art.⁹⁹⁷ Hoganas' patent was directed to a composition used to form refractory linings for industrial furnaces.⁹⁹⁸ To minimize the downtime required for drying refractory linings when installed, the claimed composition employed "straw-shaped, channel-forming elements" for releasing built-up steam used in the drying process.⁹⁹⁹ The district court had granted Dresser's motion for summary judgment of noninfringement, finding, *inter alia*, that prosecution history estoppel precluded Hoganas from urging that Dresser's composition, which employed "capillary-sized" elements, infringed Hoganas' patent.¹⁰⁰⁰

In particular, during prosecution the examiner issued an Office Action finally rejecting Hoganas' application claims for obviousness based on a reference disclosing "a composition for making porous, lightweight refractory bricks, which included 1-50% 'shredded or

992. *Id.*

993. *Id.*

994. *Id.*, 28 U.S.P.Q.2d (BNA) at 1655-56.

995. *Id.* at 1579, 28 U.S.P.Q.2d (BNA) at 1657. The concurring judge, attempting to avoid misinterpretation of the majority's "dicta" as expanding the scope of prosecution history estoppel, wrote that this was a case of "classical prosecution history"—i.e., broader claims were cancelled after a rejection based on prior art. *Id.* at 1580, 28 U.S.P.Q.2d (BNA) at 1658-59 (Newman, J., concurring). According to the concurrence, the failure to continue prosecution beyond full examination neither is, nor should be, a ground of estoppel, and the creation of such a ground would create important policy questions. *Id.* at 1581, 28 U.S.P.Q.2d (BNA) at 1659.

996. 9 F.3d 948, 28 U.S.P.Q.2d (BNA) 1936 (Fed. Cir. 1993).

997. *Hoganas AB v. Dresser Indus., Inc.*, 9 F.3d 948, 951-55, 28 U.S.P.Q.2d (BNA) 1936, 1939-42 (Fed. Cir. 1993).

998. *Id.* at 949, 28 U.S.P.Q.2d (BNA) at 1937.

999. *Id.*

1000. *Id.* at 950, 28 U.S.P.Q.2d (BNA) at 1937-38.

comminuted paper."¹⁰⁰¹ The reference disclosed two purposes for the paper: (1) the promotion, through capillary action, "of uniform drying of newly formed bricks prior to firing," and (2) the formation of channels for releasing "steam caused during firing by the burn-out of other materials added to the composition used to make bricks."¹⁰⁰² The examiner allowed the claims after Hoganas responded to the final rejection by pointing out two distinctions: (1) contrasted to the one percent or more by volume of paper in the prior-art composition, "the claimed composition [required] only a small amount of channel-forming elements 0.05 to 0.35% by weight—in order to avoid unnecessary porosity which could impair the strength of the resultant lining";¹⁰⁰³ and (2) unlike the comminuted paper of the prior-art composition, "the function of the claimed channel-forming elements was not to achieve capillary action"; and therefore "the thickness of the channel-forming elements would generally be [one hundred] or more times the thickness" of the prior-art elements.¹⁰⁰⁴ The district court focused solely on the second ground in concluding that Hoganas surrendered coverage of capillary-sized elements.¹⁰⁰⁵

On appeal, Hoganas argued that the district court failed to apply the rule that any estoppel "encompasses *all* of [the] *combined* distinctions" over the cited prior art.¹⁰⁰⁶ Hoganas argued that if the district court had properly applied this rule, it would have concluded that Hoganas gave up at most compositions incorporating both distinctions, i.e. compositions (1) containing capillary-sized fibers (2) in percentages by weight of more than one percent.¹⁰⁰⁷ The Federal Circuit did not agree; reasoning that a reasonable competitor was entitled to conclude from the prosecution history that Hoganas' characterization of the reference was correct.¹⁰⁰⁸

The court noted that Hoganas had characterized the reference as disclosing compositions having at least one percent by volume paper and that the claimed percentages could therefore have overlapped the disclosed percentages.¹⁰⁰⁹ The court indicated that because a reasonable competitor consequently would not have concluded that

1001. *Id.* at 952, 28 U.S.P.Q.2d (BNA) at 1939.

1002. *Id.*, 28 U.S.P.Q.2d (BNA) at 1939-40.

1003. *Id.*

1004. *Id.*

1005. *Id.* at 953, 28 U.S.P.Q.2d (BNA) at 1940.

1006. *Id.* (citing *Read v. Portec, Inc.*, 970 F.2d 816, 824, 23 U.S.P.Q.2d (BNA) 1426, 1433 (Fed. Cir. 1992)).

1007. *Id.*

1008. *Id.*

1009. *Id.*

the examiner relied on the first distinction in allowing the claims, the rule cited by *Hoganas* did not apply.¹⁰¹⁰ Accordingly, no error was found in the district court's finding that prosecution history estoppel precluded expanding the claims to cover the accused compositions, which lacked the second distinction.¹⁰¹¹

In addition to looking to the prosecution history to determine the proper range of equivalents, if any, to be afforded a claimed invention, a court may also look to whether the invention represents a significant or a minor advance over the prior art. For example, in *Hoganas AB*, the Federal Circuit, in further support of its determination of no infringement under the doctrine of equivalents, indicated that because the claimed invention represented only a "modest," rather than a "pioneering," advance over the prior art, it was not entitled to "the broad range of equivalents" normally afforded a pioneering invention.¹⁰¹²

C. *Special Infringement Analyses*

1. *Means-plus-function claims*

In *Valmont Industries, Inc. v. Reinke Manufacturing Co.*¹⁰¹³ the court detailed the differences between an equivalency analysis under 35 U.S.C. § 112, sixth paragraph, for determining literal infringement of claims having means-plus-function limitations, and an equivalency analysis for determining infringement of such claims under the doctrine of equivalents.¹⁰¹⁴ The patent in suit, asserted by Valmont against Reinke, claimed a "self-propelled irrigation apparatus for watering non-circular areas."¹⁰¹⁵ The claimed apparatus included a main arm for irrigating a circular area of a field, and an extension arm for irrigating portions of the field outside the circular area.¹⁰¹⁶ The apparatus further included an angle encoder at a center pivot for measuring the angle between the main arm and a predefined axis in the field, and another angle encoder at the end of a main arm for measuring the angle between the extension arm and the main arm.¹⁰¹⁷ An angle comparator was also included for comparing the

1010. *Id.*, 28 U.S.P.Q.2d (BNA) at 1940-41.

1011. *Id.* at 954, 28 U.S.P.Q.2d (BNA) at 1941.

1012. *Id.*, 28 U.S.P.Q.2d (BNA) at 1942.

1013. 983 F.2d 1039, 25 U.S.P.Q.2d (BNA) 1451 (Fed. Cir. 1993).

1014. *Valmont Indus., Inc. v. Reinke Mfg. Co.*, 983 F.2d 1039, 1041-44, 25 U.S.P.Q.2d (BNA) 1451, 1453-55 (Fed. Cir. 1993).

1015. *Id.* at 1040, 25 U.S.P.Q.2d (BNA) at 1452.

1016. *Id.*

1017. *Id.* at 1040-41, 25 U.S.P.Q.2d (BNA) at 1453.

signals from the two angle encoders and controlling the motion of the extension arm to ensure that it followed a uniform path.¹⁰¹⁸

Reinke's corner irrigation apparatus, like that claimed by Valmont, included an extension arm.¹⁰¹⁹ The extension arm in the Reinke apparatus, however, followed a buried electrical conductor, not electrical signals generated by angle comparators.¹⁰²⁰

The district court had found that Reinke's corner irrigation apparatus infringed seven Valmont patent claims, each containing means-plus-function language, under "some form of equivalency analysis."¹⁰²¹ The primary infringement issue involved the "control means"¹⁰²² element of claim 1—"control means for operating the moving means to move the extension arm relative to the main arm"¹⁰²³

The district court had concluded that both Valmont's claimed control means and Reinke's accused control means performed substantially the same function (operation of the moving means), in substantially the same way (by imparting an electric signal to steering motors, causing steering wheels to pivot), to achieve substantially the same result (movement of the extension arm in an angle relative to the main arm so that the extension arm could reach and irrigate the corners of a field).¹⁰²⁴ The Federal Circuit was only able to determine from this conclusion that the district court "applied some type of equivalency determination to find infringement, either equivalency under of 35 U.S.C. § 112 (1988) or the doctrine of equivalents."¹⁰²⁵

Before reviewing the district court's finding of infringement on its merits, the Federal Circuit explained the differences between the origins and purposes of 35 U.S.C. § 112, ¶ 6 (1988), and those of the doctrine of equivalents.¹⁰²⁶ It also distinguished an equivalency analysis mandated by the patent statute from an equivalency analysis under the doctrine of equivalents.¹⁰²⁷ The court emphasized that, unlike the doctrine of equivalents, the sixth paragraph of § 112 operates to limit the *literal* scope of a claim.¹⁰²⁸ The only question

1018. *Id.*

1019. *Id.* at 1041, 25 U.S.P.Q.2d (BNA) at 1453.

1020. *Id.*

1021. *Id.*

1022. *Id.*

1023. *Id.*

1024. *Id.*

1025. *Id.*

1026. *Id.* at 1041-44, 25 U.S.P.Q.2d (BNA) at 1453-55.

1027. *Id.*

1028. *Id.* at 1042, 25 U.S.P.Q.2d (BNA) at 1454 (citing *Johnston v. IVAC Corp.*, 885 F.2d 1574, 1580, 12 U.S.P.Q.2d (BNA) 1382, 1386 (Fed. Cir. 1989)).

in applying the claimed means-plus-function language to an accused device in determining literal infringement is whether the single means in the accused device, which performs the function stated in the claim, is the same as or an equivalent of the corresponding structure described in the patentee's specification as performing that function.¹⁰²⁹

On the other hand, determining infringement under the doctrine of equivalents involves the familiar tripartite test for determining equivalency—whether the accused device performs substantially the same overall function, in substantially the same way, to obtain substantially the same overall result as the claimed device.¹⁰³⁰ The court held that:

the word 'equivalent' in section 112 suggests the familiar doctrine of equivalents concept of insubstantial change which adds nothing of significance to the claimed invention, a section 112 equivalent, however, comes about from insubstantial change which adds nothing of significance to the particular structure, material, or acts disclosed in the specification.¹⁰³¹

Thus, the tripartite function-way-result test applied in determining infringement under the doctrine of equivalents does not apply in analyzing equivalency in determining literal infringement under § 112, sixth paragraph.¹⁰³²

The court applied these principles to the facts of this case.¹⁰³³ Analyzing equivalency under § 112, the Federal Circuit found that the district court erred in failing to examine the patent specification to identify the structures corresponding to the claimed control means, and in failing to determine whether the accused product used a control means that is an equivalent of any disclosed structure as required by the statute.¹⁰³⁴ The court found that the structures generating the signals for control in the respective devices were strikingly different: where Reinke's structure sensed electromagnetic signals from the buried cable, Valmont's disclosed structure sensed angular relations between the main arm and the extension arm.¹⁰³⁵ Thus, to the extent the district court conducted an infringement

1029. *Id.* at 1043, 25 U.S.P.Q.2d (BNA) at 1454 (citing *Durango Assocs., Inc. v. Reflange, Inc.*, 843 F.2d 1349, 1357, 6 U.S.P.Q.2d (BNA) 1290, 1295 (Fed. Cir. 1988)).

1030. *Id.*, 25 U.S.P.Q.2d (BNA) at 1455 (citing *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605 (1950); *Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931, 934, 4 U.S.P.Q.2d (BNA) 1737, 1739 (Fed. Cir. 1987) (en banc), *cert. denied*, 485 U.S. 961 (1988)).

1031. *Id.*

1032. *Id.*

1033. *Id.* at 1044-45, 25 U.S.P.Q.2d (BNA) at 1455-56.

1034. *Id.* at 1044, 25 U.S.P.Q.2d (BNA) at 1455.

1035. *Id.*, 25 U.S.P.Q.2d (BNA) at 1455-56.

analysis under § 112 and found literal infringement, it erred because the control means of Reinke's apparatus was not an equivalent of the structures disclosed in Valmont's patent.¹⁰³⁶

The Federal Circuit further held that, to the extent the district court applied the doctrine of equivalents, it also erred in finding infringement.¹⁰³⁷ Applying the tripartite test, the court found that "[a]lthough Reinke's buried cable perform[ed] substantially the same control function and achieved substantially the same result as the [claimed] control means, it [did] so in a very different way."¹⁰³⁸ Thus, Reinke's apparatus did not infringe Valmont's patent under the doctrine of equivalents because it did not meet the tripartite test.¹⁰³⁹

In *Carroll Touch, Inc. v. Electro Mechanical Systems, Inc.*,¹⁰⁴⁰ the court again considered the question of whether a means-plus-function limitation was satisfied by the accused devices, either literally or under the doctrine of equivalents.¹⁰⁴¹ Regarding the issue of literal infringement, the court stressed that to literally meet a means-plus-function limitation, an accused device must perform the identical function recited in the claim using the particular structure disclosed in the specification or an equivalent thereof.¹⁰⁴²

As discussed above, the means-plus-function limitation in question was interpreted to require the beam surfaces as being totally spaced apart, without any intersection.¹⁰⁴³ The court noted that "production of two separate beam surfaces . . . spaced apart along a direction normal to the plane of the display" was an essential function of the means-plus-function limitation in question.¹⁰⁴⁴ The court concluded that EMS' devices, which had intersecting beam surfaces, did not perform the identical function recited in the limitation and did not use any structure disclosed in the specification or an equivalent

1036. *Id.*

1037. *Id.*, 25 U.S.P.Q.2d (BNA) at 1456.

1038. *Id.* The court noted that Valmont had argued during prosecution of reissue applications, in which Valmont had sought patent protection for a buried cable system, "that buried-cable steering is completely different from the control means" claimed in the patent in suit. *Id.* at 1045, 25 U.S.P.Q.2d (BNA) at 1456.

1039. *Id.*

1040. 15 F.3d 1573, 27 U.S.P.Q.2d (BNA) 1836 (Fed. Cir. 1993).

1041. *Carroll Touch, Inc. v. Electro Mechanical Sys., Inc.*, 15 F.3d 1573, 1576-81, 27 U.S.P.Q.2d (BNA) 1836, 1839-45 (Fed. Cir. 1993).

1042. *Id.* at 1578, 27 U.S.P.Q.2d (BNA) at 1840 (citing *Valmont Indus., Inc. v. Reinke Mfg. Co.*, 983 F.2d 1039, 1042, 25 U.S.P.Q.2d (BNA) 1451, 1454 (Fed. Cir. 1993)).

1043. *Id.*, 27 U.S.P.Q.2d (BNA) at 1841.

1044. *Id.*

thereof.¹⁰⁴⁵ Accordingly, the court found no literal infringement.¹⁰⁴⁶

Nor did the court find infringement under the doctrine of equivalents.¹⁰⁴⁷ The court reemphasized that one cannot ignore claim limitations in determining whether there is infringement under the doctrine of equivalents.¹⁰⁴⁸ The court deemed its holding concerning the "spaced apart" requirement of claim 1 to be controlling in determining infringement under the doctrine of equivalents.¹⁰⁴⁹ "The claimed invention could not operate as intended if its beam surfaces were not spaced apart for the entirety of their surface areas,"¹⁰⁵⁰ because it would be unable to measure the time interval between beam surface breaks or to differentiate between a valid input by the user and an accidental input caused by a small object.¹⁰⁵¹ Thus, the court held that the accused devices, which had intersecting beam surfaces, "[did] not perform substantially the same overall function in substantially the same way to obtain substantially the same result as the claimed invention."¹⁰⁵²

2. *Product-by-process claims*

Claims of a utility patent may be drafted using various techniques, including the means-plus-function format discussed above. Another format for drafting claims is the product-by-process format, wherein a claimed product is defined by reciting the process steps used to make the product.¹⁰⁵³ One reason for using a product-by-process format is to define a product otherwise difficult to define.

A product of the court's processing of cases involving this type of claim has been a debate regarding how these claims should be interpreted for purposes of patentability or validity and for purposes of infringement.¹⁰⁵⁴ In *Mentor Corp. v. Coloplast, Inc.*,¹⁰⁵⁵ the court

1045. *Id.*

1046. *Id.*

1047. *Id.* at 1579, 27 U.S.P.Q. 2d (BNA) at 1841.

1048. *Id.* (citing *Pennwalt Corp. v. Durand-Wayland Inc.*, 833 F.2d 931, 935, 4 U.S.P.Q.2d (BNA) 1737, 1739 (Fed. Cir. 1987) (en banc), *cert. denied*, 485 U.S. 961 (1988)).

1049. *Id.*

1050. *Id.*

1051. *Id.*, 27 U.S.P.Q.2d (BNA) at 1841.

1052. *Id.*

1053. *See* *Mentor Corp. v. Coloplast, Inc.*, 998 F.2d 992, 997, 27 U.S.P.Q.2d (BNA) 1521, 1526 (Fed. Cir. 1993).

1054. *See* *Atlantic Thermoplastics Co. Inc. v. Faytex Corp.*, 970 F.2d 834, 23 U.S.P.Q.2d (BNA) 1481 (Fed. Cir. 1992).

1055. 998 F.2d 992, 27 U.S.P.Q.2d (BNA) 1521 (Fed. Cir. 1993).

avoided revisiting the issue, deciding that the claims in question were not, in fact, product-by-process claims.¹⁰⁵⁶

Mentor argued that claims 1-4 of its patent were product-by-process claims and that these claims were infringed by Coloplast's product under the court's holding in *Scripps Clinic & Research Foundation v. Genentech, Inc.*¹⁰⁵⁷ that process limitations do not prevent such claims from encompassing an identical product made by a different process.¹⁰⁵⁸ *Scripps*, however, was not on point because the claims at bar were not, in fact, product-by-process claims.¹⁰⁵⁹ The court explained that "product-by-process claims recite how a product is made, not how it is used."¹⁰⁶⁰ Here, the only process aspect of the claims related to use of the product, which was a central aspect of the claims.¹⁰⁶¹

Specifically, claims 1-4 defined a catheter for male patients suffering from incontinence in which adhesive is "transferred from the outside of the catheter to the inside upon rolling and unrolling."¹⁰⁶² Because neither party disputed that Coloplast's catheter product excluded the transfer of adhesive from the outer to the inner surface, it was found not to infringe the claims.¹⁰⁶³ Determining that no reasonable juror could have found otherwise, the Federal Circuit held that the district court erred in denying Mentor's motion for judgment of noninfringement as a matter of law.¹⁰⁶⁴

3. *Design patent claims*

Design patent claims are, like means-plus-function and product-by-process claims, written in a special format.¹⁰⁶⁵ Design patent claims entail not only special requirements relevant to validity,¹⁰⁶⁶ but also special infringement standards.¹⁰⁶⁷ There must be substantial or overall similarity between the accused and claimed

1056. *Mentor Corp. v. Coloplast, Inc.*, 998 F.2d 992, 997, 27 U.S.P.Q.2d (BNA) 1521, 1526 (Fed. Cir. 1993).

1057. 927 F.2d 1565, 18 U.S.P.Q.2d (BNA) 1001 (Fed. Cir. 1991).

1058. *Mentor Corp.*, 998 F.2d at 997, 27 U.S.P.Q.2d (BNA) at 1526.

1059. *Id.*

1060. *Id.*

1061. *Id.*

1062. *Id.*

1063. *Id.*

1064. *Id.*

1065. See 37 C.F.R. § 1.153 (1993) (discussing requirements for title, description, and claim).

1066. See *supra* notes 663-73 and accompanying text.

1067. See 35 U.S.C. § 289 (1988) (defining infringement as unauthorized manufacture or sale of "the patented design, or any colorable imitation thereof").

designs.¹⁰⁶⁸ Additionally, "the accused design must appropriate the particular novelty of the patented design that distinguishes it from the prior art."¹⁰⁶⁹ The cases below deal with questions of design patent infringement.

In *Payless Shoesource, Inc. v. Reebok International Ltd.*,¹⁰⁷⁰ the court determined a question of design patent infringement in the context of a motion for a preliminary injunction filed by Reebok.¹⁰⁷¹ Payless filed a complaint for declaratory judgment against Reebok seeking a declaration that its footwear did not infringe, *inter alia*, Reebok's design patents.¹⁰⁷² Reebok counterclaimed, alleging, *inter alia*, patent infringement by five shoe models sold by Payless, and also filed the motion for a preliminary injunction.¹⁰⁷³ After denial of its motion, Reebok appealed, arguing that the district court erred in finding that Reebok did not show a substantial likelihood of success on the merits of its claims of design patent infringement.¹⁰⁷⁴

In particular, Reebok maintained that the district court misapplied the *Gorham* test for design patent infringement.¹⁰⁷⁵ Reebok claimed that the district court compared the accused shoes with commercial versions of the patents, instead of properly comparing them with the claimed designs.¹⁰⁷⁶ It also argued that the district court improperly distinguished the accused shoes from the patented designs based on features not in the claims.¹⁰⁷⁷ The Federal Circuit agreed, finding that the record clearly showed that the district court's decision improperly turned on features, such as logos, that were not a part of claimed design.¹⁰⁷⁸ Regarding a comparison of one of the accused designs with the claimed design, the court noted that the sole

1068. *Gorham Co. v. White*, 81 U.S. (14 Wall.) 511, 528 (1871) ("[I]f, in the eye of an ordinary observer, giving such attention as a purchaser usually gives, two designs are substantially the same, if the resemblance is such as to deceive such an observer, inducing him to purchase one supposing it to be the other, the first one patented is infringed by the other.").

1069. *Payless Shoesource, Inc. v. Reebok Int'l Ltd.*, 998 F.2d 985, 990, 27 U.S.P.Q.2d (BNA) 1516, 1520 (Fed. Cir. 1993) (quoting *Avia Group Int'l, Inc. v. L.A. Gear Calif., Inc.*, 853 F.2d 1557, 1565, 7 U.S.P.Q.2d (BNA) 1548, 1554 (Fed. Cir. 1988) (citations omitted)); see *Keystone Retaining Wall Sys., Inc. v. Westrock, Inc.*, 997 F.2d 1444, 1450, 27 U.S.P.Q.2d (BNA) 1297, 1302 (Fed. Cir. 1993) (looking to similarity of design to determine infringement).

1070. 998 F.2d 985, 27 U.S.P.Q.2d (BNA) 1516 (Fed. Cir. 1993).

1071. *Payless Shoesource, Inc. v. Reebok Int'l Ltd.*, 998 F.2d 985, 986, 27 U.S.P.Q.2d (BNA) 1516, 1517 (Fed. Cir. 1993).

1072. *Id.*

1073. *Id.* at 986-87, 27 U.S.P.Q.2d (BNA) at 1517.

1074. *Id.* at 987, 27 U.S.P.Q.2d (BNA) at 1517-18.

1075. *Id.* at 990, 27 U.S.P.Q.2d (BNA) at 1520.

1076. *Id.*

1077. *Id.*

1078. *Id.* (citing *Unette Corp. v. Unit Pack Co.*, 785 F.2d 1026, 1028, 228 U.S.P.Q. (BNA) 933, 934 (Fed. Cir. 1986) (requiring that, for proper application of *Gorham* test, accused design must be compared to that claimed, not commercialized)).

distinction observed by the district court between the two 'admittedly similar' designs was a difference in heel pieces.¹⁰⁷⁹ Noting that minor or insignificant differences between a patented design and an accused design do not avoid a finding of infringement¹⁰⁸⁰ and that the ornamental aspects of a claimed design are to be considered as a whole,¹⁰⁸¹ the court held that the district court erred in failing to apply the proper legal analysis and, therefore, abused its discretion in determining that Reebok was not reasonably likely to succeed on the merits of its claims of patent infringement.¹⁰⁸²

In contrast, the court held in *L.A. Gear, Inc. v. Thom McAn Shoe Co.*¹⁰⁸³ that the district court, in determining the question of substantial similarity, did not err in comparing the accused shoe design of Melville with the design commercialized by the patentee, L.A. Gear.¹⁰⁸⁴ Here, in contrast with *Payless Shoesource, Inc. v. Reebok International Ltd.*,¹⁰⁸⁵ the accused infringer did not argue that the design of the shoe sold by the patentee differed from that claimed in the patent.¹⁰⁸⁶ As the court in *L.A. Gear* explained, when a patented design and the design of an article sold by the patentee are substantially identical, it is proper to directly compare the patentee's article to the accused article.¹⁰⁸⁷

*Keystone Retaining Wall Systems, Inc. v. Westrock, Inc.*¹⁰⁸⁸ involved not only a utility patent discussed above,¹⁰⁸⁹ but also a design patent directed to a retaining wall block.¹⁰⁹⁰ With respect to the latter patent, the Federal Circuit reviewed the district court's granting of a

1079. *Id.*, 27 U.S.P.Q.2d (BNA) at 1521.

1080. *Id.* at 991, 27 U.S.P.Q.2d (BNA) at 1521 (quoting *Litton Sys., Inc. v. Whirlpool Corp.*, 728 F.2d 1423, 1444, 221 U.S.P.Q. (BNA) 97, 110 (Fed. Cir. 1984)).

1081. *Id.* (citing *Braun Inc. v. Dynamics Corp. of Am.*, 975 F.2d 815, 820, 24 U.S.P.Q.2d (BNA) 1121, 1125 (Fed. Cir. 1992)).

1082. *Id.*

1083. 988 F.2d 1117, 25 U.S.P.Q.2d (BNA) 1913 (Fed. Cir.), *cert. denied*, 114 S. Ct. 291 (1993).

1084. *L.A. Gear, Inc. v. Thom McAn Shoe Co.*, 988 F.2d 1117, 1124-26, 25 U.S.P.Q.2d (BNA) 1913, 1917-19 (Fed. Cir.), *cert. denied*, 114 S. Ct. 291 (1993).

1085. 998 F.2d 985, 27 U.S.P.Q.2d (BNA) 1516 (Fed. Cir. 1993).

1086. *L.A. Gear*, 988 F.2d at 1125, 25 U.S.P.Q.2d (BNA) at 1918. Melville contended that the district court's infringement determination was erroneous because the court referred to its findings on likelihood of confusion, relevant to a trade dress issue in the case, in the part of its opinion concerning infringement. *Id.* The Federal Circuit found no methodological error, however, pointing out that the district court analyzed likelihood of confusion in the context of the *Gorham* test. *Id.* at 1125-26, 25 U.S.P.Q.2d (BNA) at 1918-19. Indeed, Melville did not dispute substantial similarity. *Id.*

1087. *Id.* at 1125, 25 U.S.P.Q.2d (BNA) at 1918 (citing *Lee v. Dayton-Hudson Corp.*, 838 F.2d 1186, 1189, 5 U.S.P.Q.2d (BNA) 1625, 1627 (Fed. Cir. 1988)).

1088. 997 F.2d 1444, 27 U.S.P.Q.2d (BNA) 1297 (Fed. Cir. 1993).

1089. See *supra* notes 406-19 and accompanying text.

1090. *Keystone Retaining Wall Sys., Inc. v. Westrock, Inc.*, 997 F.2d 1444, 1446, 27 U.S.P.Q.2d (BNA) 1297, 1299 (Fed. Cir. 1993).

summary judgment motion that Keystone's design patent was not infringed.¹⁰⁹¹

The claimed block design was intended for use in a retaining wall such that only one side of the block would be seen.¹⁰⁹² While the district court found the ornamental features of the accused and claimed blocks to be distinguishable, the court noted that their appearances were similar when the blocks were imbedded in a wall.¹⁰⁹³

Keystone argued on appeal that the district court misapplied the law of design patent infringement and disregarded evidence of overall similarity, contending that only the front face of the claimed design was ornamental and it alone should have been considered because the other features were all concealed when imbedded in a retaining wall.¹⁰⁹⁴ The Federal Circuit disagreed, pointing out that design patent infringement cannot be established "by showing similarity of only one part of a patented design if the designs as a whole are substantially dissimilar."¹⁰⁹⁵

Because the test for infringement begins with an examination of the overall similarity of the patented and accused designs, with the patented design being defined by the drawings in the patent, not just one claimed feature,¹⁰⁹⁶ the proper frame of reference for the patented design in question, which included no hidden portion, was the entire block.¹⁰⁹⁷ Finding the district court to have properly determined that the accused and claimed designs lacked overall similarity,¹⁰⁹⁸ the Federal Circuit held that the district court did not err in finding noninfringement.¹⁰⁹⁹

1091. *Id.* at 1449, 27 U.S.P.Q.2d (BNA) at 1301.

1092. *Id.* at 1450, 27 U.S.P.Q.2d (BNA) at 1301-02.

1093. *Id.* at 1450-51, 27 U.S.P.Q.2d (BNA) at 1302.

1094. *Id.* at 1451, 27 U.S.P.Q.2d (BNA) at 1302.

1095. *Id.* at 1450, 27 U.S.P.Q.2d (BNA) at 1302.

1096. *Id.* (citing *Unette Corp. v. Unit Pack Co.*, 785 F.2d 1026, 1028, 228 U.S.P.Q. (BNA) 933, 934 (Fed. Cir. 1986)).

1097. *Id.* at 1450-51, 27 U.S.P.Q.2d (BNA) at 1302. The court distinguished this test for infringement from standards applicable to test patentability. *Id.* While "generally concealed features are not proper bases for patentability because their appearance cannot be a 'matter of concern,'" *id.* at 1451, 27 U.S.P.Q.2d (BNA) at 1302 (citing *In re Stevens*, 173 F.2d 1015, 1016, 81 U.S.P.Q. (BNA) 362, 365-66 (C.C.P.A. 1949)), a design that cannot be seen when it is being used may be patentable because at some point in time, its appearance may be important, *id.* (citing *In re Webb*, 916 F.2d 1553, 1557, 16 U.S.P.Q.2d (BNA) 1433, 1435 (Fed. Cir. 1990)).

1098. See *supra* notes 238-42 and accompanying text (discussing evidence submitted by Keystone in opposing motion).

1099. *Keystone*, 997 F.2d at 1451, 27 U.S.P.Q.2d (BNA) at 1303. Because the district court properly found no overall similarity, the Federal Circuit held that the district court need not have addressed the issue of whether the accused block designs appropriated the claimed design's point of novelty. *Id.*

V. EQUITABLE DEFENSES TO PATENT INFRINGEMENT

Even if an accused infringer's product falls within the scope of a patentee's claims, a finding of infringement may be barred under an equitable doctrine, such as assignor estoppel or laches.

A. Assignor Estoppel

Assignor estoppel is an equitable doctrine that prevents a party assigning an invention, a patent application, or a patent from later contending that the assigned property was valueless.¹¹⁰⁰ The doctrine also bars parties in privity with the assignor, such as a corporation founded by the assignor, from making similar claims.¹¹⁰¹ Determining whether assignor estoppel applies in a particular case involves a balancing of the equities.¹¹⁰² The determination is a matter committed to the trial court's discretion, and this determination is reviewed under the abuse-of-discretion standard.¹¹⁰³

In *Q.G. Products, Inc. v. Shorty, Inc.*,¹¹⁰⁴ the Federal Circuit decided whether the district court correctly: (1) determined that the equities mandated applying the doctrine to Shorty, the assignor; and (2) ascertained that the scope of the assignment covered the patent claims in question.¹¹⁰⁵ The district court had found that Shorty infringed Q.G.'s patent, and that the doctrine of assignor estoppel barred Shorty's invalidity defense under 35 U.S.C. § 102(f).¹¹⁰⁶

Before turning to the merits of the case, the Federal Circuit distinguished cases where a patent is assigned from cases where an invention or application is assigned.¹¹⁰⁷ The court noted that in situations in which a patent is assigned, and consideration of the equities requires application of an estoppel, the analysis is relatively straightforward because the assignor implicitly attests to the assigned patent's value and the assignor's representations cover no more or less than the rights assigned. Accordingly, a defendant may present

1100. *Diamond Scientific Co. v. Ambico, Inc.*, 848 F.2d 1220, 1224, 6 U.S.P.Q.2d (BNA) 2028 (Fed. Cir. 1988) (precluding patent assignor, accused of infringement, from defending on grounds of invalidity), *cert. dismissed*, 487 U.S. 1265 (1988).

1101. *Id.* at 1224, 6 U.S.P.Q.2d (BNA) at 2031.

1102. *Q.G. Prods., Inc. v. Shorty, Inc.*, 992 F.2d 1211, 1212-13, 26 U.S.P.Q.2d (BNA) 1778, 1780 (Fed. Cir.), *cert. denied*, 114 S. Ct. 192 (1993); *Diamond Scientific*, 848 F.2d at 1225, 6 U.S.P.Q.2d (BNA) at 1231.

1103. *Carroll Touch, Inc. v. Electro Mechanical Sys., Inc.*, 15 F.3d 1573, 1581, 27 U.S.P.Q.2d (BNA) 1836, 1841 (Fed. Cir. 1993).

1104. 992 F.2d 1211, 26 U.S.P.Q.2d (BNA) 1778 (Fed. Cir.), *cert. denied*, 114 S. Ct. 192 (1993).

1105. *Q.G. Prods.*, 992 F.2d at 1213, 26 U.S.P.Q.2d (BNA) at 1780-81.

1106. *Id.*, 26 U.S.P.Q.2d (BNA) at 1781.

1107. *Id.* at 1212-13, 26 U.S.P.Q.2d (BNA) at 1780.

evidence concerning interpretation of the assigned patent's claims while at the same time being estopped from challenging the validity of these claims.¹¹⁰⁸

In situations, however, in which an "invention" or application is assigned, and consideration of the equities requires application of an estoppel, the analysis is somewhat more elaborate.¹¹⁰⁹ When an assignment is made before the patent issues, the claims are subject to change by the PTO, either with the acquiescence or at the insistence of the assignee, and so the scope of the allowed claims may actually include more than the assignor intended.¹¹¹⁰ The Supreme Court has said that this circumstance might justify a view that the scope of relevant evidence used to establish the limits of any future estoppel should be broader than in circumstances of assignment of a granted patent.¹¹¹¹ That is, because the metes and bounds of the invention are not as certain, the court recommended evaluation of sufficient evidence to define the representations of the assignor.¹¹¹²

The Federal Circuit considered such evidence, including the following background of the assignment in question. After Guy Lallier, Marc Lallier, and Rudolphe Simon discussed a design for fastening metal corner strips to wall boards, Simon alone filed a patent application for such a device.¹¹¹³ Simon's application described a device for holding a protective metal corner bead in place while nailing it to the ends of two intersecting wall boards, with a "shoe" on the device maintaining the alignment of the corner bead during fastening.¹¹¹⁴ The application depicted a corner strip and a shoe, but made no mention of interchangeable shoe sizes.¹¹¹⁵

At about the time Simon's application was filed, Simon and the Lalliers agreed to form Shorty, Inc.¹¹¹⁶ Simon assigned his rights in the application to Shorty in exchange for a \$20,000 loan and stock.¹¹¹⁷ Due to a falling-out between Simon and the Lalliers, Shorty assigned the application back to Simon in exchange for \$3,000, a promise to pay an additional \$17,000, and return of the stock.¹¹¹⁸

1108. *Id.* at 1212, 26 U.S.P.Q.2d (BNA) at 1780 (citing *Westinghouse Elec. & Mfg. v. Formica Insulation Co.*, 266 U.S. 342, 351 (1924)).

1109. *Id.* at 1213, 26 U.S.P.Q.2d (BNA) at 1780 (citing *Westinghouse Elec.*, 266 U.S. at 351).

1110. *Id.* (quoting *Westinghouse Elec.*, 266 U.S. at 352-53).

1111. *Id.* (quoting *Westinghouse Elec.*, 266 U.S. at 352-53).

1112. *Id.*

1113. *Id.* at 1212, 26 U.S.P.Q.2d (BNA) at 1779.

1114. *Id.*

1115. *Id.*

1116. *Id.*

1117. *Id.*, 26 U.S.P.Q.2d (BNA) at 1779-80.

1118. *Id.*

Under the assignment agreement, Shorty acknowledged that Simon was the inventor and that it waived any claim to the invention.¹¹¹⁹ This assignment formed Q.G.'s basis for assignor estoppel.¹¹²⁰

Simon abandoned the application in favor of a continuation-in-part (CIP) application, claiming the same type of device but adding an interchangeable head feature, pneumatic power means, and a pistol grip.¹¹²¹ The CIP application matured into the patent at issue.¹¹²² Simon then assigned his interest in the invention and the CIP application to a third party, who in turn assigned to still another party, who granted Q.G. an exclusive license.¹¹²³

The present infringement action was then filed by the assignee and Q.G., its licensee.¹¹²⁴ In defense, Shorty asserted that the patent was invalid under 35 U.S.C. § 102(f), arguing that Guy Lallier should have been listed as a co-inventor.¹¹²⁵ Q.G. moved for summary judgment that Shorty's invalidity defense was precluded under the doctrine of assignor estoppel, and this motion was granted.¹¹²⁶

In considering whether the district court correctly determined that the equities weighed in favor of estopping Shorty from arguing that the property assigned was of no value, the Federal Circuit first noted that at the time of the reassignment to Simon, Shorty implicitly represented that the invention in the first application had some value because Shorty received \$3,000, a promise for \$17,000 more, and stock.¹¹²⁷ Shorty's representation that the assigned property had value thus weighed in favor of applying assignor estoppel.

The court found that Shorty's invalidity defense provided another reason to apply assignor estoppel.¹¹²⁸ At the time of the assignment of the application back to Simon, Shorty knew that the application did not name Guy Lallier as a co-inventor.¹¹²⁹ Thus, Shorty acknowledged the value of the first application while being aware of the potential invalidity issue under § 102(f).¹¹³⁰ The Federal Circuit,

1119. *Id.* at 1213, 26 U.S.P.Q.2d (BNA) at 1781.

1120. *Id.* at 1212-13, 26 U.S.P.Q.2d (BNA) at 1780-81.

1121. *Id.* at 1212, 26 U.S.P.Q.2d (BNA) at 1780.

1122. *Id.*

1123. *Id.*

1124. *Id.*

1125. *Id.*

1126. *Id.*

1127. *Id.* at 1213, 26 U.S.P.Q.2d (BNA) at 1780-81. The court noted that although the application claims had been initially rejected by the PTO at the time of the assignment, such rejections are typical. *Id.*, 26 U.S.P.Q.2d (BNA) at 1781.

1128. *Id.*, 26 U.S.P.Q.2d (BNA) at 1781.

1129. *Id.*

1130. *Id.*

therefore, upheld the district court's weighing of the equities and its decision to apply the doctrine of assignor estoppel to Shorty.¹¹³¹

Observing that if the patent claims an invention within the assignment agreement, the assignor estoppel doctrine operates to prevent Shorty from contesting the validity of that patent, the Federal Circuit considered whether the district court correctly determined the limits of the assignment.¹¹³² Shorty argued that it did not assign the patented invention, because it assigned the first application and not the CIP application, and that the CIP application matured into the patent in question.¹¹³³ According to Shorty, the differences between the two applications, namely the interchangeable shoes and the pneumatic power means added to the CIP application, precluded applying assignor estoppel.¹¹³⁴

The court found that these differences were not material.¹¹³⁵ Simon testified that he demonstrated a prototype with interchangeable shoes to the Lalliers before the assignment.¹¹³⁶ And the court pointed to language in the original claims of the first application showing that both the interchangeable shoes and pneumatic power means were embraced by the application assigned for value.¹¹³⁷ Moreover, the prosecution history revealed that the examiner considered the feature of interchangeable shoes obvious in light of the prior art and allowed the claims after they were amended to recite a transversely mounted pistol grip.¹¹³⁸ The pistol grip depicted in the CIP application was virtually identical to that shown in the parent application.¹¹³⁹ Thus, Shorty's assignment of the invention and the parent application were found to embrace the asserted patent, and the district court's granting of summary judgment applying assignor estoppel was affirmed.¹¹⁴⁰

In *Carroll Touch, Inc. v. Electro Mechanical Systems Inc.*,¹¹⁴¹ after affirming the district court's finding of noninfringement, the Federal Circuit reviewed the district court's finding that EMS should not be estopped under the doctrine of assignor estoppel from challenging

1131. *Id.*

1132. *Id.*

1133. *Id.* at 1214, 26 U.S.P.Q.2d (BNA) at 1781.

1134. *Id.*

1135. *Id.*

1136. *Id.*, 26 U.S.P.Q.2d (BNA) at 1781-82.

1137. *Id.*, 26 U.S.P.Q.2d (BNA) at 1782.

1138. *Id.*

1139. *Id.* at 1214-15, 26 U.S.P.Q.2d (BNA) at 1782.

1140. *Id.* at 1215, 26 U.S.P.Q.2d (BNA) at 1782.

1141. 15 F.3d 1573, 27 U.S.P.Q.2d (BNA) 1836 (Fed. Cir. 1993).

the validity of the patent in suit.¹¹⁴² The suit named Lazarevich, who had previously been an employee of what became Carroll Touch and went on to found EMS and become its president and principal executive officer, as a co-inventor in the patent.¹¹⁴³ The district court found that Lazarevich played only a minor role in developing the claimed invention and received no compensation for either the invention or its assignment.¹¹⁴⁴ The district court determined that at the time he executed the assignment, Lazarevich did not realize he was assigning his rights to the claimed invention in question, but thought he was assigning his rights to another invention not at issue.¹¹⁴⁵ The district court, therefore, decided that the equities weighed against applying assignor estoppel and in favor of allowing EMS to contest the validity of the patent.¹¹⁴⁶

The Federal Circuit found that in so deciding, the district court abused its discretion.¹¹⁴⁷ Affording the district court's finding the "great deference" due,¹¹⁴⁸ the court concluded that the finding could not stand because the district court's account of the evidence was implausible in light of the entire record for four reasons.¹¹⁴⁹

First, the Federal Circuit found that if Lazarevich misunderstood the subject of the assignment agreement, that misunderstanding was attributable solely to his own imprudence.¹¹⁵⁰ EMS did not contend that Lazarevich was unable to read or comprehend the agreement, nor did EMS suggest that he was somehow incompetent to execute the agreement.¹¹⁵¹ EMS also did not identify any evidence of record that demonstrated that Carroll Touch deceived Lazarevich into assigning his rights as had been alleged.¹¹⁵²

Second, the Federal Circuit stated that testimony Lazarevich gave during previous litigation, in which Carroll Touch sued him for breach of his employment contract, contradicted his assertion that he had only minor involvement in developing the claimed inven-

1142. *Carroll Touch, Inc. v. Electro Mechanical Sys., Inc.*, 15 F.3d 1573, 1579, 27 U.S.P.Q.2d (BNA) 1836, 1841 (Fed. Cir. 1993). The court indicated that it was "desirable" to decide this issue "so that neither Carroll Touch nor the public [would be] left with unnecessary uncertainty concerning the validity of the claims at issue." *Id.*

1143. *Id.*, 27 U.S.P.Q.2d (BNA) at 1841-42.

1144. *Id.* at 1580, 27 U.S.P.Q.2d (BNA) at 1842.

1145. *Id.*

1146. *Id.* at 1581, 27 U.S.P.Q.2d (BNA) at 1842-43.

1147. *Id.*

1148. *Id.* at 1580, 27 U.S.P.Q.2d (BNA) at 1842.

1149. *Id.* at 1580-81, 27 U.S.P.Q.2d (BNA) at 1842-43.

1150. *Id.* at 1580, 27 U.S.P.Q.2d (BNA) at 1842.

1151. *Id.*

1152. *Id.*

tion.¹¹⁵³ There, he testified that he was a “principal inventor” of the device claimed in the patent in question.¹¹⁵⁴

Third, the district court erred in finding that Lazarevich did not receive any compensation for either the application or the assignment of the claimed invention.¹¹⁵⁵ The court noted that Lazarevich was compensated as an employee of Carroll Touch before he left, and that employment, salary, and bonuses are all valid forms of consideration.¹¹⁵⁶

Finally, the district court apparently failed to take into account that Lazarevich made the declaration,¹¹⁵⁷ which was filed with the application for the patent, while under oath and knowing that making willful false statements is punishable and may jeopardize the validity of the application or any patent subsequently issued.¹¹⁵⁸ EMS admitted that the matters sworn to by Lazarevich in the declaration were believed by him at that time to be true.¹¹⁵⁹ Because Lazarevich, the inventor-assignor, signed the declaration attesting to his belief in the validity of the patent and assigned the patent rights to another for valuable consideration, he was estopped from defending against the claim of patent infringement by proving that which he assigned was worthless.¹¹⁶⁰

B. Collateral Estoppel

Another type of estoppel that may operate as a defense to patent infringement is collateral estoppel, i.e., issue preclusion. As the court explained in *Pfaff v. Wells Electronics, Inc.*,¹¹⁶¹ collateral estoppel precludes the relitigation of issues previously decided, “when those issues arise in a later litigation on a claim that is not barred by res judicata.”¹¹⁶²

The patent in *Pfaff* was directed to a housing for mounting and testing leadless chip carriers.¹¹⁶³ The claimed housing was comprised of a base, “conductive pins arranged vertically on the base to

1153. *Id.*

1154. *Id.*

1155. *Id.*

1156. *Id.* at 1580-81.

1157. See 37 C.F.R. § 1.63 (1993) (providing requirements for oath or declaration).

1158. *Carroll Touch*, 15 F.3d at 1581, 27 U.S.P.Q.2d (BNA) at 1843.

1159. *Id.* (quoting 18 U.S.C. § 1001 (1988)).

1160. *Id.* (citing *Diamond Scientific v. Ambico, Inc.*, 848 F.2d 1220, 1226, 6 U.S.P.Q.2d (BNA) 2028, 2032 (Fed. Cir. 1988)).

1161. 5 F.3d 514, 28 U.S.P.Q.2d (BNA) 1119 (Fed. Cir. 1993).

1162. *Pfaff v. Wells Elecs., Inc.*, 5 F.3d 514, 517, 28 U.S.P.Q.2d (BNA) 1119, 1122 (Fed. Cir. 1993) (citing 1B JAMES W. MOORE ET. AL, MOORE'S FEDERAL PRACTICE ¶ D.401 (2d ed. 1992)).

1163. *Id.* at 515, 28 U.S.P.Q.2d (BNA) at 1120.

form a rectangular cavity the size of the leadless chip carrier . . . and an open lid or spreader on top of the pins."¹¹⁶⁴ The district court granted summary judgment of noninfringement to Wells primarily based on the holding in a prior litigation between the parties.¹¹⁶⁵ Pfaff's previous patent-infringement suit against Wells in Indiana resulted in the district court holding, *inter alia*, that Wells' devices did not infringe claim 1 of Pfaff's patent because their pins were not axially elongated and did not incline in a plane substantially parallel to the first major face and their spreader coacted with a portion of the pin ends that did not define the cavity, as required by claim 1, and because prosecution history estoppel prevented Pfaff from construing Wells' pins and spreader as equivalents.¹¹⁶⁶ Pfaff later filed the present suit against Wells in Texas to enforce the same patent, alleging that Wells' subsequently developed devices infringed, *inter alia*, claim 1 of the patent.¹¹⁶⁷ The Texas district court granted Wells' summary judgment motion for noninfringement.¹¹⁶⁸ Relying on the Indiana district court's interpretation of the claims, the Texas court found that the claim required that the spreader coact with the inner edges of the pins, and that this requirement was not met by the accused devices.¹¹⁶⁹ Moreover, the Texas district court found that prosecution history estoppel precluded Pfaff from contending that Wells' devices, having spreaders coacting with the outer edges of the pins, which did not mate with or define the cavity, were equivalents.¹¹⁷⁰ Confusing *res judicata* with collateral estoppel, the Texas district court indicated that, although there was a disparity in the devices, the Indiana court's findings in relation to the prosecution history of the patent and claim interpretation were *res judicata*.¹¹⁷¹

On appeal, Pfaff argued that the prior Indiana case did not preclude the present assertion of infringement because the devices at issue here differed significantly from those adjudged noninfringing in the Indiana case.¹¹⁷² After distinguishing *res judicata* and collateral estoppel, the latter of which was at issue, the court cited its precedent holding that a device not previously litigated and shown to differ from the devices previously litigated requires an infringement determina-

1164. *Id.*

1165. *Id.*, 28 U.S.P.Q.2d (BNA) at 1121.

1166. *Id.* at 515-16, 28 U.S.P.Q.2d (BNA) at 1120-21.

1167. *Id.* at 516, 28 U.S.P.Q.2d (BNA) at 1121.

1168. *Id.*

1169. *Id.*

1170. *Id.*

1171. *Id.* at 517, 28 U.S.P.Q.2d (BNA) at 1122.

1172. *Id.*

tion on its own facts.¹¹⁷³ The court noted, however, that where a determination of the scope of patent claims was made in a prior case and that determination was essential to the judgment there on the issue of infringement, there is collateral estoppel in a later case on the scope of such claims.¹¹⁷⁴

The Federal Circuit agreed with the district court that the claim interpretation of the Indiana case—that the “claim required coercion of the spreader with the inner edges which define the cavity”—had an issue-preclusive effect insofar as it was necessary to the judgment of noninfringement in the prior case.¹¹⁷⁵ Furthermore, the court held that collateral estoppel on the issue of prosecution history estoppel precluded spreaders coacting with the outer edges of the pin ends from infringing the claim under the doctrine of equivalents.¹¹⁷⁶ Nonetheless, the court reversed the Texas court’s summary judgment of noninfringement.¹¹⁷⁷

The court noted that the dispute was whether the accused devices in the present case contained a spreader either coacting with inner edges defining the cavity as claimed in the patent or coacting with outer edges that do not define the cavity.¹¹⁷⁸ The court determined that the Texas court could not have properly resolved this disputed issue based on the evidence before it, which consisted of rough drawings of the accused devices.¹¹⁷⁹ The court therefore vacated the Texas court’s judgment and remanded the case for further proceedings.¹¹⁸⁰

C. *Laches*

Laches is an equitable defense barring a claim where there has been both (1) an unreasonable and unexcused delay in bringing suit, and (2) some material prejudice to the defendant arising from that delay.¹¹⁸¹ An issue of the affirmative defense of laches pertaining

1173. *Id.* (citing *Del Mar Avionics, Inc. v. Quinton Instrument Co.*, 836 F.2d 1320, 1324, 5 U.S.P.Q.2d (BNA) 1255, 1258 (Fed. Cir. 1987); *Young Engineers, Inc. v. United States Int'l Trade Comm'n*, 721 F.2d 1305, 1316, 219 U.S.P.Q. (BNA) 1142, 1152 (Fed. Cir. 1983)).

1174. *Id.* at 518, 28 U.S.P.Q.2d (BNA) at 1122 (citing *Molinario v. Fanon/Couerie Corp.*, 745 F.2d 651, 655, 223 U.S.P.Q. (BNA) 706, 708 (Fed. Cir. 1984)).

1175. *Id.*

1176. *Id.* at 519, 28 U.S.P.Q.2d (BNA) at 1124.

1177. *Id.* at 520, 28 U.S.P.Q.2d (BNA) at 1124.

1178. *Id.* at 518, 28 U.S.P.Q.2d (BNA) at 1122.

1179. *Id.* at 519, 28 U.S.P.Q.2d (BNA) at 1123.

1180. *Id.* at 520, 28 U.S.P.Q.2d (BNA) at 1124.

1181. *Advanced Cardiovascular Sys., Inc. v. SciMed Life Sys., Inc.*, 988 F.2d 1157, 1161, 26 U.S.P.Q.2d (BNA) 1038, 1041 (Fed. Cir. 1993) (citing *A.C. Aukerman Co. v. R.L. Chaides Constr. Co.*, 960 F.2d 1020, 1028, 22 U.S.P.Q.2d (BNA) 1321, 1324 (Fed. Cir. 1992) (en banc)).

to a cross-complainant's claim was addressed in *Advanced Cardiovascular Systems, Inc. v. SciMed Life Systems, Inc.*¹¹⁸²

Advanced Cardiovascular Systems (ACS) sued SciMed for infringing ACS' patent to a balloon dilation catheter.¹¹⁸³ During discovery, SciMed became aware of and contacted Hess, an engineer, who contended that he assisted the inventors named on the patent by providing ideas and expertise on the structure and materials to be used in making the claimed catheter.¹¹⁸⁴ Hess stated that he did not know that the patent existed or that he was not named as a co-inventor until contacted by SciMed.¹¹⁸⁵ More than eight years after ACS' patent issued, Hess filed a motion in the litigation to intervene as a cross-complainant, seeking a declaration that he was a joint inventor and a corresponding correction of the patent.¹¹⁸⁶ ACS filed a motion under Federal Rule of Civil Procedure 12(b)(6), to dismiss Hess' cross-complaint for failure to state a claim upon which relief could be granted.¹¹⁸⁷ The district court, considering Hess' knowledge of the patent's issuance irrelevant, measured Hess' delay from the date the patent issued to the date he sought to intervene.¹¹⁸⁸ Drawing an analogy to the six-year limit under 35 U.S.C. § 286 for recovering damages for past infringement and the six-year statute of limitations applying to conversion of personal property under the state law, the district court held that Hess' delay for more than eight years after patent issuance was unreasonable.¹¹⁸⁹ The district court found that Hess' delay prejudiced ACS because Hess intervened on the eve of trial and his intervention, if allowed, would therefore delay resolution of the case.¹¹⁹⁰

In considering whether the district court correctly found that Hess unreasonably and inexcusably delayed in bringing his claim, the Federal Circuit first reviewed the lower court's determination of the period of delay. The Federal Circuit held that, similar to a claim for patent infringement where the period of delay is measured when the patent owner knew or should have known of the infringement,¹¹⁹¹ the period of delay began when Hess "had actual notice of the claim

1182. *Id.* at 1161-64, 26 U.S.P.Q.2d (BNA) at 1041-43.

1183. *Id.* at 1159, 26 U.S.P.Q.2d (BNA) at 1040.

1184. *Id.* at 1159-60, 26 U.S.P.Q.2d (BNA) at 1040.

1185. *Id.*

1186. *Id.* at 1160, 26 U.S.P.Q.2d (BNA) at 1040.

1187. *Id.*

1188. *Id.* at 1161, 26 U.S.P.Q.2d (BNA) at 1041.

1189. *Id.* at 1160, 26 U.S.P.Q.2d (BNA) at 1040.

1190. *Id.*

1191. *Id.* at 1161, 26 U.S.P.Q.2d (BNA) at 1041-42 (citing *A.C. Aukerman Co. v. R. L. Chaides Constr. Co.*, 960 F.2d 1020, 1032, 22 U.S.P.Q.2d (BNA) 1321, 1328 (Fed. Cir. 1992)).

or would have reasonably been expected to inquire about the subject matter.”¹¹⁹² Drawing all reasonable factual inferences in favor of Hess, i.e., accepting his allegations of when he first had notice of the patent and the omission of his name as an inventor, the court concluded that Hess’ pleading did not establish unreasonable delay and that the district court therefore erred in granting the Rule 12(b)(6) motion to dismiss.¹¹⁹³

Concerning the second laches element of prejudice, the court pointed out that justice required that an issue of legitimate concern “not be held forfeited merely because it would complicate other pending litigation.”¹¹⁹⁴ Noting a lack of any suggestion that Hess had attempted to manipulate the legal process in seeking or timing his intervention, the court found error in the district court’s finding of prejudice.¹¹⁹⁵ The court therefore vacated the dismissal of Hess’ cross-complaint.¹¹⁹⁶

D. Inequitable Conduct

Inequitable conduct is an affirmative defense to a patent infringement allegation,¹¹⁹⁷ stemming from the requirement that applicants for a patent conduct themselves with candor in their dealings with the PTO.¹¹⁹⁸ If an applicant engages in inequitable conduct in prosecuting a patent application, a patent issued thereon is rendered unenforceable.¹¹⁹⁹

Inequitable conduct is established by proving its two elements—materiality and intent—by clear and convincing evidence.¹²⁰⁰ To establish the first element, the accused infringer

1192. *Id.*

1193. *Id.* at 1163, 26 U.S.P.Q.2d (BNA) at 1042-43. The court, however, agreed with the district court that the six-year statutory limitation period analogously applies to determine laches in challenges to inventorship, and that a delay of more than six years creates a rebuttable presumption of laches. *Id.*, 26 U.S.P.Q.2d (BNA) at 1043. As noted by the court, however, a presumption does not support judgment on the pleading under Rule 12(b)(6). *Id.* at 1164, 26 U.S.P.Q.2d (BNA) at 1043.

1194. *Id.* at 1163, 26 U.S.P.Q.2d (BNA) at 1043.

1195. *Id.* at 1163-64, 26 U.S.P.Q.2d (BNA) at 1043.

1196. *Id.* at 1165, 26 U.S.P.Q.2d (BNA) at 1044.

1197. See *Precision Instrument Mfg. Co. v. Automatic Maintenance Machinery Co.*, 324 U.S. 806, 814-17 (1945) (barring plaintiff in infringement action from enforcing two patents under equitable doctrine of unclean hands).

1198. See 37 C.F.R. § 1.56(a) (1993) (prescribing patent applicant’s duty of candor to deal in good faith with PTO, including duty to disclose all information known to be material to patentability).

1199. See *Kingsdown Medical Consultants Ltd. v. Hollister, Inc.*, 863 F.2d 867, 877, 9 U.S.P.Q.2d (BNA) 1384, 1392 (Fed. Cir. 1988) (en banc), *cert. denied*, 490 U.S. 1067 (1989); see also M.P.E.P. § 2010.

1200. See *J.P. Stevens & Co. v. Lex Tex Ltd.*, 747 F.2d 1553, 1559, 223 U.S.P.Q. (BNA) 1089, 1094 (Fed. Cir. 1984), *cert. denied*, 747 U.S. 822 (1985). A finding of inequitable conduct is

must show that the patent applicant withheld from the PTO material information.¹²⁰¹ The second element is established by showing that the applicant intended to deceive the PTO by failing to disclose this material information to achieve allowance of the claims.¹²⁰²

In *Paragon Podiatry Laboratory, Inc. v. KLM Laboratories, Inc.*,¹²⁰³ the Federal Circuit considered whether the district court properly granted KLM's motion for summary judgment that the patent at issue was unenforceable because of the patent applicant's inequitable conduct in obtaining the patent.¹²⁰⁴ The district court had based its holding on the applicant's failure to disclose to the PTO sales of the Omniflex orthotic device before the critical date, and the applicant's submission of deceptive affidavits under 37 C.F.R. § 1.132¹²⁰⁵ responding to the PTO's request for affidavits from a "disinterested third party."¹²⁰⁶

Paragon's appeal focused on the intent element of inequitable conduct.¹²⁰⁷ Paragon argued that the district court's holding of inequitable conduct was in error because the district court did not specifically find an intent to deceive the PTO, and because genuine issues of material fact were raised respecting culpable intent, thus precluding summary judgment.¹²⁰⁸

Regarding the first argument, the court stated that Paragon's argument boiled down to the fact that because the district court's opinion did not contain the words "I find that the applicant had an intent to deceive the PTO," there was no finding of intent.¹²⁰⁹ The Federal Circuit rejected this as elevating form over substance.¹²¹⁰ The court observed that the district court specifically noted that intent to deceive the PTO is a required element of inequitable conduct, and

committed to the discretion of the trial court and is reviewed under an abuse of discretion standard. *Kingsdown*, 863 F.2d at 876, 9 U.S.P.Q.2d (BNA) at 1392.

1201. See *FMC Corp. v. Manitowoc Co.*, 835 F.2d 1411, 1415, 5 U.S.P.Q.2d (BNA) 1112, 1115 (Fed. Cir. 1987); *J.P. Stevens*, 747 F.2d at 1559, 223 U.S.P.Q. (BNA) at 1094.

1202. See *Greenwood v. Hattori Seiko Co.*, 900 F.2d 238, 241-42, 14 U.S.P.Q.2d (BNA) 1474, 1476 (Fed. Cir. 1990); *FMC Corp.*, 835 F.2d at 1411, 5 U.S.P.Q.2d (BNA) at 1115; see also M.P.E.P. § 2010.01.

1203. 984 F.2d 1182, 25 U.S.P.Q.2d (BNA) 1561 (Fed. Cir. 1993).

1204. *Paragon Podiatry Lab., Inc. v. KLM Lab., Inc.*, 984 F.2d 1182, 1184, 25 U.S.P.Q.2d (BNA) 1561, 1562 (Fed. Cir. 1993).

1205. 37 C.F.R. § 1.132 (1991). Under Rule 132, "[w]hen any claim of an application . . . is rejected on reference to a domestic patent which substantially shows or describes but does not claim the invention, . . . affidavits or declarations traversing these references or objections may be received." *Id.*

1206. *Paragon Podiatry*, 984 F.2d at 1188, 25 U.S.P.Q.2d (BNA) at 1566.

1207. *Id.*

1208. *Id.* at 1188-89, 25 U.S.P.Q.2d (BNA) at 1566.

1209. *Id.* at 1189, 25 U.S.P.Q.2d (BNA) at 1566.

1210. *Id.* (citing *Consolidated Aluminum Corp. v. Foseco Int'l Ltd.*, 910 F.2d 804, 809, 15 U.S.P.Q.2d (BNA) 1481, 1484 (Fed. Cir. 1990)).

that to reach its conclusion of inequitable conduct the district court necessarily had to have found the requisite intent.¹²¹¹

The court turned to the remaining issue: the correctness of the district court's conclusion that there was no genuine issue regarding the intent to deceive or mislead the PTO.¹²¹² The intent to deceive element of inequitable conduct requires that the conduct at issue, when considered with all the relevant evidence, including evidence indicative of good faith, must exhibit sufficient culpability to demand a finding of an intent to deceive the PTO.¹²¹³ The court noted that the element of intent to deceive is generally inferred from the totality of facts and circumstances surrounding applicant's conduct.¹²¹⁴ The court further noted that although its precedent urged caution in the grant of summary judgment concerning inequitable conduct,¹²¹⁵ the grant is appropriate if the criteria for summary judgment are met.¹²¹⁶

Turning to the finding of inequitable conduct based on Paragon's submission of Rule 132 affidavits during prosecution, the court concluded that on the evidence of record the district court properly held that there was no genuine dispute regarding the factors of materiality or intent.¹²¹⁷ The materiality of the affidavits was not disputed.¹²¹⁸ Concerning intent, the court noted that the examiner's summary of an interview with Paragon's counsel indicated that Paragon would provide a Rule 132 affidavit from a disinterested third party on the point of nonobviousness over the prior art, and that Paragon submitted three affidavits of professionals in the field attesting to the advantages of the invention over prior art.¹²¹⁹ Paragon, however, failed to disclose to the examiner that each of the affiants held stock in Paragon and one or all three had been paid consultants for Paragon.¹²²⁰ Moreover, each affiant averred, "with what [to the court conveyed] the impression of deliberate artfulness in light of their ownership interest in the patent," that they had not

1211. *Id.*, 25 U.S.P.Q.2d (BNA) at 1566-67.

1212. *Id.*, 25 U.S.P.Q.2d (BNA) at 1567.

1213. *Id.* (citing *Kingsdown Medical Consultants Ltd. v. Hollister, Inc.*, 863 F.2d 867, 876, 9 U.S.P.Q.2d (BNA) 1384, 1392 (Fed. Cir. 1988) (en banc), *cert. denied*, 490 U.S. 1067 (1989)).

1214. *Id.* at 1190, 25 U.S.P.Q.2d (BNA) at 1567 (citing *Kingsdown*, 863 F.2d at 876, 9 U.S.P.Q.2d (BNA) at 1392).

1215. *Id.*

1216. *Id.*; see *supra* notes 222-53 and accompanying text (discussing criteria for summary judgment).

1217. *Paragon Podiatry*, 984 F.2d at 1190-91, 25 U.S.P.Q.2d (BNA) at 1568.

1218. *Id.* at 1191, 25 U.S.P.Q.2d (BNA) at 1568.

1219. *Id.*

1220. *Id.*

been employed and did not intend to be employed by Paragon, the assignee.¹²²¹

The Federal Circuit, therefore, concluded that the inference of an intent to deceive the PTO was strongly supported by the submission of the deceptive affidavits.¹²²² The inference was said to arise not only from the materiality of these affidavits, but also from the applicant's affirmative acts of submitting them, the misleading character of the affidavits, and the examiner's inability to investigate the surrounding circumstances.¹²²³ Paragon also was successful in its inferred effort to lead the examiner to believe that the affiants were "disinterested" parties.¹²²⁴ KLM, therefore, established a *prima facie* case of inequitable conduct.¹²²⁵ Hence, the burden shifted to Paragon to come forward with evidence to the contrary.¹²²⁶

In response, Paragon had filed affidavits from both the inventor and the attorney who had prosecuted the application before the PTO, attesting to their good faith and lack of deceptive intent.¹²²⁷ The Federal Circuit found that Paragon's affidavits amounted to no more than a conclusory denial, which under Fed. R. Civ. P. 56 was insufficient to create a genuine issue.¹²²⁸ Considering the entire record, the court reached the same conclusion as the district court that the record led to only one conclusion, and held that inequitable conduct was established by the evidence concerning the submission of deceptive Rule 132 affidavits with intent to mislead or deceive the PTO.¹²²⁹

Concerning the second ground for inequitable conduct—the failure of the applicant to disclose to the examiner the sales of the patented device that occurred more than one year before the filing of the application—Paragon asserted that the record showed a factual issue respecting the element of intent to deceive.¹²³⁰ The court disagreed.

The court observed that in a response denying a charge of inequitable conduct, the patentee may set forth facts showing that under the circumstances, as perceived by the applicant or his

1221. *Id.*

1222. *Id.*

1223. *Id.*

1224. *Id.*

1225. *Id.*

1226. *Id.*

1227. *Id.*

1228. *Id.*

1229. *Id.* at 1192, 25 U.S.P.Q.2d (BNA) at 1569.

1230. *Id.*

attorney, an inference of wrongful intent should not be drawn.¹²³¹ For example, facts explaining the nondisclosure due to a good-faith mistake of law or fact or negligence may be enough to raise a factual dispute regarding intent.¹²³² Without an explanation, however, evidence of a knowing failure to disclose sales that exhibit commercial characteristics reasonably supports the inference that the prosecuting attorney intended to mislead the PTO.¹²³³ In the present case, the court found an absence of explanatory evidence to negate the inference of intent to mislead.¹²³⁴

Paragon attempted to excuse the failure to disclose to the examiner the pre-critical date sales by asserting that the attorney believed it was proper for him to conclude that those sales were experimental and, therefore, not disclose them to the PTO.¹²³⁵ This argument, however, was not presented to the district court and had no support in the record, and thus failed to establish that the district court erred in finding no genuine issue concerning intent.¹²³⁶

Furthermore, the explanation for failing to disclose the sales in Paragon's argument on appeal took a different approach than the explanations in the attorney's affidavit and deposition of record.¹²³⁷ The attorney's affidavit stated that the invention was not reduced to practice until after the pre-critical date sales, but the patent attorney never averred that he mistakenly believed that reduction to practice was required for application of the on-sale bar.¹²³⁸ Contrasted with the argument on appeal and the affidavit, the attorney's later deposition testimony stated that he considered the facts to show that the sales were experimental, even though he saw the promotional material and knew that the sales were unrestricted and that no testing

1231. *Id.*

1232. *Id.*

1233. *Id.* at 1193, 25 U.S.P.Q.2d (BNA) at 1569-70.

1234. *See id.*, 25 U.S.P.Q.2d (BNA) at 1570 (finding that Paragon's explanation during appeal was improper because argument not raised at trial and, therefore, lower court properly found no genuine issue concerning intent).

1235. *Id.*

1236. *Id.* The argument indicated that the attorney relied on *Reactive Metals & Alloys Corp. v. ESM, Inc.*, 769 F.2d 1578, 1583, 226 U.S.P.Q. (BNA) 821, 825 (Fed. Cir. 1985). *Paragon Podiatry*, 984 F.2d at 1193, 25 U.S.P.Q.2d (BNA) at 1570. To avoid the potential misreading of its precedent, the court clarified in *dictum* that the holding in *Reactive Metals* does not excuse a patent attorney from disclosing pre-critical date sales based solely on the inventor's representations in the face of objective evidence that the sales were commercial. *Id.* at 1193 n.10, 25 U.S.P.Q.2d (BNA) at 1570 n.10.

1237. *Id.* at 1193, 25 U.S.P.Q.2d (BNA) at 1570.

1238. *Id.* (citing *UMC Elecs. Co. v. United States*, 816 F.2d 647, 656, 2 U.S.P.Q.2d (BNA) 1465, 1471 (Fed. Cir. 1987) (concluding that reduction to practice not required for application of on-sale bar), *cert. denied*, 484 U.S. 1025 (1988)).

records had been maintained.¹²³⁹

The court concluded that Paragon's inconsistent excuses did not raise a genuine issue regarding good faith.¹²⁴⁰ Consequently, the court held that the prosecution history of the application, when viewed as a whole, exhibited a clear pattern of misconduct sufficient to support the finding of culpable intent by the district court and its conclusion of inequitable conduct.¹²⁴¹

E. Shop Rights

In general, a "shop right" is an equitable right created at common law, when demanded by the circumstances under principles of equity, entitling an employer to use without charge an invention patented by its employee without liability for infringement, essentially granting the employer a nonexclusive license to use the invention.¹²⁴² The court observed in *McElmurry v. Arkansas Power & Light Co.*¹²⁴³ that "the immense body of case law [concerning] 'shop rights' suggests that not all courts agree as to the doctrinal basis for 'shop rights,'" and as a result all courts do not agree as to the specific circumstances required to give rise to a "shop right."¹²⁴⁴

The Federal Circuit outlined an appropriate analysis for determining patent shop rights in *McElmurry*. After reviewing the characterizations of shop rights and the analyses for resolving the question adopted by other courts, the Federal Circuit held that the appropriate methodology for analyzing "whether an employer has acquired a 'shop right' in a patented invention is to look to the totality of the circumstances on a case by case basis and determine whether the facts of a particular case demand, under principles of equity and fairness, a finding that a 'shop right' exists."¹²⁴⁵ The court indicated that factors to be considered in such an analysis include the circumstances surrounding the development of the patented invention and the inventor's activities concerning that invention after development.¹²⁴⁶ The court found that the district court undertook this

1239. *Id.*

1240. *Id.*

1241. *Id.*

1242. See 6 DONALD S. CHISUM, PATENTS § 22.03[3], at 22-40 (1993) (discussing definition of shop rights).

1243. 995 F.2d 1576, 27 U.S.P.Q.2d (BNA) 1129 (Fed. Cir. 1993).

1244. *McElmurry v. Arkansas Power & Light Co.*, 995 F.2d 1576, 1580-81, 27 U.S.P.Q.2d (BNA) 1129, 1133 (Fed. Cir. 1993). The court followed this observation with a summary of the body of law on the issue. *Id.* at 1581, 27 U.S.P.Q.2d (BNA) at 1133.

1245. *Id.* at 1581-82, 27 U.S.P.Q.2d (BNA) at 1134.

1246. *Id.* at 1582, 27 U.S.P.Q.2d (BNA) at 1134.

type of analysis of the circumstances.¹²⁴⁷

Arkansas Power & Light Company (AP & L) hired Bowman as a consultant to assist in installing, maintaining, and operating electrostatic precipitators at one of AP & L's power stations.¹²⁴⁸ While working for AP & L, Bowman designed a level detector for the hopper of an electrostatic precipitator.¹²⁴⁹ Upon successful testing, AP & L had the new detectors installed in all units at the station, paying all costs for testing and installing the new detectors.¹²⁵⁰

Subsequently, Bowman formed a partnership, White Rivers Technology (WRT), with McElmurry to market some of Bowman's inventions, including the level detector for which a patent was later obtained and assigned to WRT.¹²⁵¹ WRT contracted with AP & L to install the detectors in the precipitator hoppers at a second AP & L location, and the detectors were installed before the Bowman patent was issued.¹²⁵² All costs were again paid by AP & L.¹²⁵³

Based on the success of the detectors in the hoppers of the precipitators, AP & L implemented a plan to install the level detector in a hopper of a similar apparatus at the second facility.¹²⁵⁴ WRT bid on the installation contract, but the contract was awarded to a lower bidder.¹²⁵⁵ WRT subsequently filed suit for patent infringement.¹²⁵⁶

In granting summary judgment and determining that AP & L was entitled under the shop-rights rule to reproduce and use the detectors in its business, the district court considered the following factors: (1) the contractual nature of the relationship between AP & L and Bowman; (2) whether Bowman consented to AP & L's use of the level detector; and (3) whether Bowman induced, acquiesced in, or assisted AP & L in using the level detector.¹²⁵⁷ Regarding the first factor, the court found that although Bowman's consulting contract indicated that he was an independent contractor, the law does not limit shop rights to only the employer-employee relationship.¹²⁵⁸

1247. *Id.*

1248. *Id.* at 1578, 27 U.S.P.Q.2d (BNA) at 1131.

1249. *Id.* at 1579, 27 U.S.P.Q.2d (BNA) at 1131.

1250. *Id.*

1251. *Id.*, 27 U.S.P.Q.2d (BNA) at 1131-32.

1252. *Id.*, 27 U.S.P.Q.2d (BNA) at 1132.

1253. *Id.*

1254. *Id.* at 1579-80, 27 U.S.P.Q.2d (BNA) at 1132.

1255. *Id.* at 1580, 27 U.S.P.Q.2d (BNA) at 1132.

1256. *Id.*

1257. *See id.* at 1582, 27 U.S.P.Q.2d (BNA) at 1134 (referring to factors set forth in WRT's Memorandum Brief in Support of Response to Motion for Summary Judgment).

1258. *Id.* at 1583 n.15, 27 U.S.P.Q.2d (BNA) at 1134-35 n.15 (citing *Francklyn v. Guilford Packing Co.*, 695 F.2d 1158, 1160-62, 217 U.S.P.Q. (BNA) 317, 319 (9th Cir. 1983) (holding that

The court noted that Bowman developed the patented level detector while working at AP & L.¹²⁵⁹

Concerning the second and third factors, the court pointed out that AP & L installed the detectors in the precipitator hoppers at its two stations with Bowman's consent and participation.¹²⁶⁰ The court also noted that a number of the detectors had been installed at AP & L's second site by a contractor other than WRT, with Bowman's and WRT's knowledge and consent.¹²⁶¹ Moreover, all expenses relating to testing and installing the detectors had been borne by AP & L.¹²⁶² Additionally, Bowman never required AP & L to obtain permission to employ the detector nor did he seek remuneration from AP & L for its use.¹²⁶³ Thus, the Federal Circuit held that AP & L had acquired a shop right in the patented level detector.¹²⁶⁴

The Federal Circuit dismissed as meritless WRT's argument that AP & L's dissemination of specifications of the patented level detector to potential contract bidders exceeded the scope of its shop right.¹²⁶⁵ The court found support in the law for the district court's conclusion that the shop right entitled AP & L to duplicate and use the detector in its business.¹²⁶⁶ The Federal Circuit further found that the shop right entitled AP & L to procure the level detector from outside contractors.¹²⁶⁷ Thus, AP & L's successful shop-rights defense precluded a finding of patent infringement.

F. Doctrine of First Sale (Patent Exhaustion)

*Intel Corporation v. ULSI System Technology, Inc.*¹²⁶⁸ raised the issue of whether ULSI was free from infringement liability because of the "first sale" or "patent exhaustion" doctrine. According to this doctrine, authorized sale of the patented product takes that product outside the reach of the patent,¹²⁶⁹ thereby providing a defense to infringement. This longstanding doctrine applies likewise to sale of

shop right not necessarily limited to conventional employer-employee relationship)).

1259. *Id.* at 1582-83, 27 U.S.P.Q.2d (BNA) at 1134.

1260. *Id.* at 1583, 27 U.S.P.Q.2d (BNA) at 1135.

1261. *Id.*

1262. *Id.*

1263. *Id.*

1264. *Id.*

1265. *Id.* The court noted that such action neither constituted patent infringement nor rendered Bowman's patent worthless. *Id.*

1266. *Id.* (citing *United States v. Dubilier Condenser Corp.*, 289 U.S. 178, 188-89 (1933)).

1267. *Id.* at 1584, 27 U.S.P.Q.2d (BNA) at 1135 (citing *Schmidt v. Central Foundry Co.*, 218 F. 466, 470 (D.N.J. 1914), *aff'd on other grounds*, 229 F. 157 (3d Cir. 1916)).

1268. 995 F.2d 1566, 27 U.S.P.Q.2d (BNA) 1136 (Fed. Cir. 1993).

1269. *Intel Corp. v. ULSI Sys. Tech., Inc.*, 995 F.2d 1566, 1568, 27 U.S.P.Q.2d (BNA) 1136, 1138 (Fed. Cir. 1993) (citing *Bloomer v. Millinger*, 68 U.S. (1 Wall.) 340, 350-51 (1864)).

the patented product that has been manufactured by a licensee who is acting within the scope of its license.¹²⁷⁰

Intel owned a patent directed to a numerical data processor for math coprocessors used in personal computers.¹²⁷¹ Intel and Hewlett-Packard Company (HP) entered into a cross-licensing agreement under which they granted to each other an "irrevocable, retroactive, nonexclusive, world-wide, royalty-free license" under all patents and patent applications filed by a certain date, including the patent in question, the license being effective for the terms of the patents.¹²⁷²

ULSI sold a coprocessor that competed with Intel's coprocessor.¹²⁷³ ULSI purchased the coprocessor from HP under a "foundry" agreement providing that HP was to manufacture the coprocessors for ULSI.¹²⁷⁴ Under this agreement, ULSI supplied HP with design specifications and HP then produced and transported the coprocessor chips to ULSI, who in turn resold them as ULSI products.¹²⁷⁵ After Intel became aware of ULSI's coprocessor sales, Intel filed suit against ULSI and filed a motion for a preliminary injunction.¹²⁷⁶ Opposing the motion, ULSI asserted HP was allowed under the license to act as a foundry for ULSI, and the sale by HP of the coprocessors to ULSI was a "first sale" that negated Intel's patent rights regarding those coprocessors.¹²⁷⁷ The district court, however, determined that the agreement did not grant HP the power to sublicense the patent at issue, and granted Intel's motion for a preliminary injunction.¹²⁷⁸

To determine whether the preliminary injunction was properly granted, the Federal Circuit first considered the issue of whether ULSI was free from infringement, which turned on whether there was a sale of the coprocessors by HP to ULSI.¹²⁷⁹ Contrary to Intel's argument, the court, after reviewing the HP-ULSI foundry agreement, concluded that the agreement did not merely provide for fabrication services to ULSI, but that it was a contract for the manufacture and

1270. *Id.* (citing *Unidisco, Inc. v. Schattner*, 824 F.2d 965, 968, 3 U.S.P.Q.2d (BNA) 1439, 1441 (Fed. Cir. 1987), *cert. denied*, 484 U.S. 1042 (1988)).

1271. *Id.* at 1567, 27 U.S.P.Q.2d (BNA) at 1137.

1272. *Id.*

1273. *Id.*

1274. *Id.*

1275. *Id.*

1276. *Id.*

1277. *Id.* at 1568, 27 U.S.P.Q.2d (BNA) at 1138.

1278. *Id.* The subject of preliminary injunctions is discussed in the next section.

1279. *Id.*

sale of chips incorporating the patented coprocessor design.¹²⁸⁰ Nor did the court agree with Intel that the licensed seller of a patented product must own intellectual property rights to the product in order for there to be a sale.¹²⁸¹ After reviewing the licensing agreement, the court rejected Intel's contention that HP's sale of chips to ULSI constituted a "*de facto* sublicense" prohibited by the agreement.¹²⁸² Similarly, the court found it irrelevant that HP was not authorized to sublicense to ULSI because HP did not grant a sublicense, and instead, sold a product, which was designed by its purchaser, ULSI.¹²⁸³

The court found that Intel's rights ended with the sale of the patented product manufactured by the licensee acting within the scope of its license, and that the cross-licensing agreement did not restrict the manufacturer's rights to sell or serve as a foundry.¹²⁸⁴ The court concluded that ULSI was insulated from infringement because the coprocessors were first sold to ULSI by HP, who was authorized to do so under its license with Intel.¹²⁸⁵ Accordingly, the court reversed the grant of the preliminary injunction because the district court's finding of a likelihood of success on the issue of infringement was erroneous.¹²⁸⁶

V. REMEDIES

After a patentee clears the hurdle of establishing patent infringement, having avoided tripping over any obstacles the accused infringer defensively threw on the track, the question left is what the patentee will garner on the award-stand in the way of damages, as will be discussed. But back at the starting blocks, the patentee may seek to preliminarily enjoin the accused infringer from treading on the patent rights, as discussed below.

A. Injunctions

Under 35 U.S.C. § 283, a court may grant an injunction in accordance with the principles of equity to prevent the violation of any right secured by patent, on such terms as the court deems

1280. *Id.* at 1569, 27 U.S.P.Q.2d (BNA) at 1138.

1281. *Id.*

1282. *Id.*, 27 U.S.P.Q.2d (BNA) at 1139 (citing *Lisle Corp. v. Edwards*, 777 F.2d 693, 227 U.S.P.Q. (BNA) 894 (Fed. Cir. 1985)).

1283. *Id.*

1284. *Id.* at 1570, 27 U.S.P.Q.2d (BNA) at 1139-40 (distinguishing *Intel Corp. v. United States Int'l Trade Comm'n*, 946 F.2d 821, 20 U.S.P.Q.2d (BNA) 1161 (Fed. Cir. 1991)).

1285. *Id.*, 27 U.S.P.Q.2d (BNA) at 1140.

1286. *Id.*

reasonable.¹²⁸⁷ Thus, a court may preliminarily enjoin a party accused of infringement, or permanently enjoin a party found to infringe, from making, using, or selling a product alleged or adjudged to be covered by a patent claim.¹²⁸⁸

1. Preliminary injunctions

In *Payless Shoesource, Inc. v. Reebok International Ltd.*,¹²⁸⁹ the court reviewed under Tenth Circuit law¹²⁹⁰ the district court's denial of Reebok's motion for a preliminary injunction, which sought to enjoin Payless from making, using, or selling shoes that infringe Reebok's U.S. design patents.¹²⁹¹ The Federal Circuit noted that a movant seeking a preliminary injunction in the Tenth Circuit must show:

- (1) substantial likelihood that the movant will eventually prevail on the merits; (2) a showing that the movant will suffer irreparable injury unless the injunction is issued; (3) proof that this threatened injury outweighs any damage to the opposing party that the proposed injunction may cause; and (4) a showing that the injunction would not be adverse to the public interest.¹²⁹²

The district court concluded that Reebok had not established a reasonable likelihood of success on the merits and, after weighing the other preliminary-injunction factors,¹²⁹³ concluded that a preliminary injunction was ill-advised.¹²⁹⁴

Regarding the first factor, the court found that the district court failed to apply the proper infringement analysis for a design patent.¹²⁹⁵ The Federal Circuit, therefore, held that the district

1287. 35 U.S.C. § 283 (1988).

1288. See *Payless Shoesource, Inc. v. Reebok Int'l Ltd.*, 998 F.2d 985, 988-89, 27 U.S.P.Q.2d (BNA) 1516, 1518-19 (Fed. Cir. 1993) (discussing factors for granting preliminary injunction for patent infringement); *Additive Controls & Measurement Sys., Inc. v. Flowdata, Inc.*, 986 F.2d 476, 479, 25 U.S.P.Q.2d (BNA) 1798, 1801 (Fed. Cir. 1993) (stating that permanent injunctions may be granted to prevent patent infringement).

1289. 998 F.2d 985, 27 U.S.P.Q.2d (BNA) 1516 (Fed. Cir. 1993).

1290. The court deferred to the law of the Tenth Circuit, as discussed in Part I.C.

1291. *Payless Shoesource, Inc. v. Reebok Int'l Ltd.*, 998 F.2d 985, 987, 27 U.S.P.Q.2d (BNA) 1516, 1517 (Fed. Cir. 1993).

1292. *Id.* at 987-88, 27 U.S.P.Q.2d (BNA) at 1518 (citing *Otero Savs. & Loan Ass'n v. Federal Reserve Bank*, 665 F.2d 275, 278 (10th Cir. 1981)).

1293. *Id.* at 991, 27 U.S.P.Q.2d (BNA) at 1521. According to the Federal Circuit:

The court found that Payless would suffer significant financial hardship if the preliminary injunction issued. On the other hand, the court found that the harm to Reebok's reputation if the injunction was denied was belied by the fact that Payless had sold some forms of the accused shoes The court also found that the likelihood of irreparable harm to Reebok was diminished in view of the different market channels. Lastly, the court found that the public interest favored keeping Payless' lower priced shoes on the market.

Id.

1294. *Id.* at 987, 27 U.S.P.Q.2d (BNA) at 1518.

1295. *Id.* at 990, 27 U.S.P.Q.2d (BNA) at 1520.

court erred as a matter of law and abused its discretion in determining that Reebok was not reasonably likely to succeed on the merits of its claims of design patent infringement.¹²⁹⁶

The court found that the district court's findings on the other preliminary-injunction factors were apparently tainted by its clearly erroneous finding on the likelihood of success.¹²⁹⁷ The Federal Circuit concluded that the district court failed to consider that selling less expensive products does not justify patent infringement, and noting that if it did, the majority of injunctions would then be denied, simply because copiers universally price their products lower than innovators.¹²⁹⁸ Accordingly, the Federal Circuit vacated the district court's order denying preliminary-injunctive relief based on Reebok's claims of design patent infringement and remanded the case to the district court.¹²⁹⁹

2. *Permanent injunctions*

In *Additive Controls & Measurement Systems, Inc. v. Flowdata, Inc.*,¹³⁰⁰ the Federal Circuit noted that a permanent injunction barring violation of patent rights must comply with Federal Rule of Civil Procedure 65.¹³⁰¹ After finding that Adcon infringed Flowdata's patent, the district court entered a permanent injunction against Adcon because Adcon did not contest the validity of Flowdata's patent.¹³⁰² The injunction order stated that "[p]laintiff is forever barred from infringing Flowdata's patent. This order is made with the oral consent of ADCON'S Secretary Treasurer who appeared before this Court in her official capacity."¹³⁰³

Reviewing the district court order, the Federal Circuit noted that the requirements of Rule 65(d)—that every order granting an injunction set forth the reasons for its issuance and describe in detail, without reference to another document, the act to be restrained—were intended to avoid unnecessary and unwarranted contempt proceedings against the enjoined party by providing specific notice of the enjoined activity and the reason for the injunction.¹³⁰⁴

1296. *Id.* at 991, 27 U.S.P.Q.2d (BNA) at 1521.

1297. *Id.*

1298. *Id.* Such an assertion is plausible because copiers get a free ride on the innovators' costly research and development.

1299. *Id.*

1300. 986 F.2d 476, 25 U.S.P.Q.2d (BNA) 1798 (Fed. Cir. 1993).

1301. *Additive Controls & Measurement Sys., Inc. v. Flowdata, Inc.*, 986 F.2d 476, 479, 25 U.S.P.Q.2d (BNA) 1798, 1799 (Fed. Cir. 1993).

1302. *Id.* at 477, 25 U.S.P.Q.2d (BNA) at 1799.

1303. *Id.*

1304. *Id.* at 479-80, 25 U.S.P.Q.2d (BNA) at 1801.

The Federal Circuit held that the simple two-sentence injunction in this case did not satisfy the requirements of Rule 65(d), and remanded the case to the district court to issue an injunction satisfying the provisions of Rule 65(d).¹³⁰⁵

The Federal Circuit also considered the propriety of the form and scope of a permanent injunction in *Joy Technologies, Inc. v. Flakt, Inc.*¹³⁰⁶ The district court entered judgment against Flakt for infringement of Joy's patent claiming a process of desulfurizing flue gas produced from combustion fuels, which included a step of partially recycling the calcium hydroxide used therein.¹³⁰⁷ In granting Joy's post-trial motion for a permanent injunction, the district court relied on the rationale in its Memorandum Opinion.¹³⁰⁸ In its memorandum opinion, "the district court discussed enjoining Flakt from further direct infringement, contributory infringement and inducement of infringement" by precluding Flakt, for the remainder of the patent term, from contracting to sell or construct any air pollution control system which was designed to carry out the patented method.¹³⁰⁹

The Federal Circuit found that the injunction issued by the district court failed to comply with the requirements of Rule 65(d) because the order granting the injunction and the prohibitions set out in the memorandum opinion were not a single document.¹³¹⁰ The court indicated that this defect would normally necessitate vacating and remanding the injunctive order for compliance with the requirements of form and specificity.¹³¹¹ Because, however, the intent of the district court regarding the scope of the injunction was evident from the memorandum opinion, the court reviewed the scope of the injunction, which issue was dispositive of the appeal, for an abuse of discretion.¹³¹²

Flakt argued on appeal that the order improperly enjoined Flakt from acts that would not infringe Joy's patent.¹³¹³ The Federal Circuit agreed, explaining that Flakt's sale of equipment designed for carrying out the patented process would not directly infringe Joy's

1305. *Id.* at 480, 25 U.S.P.Q.2d (BNA) at 1801.

1306. 6 F.3d 770, 28 U.S.P.Q.2d (BNA) 1378 (Fed. Cir. 1993).

1307. *Joy Technologies, Inc. v. Flakt, Inc.*, 6 F.3d 770, 771, 28 U.S.P.Q.2d (BNA) 1378, 1379 (Fed. Cir. 1993).

1308. *Id.*, 28 U.S.P.Q.2d (BNA) at 1380.

1309. *Id.* at 772, 28 U.S.P.Q.2d (BNA) at 1380.

1310. *Id.*

1311. *Id.*

1312. *Id.*

1313. *Id.* at 773, 28 U.S.P.Q.2d (BNA) at 1381.

patent.¹³¹⁴ The court noted that "the law is unequivocal that selling equipment to perform a process is not a sale of the process within the meaning of [35 U.S.C.] § 271(a)," as highlighted by not only the case law, but also 35 U.S.C. § 271(c).¹³¹⁵ Moreover, the court noted that the injunction was punitive, rather than remedial, to the extent it placed Flakt in a position differing from other potential manufacturers of the same equipment who could sell to purchasers who would not practice the claimed invention during the term of Joy's patent.¹³¹⁶

The court also pointed out that Flakt's sale of the equipment would not constitute infringement absent direct infringement.¹³¹⁷ The court noted that for there to be liability under § 271(b) or (c), which respectively define inducement of infringement and contributory infringement, there must be some act of direct infringement.¹³¹⁸

Finally, the court rejected Joy's argument that the scope of the injunction was necessary to prevent use of the claimed process during the term of its patent.¹³¹⁹ The court held that Flakt was improperly precluded under the injunction from contracting even where there would be no possibility of infringement during the patent term, and therefore, no possibility of direct or indirect infringement.¹³²⁰ The court observed that it was in Flakt's interest to take steps to prevent direct infringement to avoid liability for infringement and contempt.¹³²¹ Reminding the district court that any injunction must comply with Rule 65(d), the Federal Circuit vacated the injunction and remanded the case for reconsideration.¹³²²

B. Monetary Damages

According to 35 U.S.C. § 284, "[u]pon finding for the claimant the court shall award the claimant damages adequate to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer, together with interest and costs as fixed by the court."¹³²³ As noted in *BIC Leisure Prod-*

1314. *Id.*

1315. *Id.* at 773-74, 28 U.S.P.Q.2d (BNA) at 1381 (citing, e.g., *Standard Havens Prods., Inc. v. Gencor Indus., Inc.*, 953 F.2d 1360, 1374, 21 U.S.P.Q.2d (BNA) 1321, 1332 (Fed. Cir. 1991), *cert. denied*, 113 S. Ct. 60 (1992)).

1316. *Id.* at 775, 28 U.S.P.Q.2d (BNA) at 1383.

1317. *Id.* at 774, 28 U.S.P.Q.2d (BNA) at 1382.

1318. *Id.*; see 35 U.S.C. § 271(b)-(c) (1998).

1319. *Joy Technologies*, 6 F.3d at 776, 28 U.S.P.Q.2d (BNA) at 1383-84.

1320. *Id.*, 28 U.S.P.Q.2d (BNA) at 1384.

1321. *Id.* at 777, 28 U.S.P.Q.2d (BNA) at 1384.

1322. *Id.*

1323. 35 U.S.C. § 284 (1988).

ucts, Inc. v. Windsurfing International, Inc.,¹³²⁴ the amount of damages for infringement is a question of fact on which the patentee has the burden of proof.¹³²⁵ The district court fixes the amount, and the Federal Circuit reviews the finding under the clearly erroneous standard.¹³²⁶

1. *Lost profits*

A patent owner may recover lost profits as opposed to a reasonable royalty, by showing a reasonable probability that, "but for" the infringement, the patent owner would have made the sales.¹³²⁷ In *BIC Leisure*,¹³²⁸ the court considered the propriety of a district court's grant of an award to Windsurfing of lost profits based on Windsurfing's market share¹³²⁹ and denial of award of lost profits for alleged price erosion.¹³³⁰ Regarding the lost profits awarded under the market-share theory, the district court applied the *Panduit* test, which requires the patentee to show: (1) a demand for the patented product; (2) the absence of acceptable, noninfringing alternatives; (3) the patentee's capacity to exploit the demand; and (4) the amount of profits lost due to the infringement.¹³³¹ The lower court, however, modified the *Panduit* test by assuming that Windsurfing would have captured a share of BIC's sales proportional to its pre-existing share of the relevant market.¹³³² The district court, therefore, awarded lost profits to Windsurfing based on this pro rata percentage of BIC's sales for each year of the period for damages.¹³³³

The Federal Circuit held that the district court, in awarding lost profits, clearly erred by failing to apply the "but for" causation test.¹³³⁴ The court found that the record did not show a reasonable likelihood that Windsurfing would have made its pro rata share of

1324. 1 F.3d 1214, 27 U.S.P.Q.2d (BNA) 1671 (Fed. Cir. 1993).

1325. *BIC Leisure Prods., Inc. v. Windsurfing Int'l, Inc.*, 1 F.3d 1214, 1217, 27 U.S.P.Q.2d (BNA) 1671, 1673-94 (Fed. Cir. 1993).

1326. *Id.* at 1217-18, 27 U.S.P.Q.2d (BNA) at 1674 (citing *Smithkline Diagnostics, Inc. v. Helena Lab. Corp.*, 926 F.2d 1161, 1164, 17 U.S.P.Q.2d (BNA) 1922, 1925 (Fed. Cir. 1991)).

1327. *Id.* at 1218, 27 U.S.P.Q.2d (BNA) at 1674 (citing *Water Technologies Corp. v. Calco Ltd.*, 850 F.2d 660, 671, 7 U.S.P.Q.2d (BNA) 1097, 1106 (Fed. Cir.), *cert. denied*, 488 U.S. 968 (1988)).

1328. *Id.* at 1214, 27 U.S.P.Q.2d (BNA) at 1671.

1329. *See id.* at 1217-20, 27 U.S.P.Q.2d (BNA) at 1673-75 (discussing district court's award of lost profits to Windsurfing based on its share of sailboard market).

1330. *See id.* at 1220, 27 U.S.P.Q.2d (BNA) at 1675 (evaluating district court's denial of Windsurfing's lost profits).

1331. *Id.* at 1217, 27 U.S.P.Q.2d (BNA) at 1673 (citing *Panduit Corp. v. Stahl Bros. Fibre Works, Inc.*, 575 F.2d 1152, 1156, 197 U.S.P.Q. (BNA) 726, 730 (6th Cir. 1978)).

1332. *Id.*

1333. *Id.*

1334. *Id.* at 1218, 27 U.S.P.Q.2d (BNA) at 1674.

BIC's sales had not BIC been in the market, because there were at least fourteen other competitors competing during the damages period for sales in the relevant market.¹³³⁵ Windsurfing's boards differed fundamentally from BIC's boards, and their prices were also disparate.¹³³⁶ Additionally, the record contained uncontradicted evidence that demand for sailboards was relatively elastic.¹³³⁷ The court found that the record indicated that without BIC in the market, BIC's customers would have likely sought similarly-priced boards available from other competitors.¹³³⁸ Furthermore, there was a continual decline in Windsurfing's sales after the district court enjoined BIC's infringement, evidence the court found to show that Windsurfing did not capture its market share of the sales that replaced BIC's sales.¹³³⁹

The court pointed out that the *Panduit* test, which is an acceptable, though not an exclusive, test for determining "but for" causation when properly applied, operates under the inherent assumption that both the patent owner and the infringer market products sufficiently alike so as to compete directly against each other in the same market.¹³⁴⁰ That is, the patentee's and infringer's products must be substitutes in a competitive market for the first two factors of the *Panduit* test to meet the "but for" test.¹³⁴¹

More specifically, the first *Panduit* factor—demand for the patented product—assumes that the demand for the infringer's product and the demand for the patentee's product are interchangeable.¹³⁴² If, however, the products are not sufficiently alike to compete directly for the same customers, in the absence of the infringer's product the infringer's customers would not necessarily transfer their demand to the patentee's product.¹³⁴³ In such a case, the demand for the patented product factor does not operate to satisfy the "but for" test.¹³⁴⁴

Likewise, the second *Panduit* factor—absence of acceptable, noninfringing alternatives—assumes that the patentee and the infringer sell substantially similar products in the same market. To be considered an acceptable alternative by the infringer's customers in

1335. *Id.*

1336. *Id.*

1337. *Id.*

1338. *Id.*

1339. *Id.*

1340. *Id.*

1341. *Id.*

1342. *Id.*

1343. *Id.* at 1219, 27 U.S.P.Q.2d (BNA) at 1674.

1344. *Id.*

an elastic market, the alleged alternative "must not have a disparately higher price than or possess characteristics significantly different from the patented product."¹³⁴⁵

As an alternative to the second *Panduit* factor, the court indicated that it has allowed proof of its market share instead of proof of the absence of acceptable substitutes because the market-share approach offers a reasonable probability of proof that the patent owner would have made the sales "but for" the infringement.¹³⁴⁶ The court commented that this alternative to the second *Panduit* factor nonetheless presupposes that the patent owner and the infringer compete in the same market.¹³⁴⁷

Here, however, the court found that the record revealed that during the damages period not every competitor in the sailboard market sold substantially the same product.¹³⁴⁸ Windsurfing and BIC sold differing types of sailboards at varying prices to different customers.¹³⁴⁹ The Court, thus, found that there was no "but for" causation.¹³⁵⁰ Finding no evidence to support Windsurfing's claim of lost profits, the Federal Circuit reversed the district court's award.¹³⁵¹

The court also noted that Windsurfing, having licensed the patented technology to most companies supplying sailboards in the United States without competing itself in most sailboat submarkets, valued its patent in terms of royalties, and not in terms of profits it could make by excluding others from the market.¹³⁵² The court held that Windsurfing was entitled to receive lost royalties, i.e., the amounts Windsurfing's licensees would have paid "but for" the infringement.¹³⁵³ Regarding the lost royalties, BIC challenged the district court's methodology of using the number of boards sold as the royalty basis.¹³⁵⁴ The Federal Circuit found that the district court had the discretion to use the chosen methodology.¹³⁵⁵

Concerning the district court's denial of an award of lost profits under a price-erosion theory, the court found nothing clearly

1345. *Id.*, 27 U.S.P.Q.2d (BNA) at 1675 (citing *Kaufman Co. v. Lantech, Inc.*, 926 F.2d 1136, 1142, 17 U.S.P.Q.2d (BNA) 1828, 1832 (Fed. Cir. 1991)).

1346. *Id.*

1347. *Id.*

1348. *Id.*

1349. *Id.*

1350. *Id.*

1351. *Id.*

1352. *Id.*

1353. *Id.*

1354. *Id.*

1355. *Id.*

erroneous in the finding that the evidence on price erosion was too speculative to support an award of price-erosion lost profits.¹³⁵⁶ The court observed that the record reflected that other market factors, not BIC, caused Windsurfing to lower sale prices.¹³⁵⁷ These forces, including new innovations in board designs and consumer choices, reduced the demand for Windsurfing's boards and caused many companies to discount their inventory of the patented boards in order to stock the newer boards.¹³⁵⁸ Moreover, Windsurfing, having licensed many competitors who produced boards more economically, exacerbated the price problem.¹³⁵⁹ The court, therefore, concluded that Windsurfing did not prove that it could have sold its boards at higher prices "but for" BIC's infringement.¹³⁶⁰

2. *Reasonable royalty*

If the patent claimant is unable to prove the amount of compensatory damages as measured by lost profits, the court may award a reasonable royalty.¹³⁶¹ As noted in *Wang Laboratories Inc. v. Toshiba Corp.*,¹³⁶² a reasonable royalty may be found by determining the amount a licensee, in a hypothetical negotiation with a licensor, would have been willing to pay as a royalty to practice the patented invention and yet make a reasonable profit.¹³⁶³

Wang Laboratories involved a question relating to calculating a reasonable royalty, namely, whether the district court properly denied Wang's motion to amend the royalty period to start from the date infringement began, rather than from the date on which Wang gave notice to Toshiba and NEC that their products infringed Wang's patents.¹³⁶⁴ The Federal Circuit held that the case was governed by its precedent that hypothetical negotiations are considered to have

1356. *Id.* at 1220, 27 U.S.P.Q.2d (BNA) at 1675.

1357. *Id.*

1358. *Id.*

1359. *Id.*

1360. *Id.*

1361. See 35 U.S.C. § 284 (1988) ("Upon finding for the claimant the court shall award the claimant damages adequate to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer. . ."); see also *Fromson v. Western Litho Plate & Supply Co.*, 853 F.2d 1568, 1574, 7 U.S.P.Q.2d (BNA) 1606, 1612 (Fed. Cir. 1988) (stating that when evidence is inadequate to establish actual damages, 35 U.S.C. § 284 (1988) allows court to award reasonable royalty).

1362. 993 F.2d 858, 26 U.S.P.Q.2d (BNA) 1767 (Fed. Cir. 1993).

1363. *Wang Lab., Inc. v. Toshiba Corp.*, 993 F.2d 858, 870, 26 U.S.P.Q.2d (BNA) 1767, 1778 (Fed. Cir. 1993) (citing *Trans-World Mfg. Corp. v. Al Nyman & Sons, Inc.*, 750 F.2d 1552, 1568, 224 U.S.P.Q. (BNA) 259, 269 (Fed. Cir. 1984)).

1364. *Id.* at 869, 26 U.S.P.Q.2d (BNA) at 1777.

occurred when infringement began,¹³⁶⁵ even though 35 U.S.C. § 286 mandates that the infringer is only liable for damages for the six-year period before filing the infringement action.¹³⁶⁶

The Federal Circuit noted that limitations on the period for which damages may be recovered, such as the failure to provide notice according to 35 U.S.C. § 287, should not be confused with the time when damages begin to accrue, which controls the determination of a reasonable royalty based on hypothetical negotiations.¹³⁶⁷ The court held that the district court abused its discretion in denying Wang's motion to amend the judgment awarding damages.¹³⁶⁸

3. *Post-judgment interest*

As noted in *Goodwill Construction Co. v. Beers Construction Co.*,¹³⁶⁹ the interest rate for calculating post-judgment interest is set forth in 28 U.S.C. § 1961(a):

[I]nterest shall be calculated from the date of the entry of the judgment, at a rate equal to the coupon issue yield equivalent (as determined by the Secretary of the Treasury) of the average accepted auction price for the last auction of fifty-two week United States Treasury bills settled immediately prior to the date of the judgment.¹³⁷⁰

A district court may not choose a rate contrary to this statutory rate.¹³⁷¹

C. *Enhanced Damages, Attorney Fees, and Costs*

Under 35 U.S.C. § 284, a court may award the prevailing patent owner up to three times the amount of damages found.¹³⁷² A showing of willful infringement or bad faith is necessary for an award of enhanced damages, which are punitive in nature, rather than compensatory.¹³⁷³ In exceptional cases, the court may award

1365. *Id.* at 870, 26 U.S.P.Q.2d (BNA) at 1778 (citing *Fromson*, 853 F.2d at 1575, 7 U.S.P.Q.2d (BNA) at 1613).

1366. *Id.*

1367. *Id.*

1368. *Id.*

1369. 991 F.2d 751, 26 U.S.P.Q.2d (BNA) 1420 (Fed. Cir. 1993).

1370. *Goodwill Constr. Co. v. Beers Constr. Co.*, 991 F.2d 751, 759, 26 U.S.P.Q.2d (BNA) 1420, 1427 (Fed. Cir. 1993) (quoting 28 U.S.C. § 1961(a) (1988)).

1371. *Id.* (citing *Kaiser Aluminum & Chemical Corp. v. Bonjorno*, 494 U.S. 827, 840 (1990) (vacating district court's award of post-judgment interest)).

1372. See 35 U.S.C. § 284 (1988) (mandating that, if damages are not set by jury, court may award up to three times amount assessed).

1373. See *Delta-X Corp. v. Baker Hughes Prod. Tools, Inc.*, 984 F.2d 410, 413, 25 U.S.P.Q.2d (BNA) 1447, 1449 (Fed. Cir. 1993).

reasonable attorney fees to the prevailing party under 35 U.S.C. § 285.¹³⁷⁴

BIC Leisure involved review of the district court's finding of non-willfulness and non-exceptionality based on a separate, three-day trial on the issues of enhanced damages and attorney fees.¹³⁷⁵ Windsurfing, the prevailing patent owner, had the burden of proving by clear and convincing evidence that BIC's infringement was willful and therefore the case was exceptional.¹³⁷⁶

Observing that BIC received oral and written noninfringement opinions from a competent and experienced patent attorney, the court found that the record showed that BIC believed in good-faith that Windsurfing's reissue patent was invalid, a belief strengthened by the invalidation of Windsurfing's corresponding British patent.¹³⁷⁷ Because the district court relied heavily on the testimony of six witnesses and hundreds of documents, the Federal Circuit upheld the district court's decision.¹³⁷⁸

Similarly, the court held in *Delta-X Corp. v. Baker Hughes Production Tools, Inc.*,¹³⁷⁹ that the district court did not err or abuse its discretion in refusing to award enhanced damages, attorney fees, and costs, finding that the district court had thoroughly considered a variety of factors in its decision.¹³⁸⁰ The Federal Circuit reversed the district court's granting of JNOV and reinstated the jury's finding of willfulness.¹³⁸¹ Nonetheless, the court found the grant of JNOV to be harmless error because the district court had "independently determined that Delta-X had not shown entitlement to enhanced damages, attorney fees, and costs."¹³⁸²

Regarding the issue of willfulness or bad faith, the court noted that "an infringer may generally avoid enhanced damages with a meritorious good faith defense and a substantial challenge to infringe-

1374. 35 U.S.C. § 285 (1988). Whether a case is exceptional is a factual determination subject to appellate review under the clearly erroneous standard. See *Reactive Metals & Alloys Corp. v. ESM, Inc.*, 769 F.2d 1578, 1583, 226 U.S.P.Q. (BNA) 821, 824 (Fed. Cir. 1985) (noting that, for review of finding of exceptional circumstances, appellate courts must apply clearly erroneous standard).

1375. *BIC Leisure Prods., Inc. v. Windsurfing Int'l, Inc.*, 1 F.3d 1214, 1222-23, 27 U.S.P.Q.2d (BNA) 1671, 1678 (Fed. Cir. 1993).

1376. *Id.* at 1222, 27 U.S.P.Q.2d (BNA) at 1678.

1377. *Id.* at 1223, 27 U.S.P.Q.2d (BNA) at 1678.

1378. *Id.*

1379. 984 F.2d 410, 25 U.S.P.Q.2d (BNA) 1447 (Fed. Cir. 1993).

1380. *Delta-X Corp. v. Baker Hughes Prod. Tools, Inc.*, 984 F.2d 410, 413-14, 25 U.S.P.Q.2d (BNA) 1447, 1449-50 (Fed. Cir. 1993).

1381. *Id.* at 413, 25 U.S.P.Q.2d (BNA) at 1449.

1382. *Id.*

ment.”¹³⁸³ Concerning the issue of attorney fees and costs, the district court exercised its discretion under 35 U.S.C. § 284 in awarding of costs.¹³⁸⁴ The court explained that § 284 is similar to Rule 54(d) in that both give the district court discretion in awarding costs, but “section 284 requires a district court to follow Federal Circuit precedent in establishing the bounds of its discretion.”¹³⁸⁵

The court detected “no abuse of discretion in the district court’s denial of enhanced damages, attorney fees, and costs.”¹³⁸⁶ “Although Baker[, the infringer,] had not obtained a competent opinion of counsel regarding the probability of infringement, such a “failure to obtain legal advice does not mandate a finding of willfulness or bad faith,” as correctly noted by the district court.¹³⁸⁷ Moreover, the record showed neither copying of Delta-X’s patent nor intentional infringement.¹³⁸⁸ Furthermore, “the record evidenced that Baker had, in good faith, determined that its device did not infringe” and that Baker had “mounted a substantial challenge to infringement.”¹³⁸⁹ In addition to these factors, the district court considered Delta-X’s testimony on willfulness “based on recollections of a conversation with an unidentified individual.”¹³⁹⁰ The Federal Circuit, therefore, affirmed the district court’s decision.¹³⁹¹

The court overturned another finding of willfulness in *Westvaco Corp. v. International Paper Co.*¹³⁹² The Federal Circuit agreed with Westvaco that the lower court’s conclusion of willfulness was clearly erroneous because (1) Westvaco had relied, in good faith, “on timely and competent opinions from [its] patent counsel” that there was no infringement of International Paper Co.’s (IPC’s) reissue patent and (2) Westvaco attempted to design around IPC’s product rather than copy it.¹³⁹³

The Federal Circuit reiterated that objective evidence must be considered in determining whether reliance on patent counsel’s advice was justified, that is, whether the patent counsel’s opinion was

1383. *Id.* (citing *Paper Converting Mach. Co. v. Magna-Graphics Corp.*, 745 F.2d 11, 20, 223 U.S.P.Q. (BNA) 591, 597-98 (Fed. Cir. 1984)).

1384. *Id.* at 414, 25 U.S.P.Q.2d (BNA) at 1450.

1385. *Id.*

1386. *Id.*

1387. *Id.* (citing *Nickson Indus. v. Rol Mfg. Co.*, 847 F.2d 795, 800, 6 U.S.P.Q.2d (BNA) 1878, 1881 (Fed. Cir. 1988)).

1388. *Id.*

1389. *Id.*

1390. *Id.*

1391. *Id.* at 415, 25 U.S.P.Q.2d (BNA) at 1451.

1392. 991 F.2d 735, 26 U.S.P.Q.2d (BNA) 1353 (Fed. Cir. 1993).

1393. *Westvaco Corp. v. International Paper Co.*, 991 F.2d 735, 743, 26 U.S.P.Q.2d (BNA) 1353, 1360 (Fed. Cir. 1993).

competent.¹³⁹⁴ Written opinions should be reviewed for their overall tone, discussion of case law, and analyses of the necessary facts and issues to determine whether they evidence an appropriate foundation or are conclusory on their face.¹³⁹⁵

Reviewing the record, the court found that counsel's opinions in this case had an adequate foundation.¹³⁹⁶ Each opinion began with a statement that it was based on a review of the prosecution history of the patent, the prior art of record, and additional prior art.¹³⁹⁷ The validity and infringement issues were analyzed in detail, including discussions of the prior art, the accused device, and the claim language.¹³⁹⁸

IPC, relying on *Datascope Corp. v. SMEC, Inc.*,¹³⁹⁹ argued "that the opinions [were] incompetent because they [did] not include a separate discussion of infringement under the doctrine of equivalents."¹⁴⁰⁰ The Federal Circuit distinguished the opinions in the present case from the conclusory opinion in *Datascope*, pointing out that present opinions contained "enough other indicia of competence so that counsel's failure to separately discuss infringement under the doctrine of equivalents was not fatal."¹⁴⁰¹

Nor were other factors considered by the district court fatal to non-willfulness. Although the opinions were found to be equivocal, the court noted that "[a]n honest opinion was more likely to speak of probabilities than certainties."¹⁴⁰² The court also found that Westvaco's act of obtaining an opinion from outside counsel was not an "after-the-fact [effort] to justify [its] actions by encouraging positive opinions from an initially uncertain outside counsel."¹⁴⁰³ Westvaco sought advice of counsel before it originally began manufacturing the accused product and requested updated advice immediately after it became aware of IPC's reissue patent.¹⁴⁰⁴ A draft opinion, which in-house counsel commented on before being finalized, did not

1394. *Id.* (citing *Read Corp. v. Portec, Inc.*, 970 F.2d 816, 829, 23 U.S.P.Q.2d (BNA) 1426, 1437 (Fed. Cir. 1992)).

1395. *Id.* at 743-44, 26 U.S.P.Q.2d (BNA) at 1360 (citing *Read Corp.*, 970 F.2d at 829, 23 U.S.P.Q.2d (BNA) at 1437; *Ortho Pharmaceutical Corp. v. Smith*, 959 F.2d 936, 944, 22 U.S.P.Q.2d (BNA) 1119, 1126 (Fed. Cir. 1992)).

1396. *Id.* at 744, 26 U.S.P.Q.2d (BNA) at 1360.

1397. *Id.*

1398. *Id.*

1399. 879 F.2d 820, 11 U.S.P.Q.2d (BNA) 1321 (Fed. Cir. 1989), *cert. denied*, 493 U.S. 1024 (1990).

1400. *Westvaco*, 991 F.2d at 744, 26 U.S.P.Q.2d (BNA) at 1360.

1401. *Id.*

1402. *Id.*, 26 U.S.P.Q.2d (BNA) at 1361.

1403. *Id.*

1404. *Id.*

indicate that the outside counsel was initially uncertain about his conclusions.¹⁴⁰⁵ Furthermore, outside counsel declined Westvaco's view regarding anticipation of the claims, independently concluding to the contrary.¹⁴⁰⁶ Thus, the court found that Westvaco was justified in relying on the competent noninfringement opinions of counsel.¹⁴⁰⁷

The court further found that, contrary to the district court's finding, Westvaco did not copy IPC's product, but instead legitimately attempted to design around IPC's patent.¹⁴⁰⁸ Westvaco made specific changes to its product so that it would not be a copy of IPC's product.¹⁴⁰⁹ Although the court found this attempt to design around IPC's patent to be unsuccessful, the court, finding the facts to parallel those in *Read Corp. v. Portec, Inc.*,¹⁴¹⁰ and applying its rationale in *London v. Carson Pirie Scott & Co.*,¹⁴¹¹ concluded that this failed attempt did not support a finding of willful infringement.¹⁴¹² Accordingly, the Federal Circuit reversed the district court's finding of willfulness and the enhancement of damages, and vacated the award of attorney fees and costs as being influenced by the erroneous finding of willfulness.¹⁴¹³

In contrast, in *L.A. Gear, Inc. v. Thom McAn Shoe Co.*, the Federal Circuit reversed the district court's finding that Melville's infringement of L.A. Gear's design patent was not willful.¹⁴¹⁴ Melville relied solely on counsel's obligations under Federal Rule of Civil Procedure 11 to support its position that it had a good-faith belief that the patent was invalid and unenforceable.¹⁴¹⁵ As noted by the court, however, a defensive pleading of invalidity or unenforceability may pass muster under Rule 11, yet at the same time be inadequate to defend a charge of willful infringement.¹⁴¹⁶ The court noted that Melville's pleaded defense of unenforceability was not pursued at trial, and that the only ground asserted for invalidity did not

1405. *Id.*

1406. *Id.*

1407. *Id.*

1408. *Id.* at 745, 26 U.S.P.Q.2d (BNA) at 1361.

1409. *Id.*

1410. 970 F.2d 816, 828, 23 U.S.P.Q.2d (BNA) 1426, 1436 (Fed. Cir. 1992).

1411. 946 F.2d 1534, 1538, 20 U.S.P.Q.2d (BNA) 1456, 1458 (Fed. Cir. 1991) (asserting that practice of designing around patents to make new inventions should be encouraged).

1412. *Westvaco*, 991 F.2d at 745, 26 U.S.P.Q.2d (BNA) at 1361.

1413. *Id.* at 746, 26 U.S.P.Q.2d (BNA) at 1362.

1414. *L.A. Gear, Inc. v. Thom McAn Shoe Co.*, 988 F.2d 1117, 1126-27, 25 U.S.P.Q.2d (BNA) 1913, 1919-20 (Fed. Cir. 1993).

1415. *Id.* at 1126, 25 U.S.P.Q.2d (BNA) at 1919.

1416. *Id.*

present a close question of fact or law.¹⁴¹⁷ Thus, Rule 11 did not shield Melville from a finding of willfulness.

Finding evidence of deliberate copying and no exculpatory evidence of good faith, the court held that the facts in *Avia Group International, Inc. v. L.A. Gear California, Inc.*¹⁴¹⁸ compelled a finding of willfulness.¹⁴¹⁹ Melville introduced no objective evidence of good faith, such as an opinion of counsel that the patent was invalid or not infringed.¹⁴²⁰ Furthermore, "Melville admitted copying [the patented design], offering as its sole justification the proposition that copying is prevalent in the fashion industry, [which, the court noted, is] simply irrelevant to the issue of patent infringement."¹⁴²¹ The Federal Circuit, therefore, reversed the district court's ruling that the infringement was not willful, and remanded the case for a determination of L.A. Gear's recovery of damages.¹⁴²²

The district court further found in *L.A. Gear* that the case was not exceptional.¹⁴²³ Noting that willfulness of infringement is a sufficient basis for finding a case exceptional, the Federal Circuit pointed out that not every exceptional case warrants awarding attorney fees.¹⁴²⁴ Because the court's determination that Melville's infringement was willful changed the factual premises, the court remanded for a redetermination of the issue of attorney fees.¹⁴²⁵

The Federal Circuit also considered a finding of willfulness in *American Medical Systems, Inc. v. Medical Engineering Corp.*¹⁴²⁶ On appeal, Medical Engineering Corporation (MEC), relying on the district court's statement that there was a lack of evidence of good faith rather than explicit evidence of bad faith, argued that the district court had applied the wrong standard.¹⁴²⁷ The court rejected this argument, holding that the district court applied the proper legal standard and had correctly considered the totality of the

1417. *Id.*

1418. 853 F.2d 1557, 7 U.S.P.Q.2d (BNA) 1548 (Fed. Cir. 1988).

1419. *L.A. Gear*, 988 F.2d at 1127, 25 U.S.P.Q.2d (BNA) at 1920.

1420. *Id.* at 1126, 25 U.S.P.Q.2d (BNA) at 1919.

1421. *Id.* at 1126-27, 25 U.S.P.Q.2d (BNA) at 1919.

1422. *Id.* at 1127, 25 U.S.P.Q.2d (BNA) at 1920. The district court assessed damages based on trade dress infringement under the Lanham Act, and did not assess separate damages under 35 U.S.C. § 289 for design patent infringement. *Id.*

1423. *Id.* at 1128, 25 U.S.P.Q.2d (BNA) at 1921.

1424. *Id.*, 25 U.S.P.Q.2d (BNA) at 1920-21 (citing *S.C. Johnson & Son, Inc. v. Carter-Wallace, Inc.*, 781 F.2d 198, 201, 228 U.S.P.Q. (BNA) 367, 369 (Fed. Cir. 1986)).

1425. *Id.*, 25 U.S.P.Q.2d (BNA) at 1921.

1426. 6 F.3d 1523, 1530-32, 28 U.S.P.Q.2d (BNA) 1321, 1325-26 (Fed. Cir. 1993).

1427. *American Medical Sys., Inc. v. Medical Eng'g Corp.*, 6 F.3d 1523, 1530, 28 U.S.P.Q.2d (BNA) 1321, 1325 (Fed. Cir. 1993).

circumstances in finding that MEC willfully infringed American Medical Systems' (AMS') patent.¹⁴²⁸

In particular, the district court found that MEC knew of the patent soon after issuance, that MEC had no reasonable good-faith belief to justify its continued infringement because the opinions of counsel it received were not credible or came too late, and that MEC had deliberately copied the patented invention.¹⁴²⁹ The Federal Circuit rejected MEC's contention that the district court failed to consider mitigating factors, including MEC's efforts to design a noninfringing alternative and AMS' delay in giving notice of infringement.¹⁴³⁰ The court indicated that simply because these factors were not mentioned in the discussion on willfulness did not mean that they were not considered, and noted that the factors raised by MEC were discussed at some point in the district court's opinion.¹⁴³¹ Consequently, the court found that the district court had not abused its discretion in awarding enhanced damages of 1.5 times the total amount.¹⁴³²

In *Carroll Touch, Inc. v. Electro Mechanical Systems, Inc.*,¹⁴³³ EMS, the accused infringer and prevailing party, appealed the district court's denial of its motion for recovery of attorney fees.¹⁴³⁴ EMS argued that the district court did not issue factual findings regarding whether the case was an exceptional case and cited cases in which remand was deemed necessary for further findings concerning the issue of whether the case was exceptional.¹⁴³⁵ The court distinguished the cited cases from the present one, explaining that as opposed to the cited cases, the present record did provide a sufficient basis for reviewing the exercise of the district court's discretion.¹⁴³⁶

1428. *Id.* at 1530-31, 28 U.S.P.Q.2d (BNA) at 1325-26. The court criticized MEC for focusing on one statement taken in isolation, stressing that it is judgments, not words, that are appealable. *Id.* at 1531, 28 U.S.P.Q.2d (BNA) at 1325-26.

1429. *Id.* at 1531, 28 U.S.P.Q.2d (BNA) at 1326.

1430. *Id.*

1431. *Id.*

1432. *Id.* at 1532, 28 U.S.P.Q.2d (BNA) at 1326.

1433. 15 F.3d 1573, 27 U.S.P.Q.2d (BNA) 1836 (Fed. Cir. 1993).

1434. *Carroll Touch, Inc. v. Electro Mechanical Sys., Inc.*, 3 F.3d 1573, 1583, 27 U.S.P.Q.2d (BNA) 1836, 1845-46 (Fed. Cir. 1993).

1435. *Id.* at 1580-81, 27 U.S.P.Q.2d (BNA) at 1845. In particular, EMS relied on *Badalamenti v. Dunham's Inc.*, 896 F.2d 1359, 13 U.S.P.Q.2d (BNA) 1967 (Fed. Cir.), *cert. denied*, 498 U.S. 851 (1990), *Fromson v. Western Litho Plate & Supply Co.*, 853 F.2d 1568, 7 U.S.P.Q.2d (BNA) 1606 (Fed. Cir. 1988), and *S.C. Johnson & Sons, Inc. v. Carter-Wallace, Inc.*, 781 F.2d 198, 228 U.S.P.Q. (BNA) 367 (Fed. Cir. 1986).

1436. *Carroll Touch*, 15 F.3d at 1576-78, 27 U.S.P.Q.2d (BNA) at 1845 (citing *Consolidated Aluminum Corp. v. Foseco Int'l Ltd.*, 910 F.2d 804, 814, 15 U.S.P.Q.2d (BNA) 1481, 1488 (Fed. Cir. 1990) (stating that "appellate court need not close its eyes to the record where . . . there is a way clearly open to affirm the district court's action"))).

Noting that EMS, as the party moving for attorney fees, had the burden to prove the exceptional nature of the case by clear and convincing evidence, the court found that EMS failed to demonstrate error in the district court's conclusion that the circumstances¹⁴³⁷ did not warrant a finding that this was an exceptional case.¹⁴³⁸ The court held that no remand was necessary because the district court did not commit clear error or abuse its discretion.¹⁴³⁹

The Federal Circuit penalized the "uncivil behavior" of counsel when it awarded costs to the plaintiff in *Katz v. Batavia Marine & Sporting Supplies, Inc.*¹⁴⁴⁰ Katz arranged with a third party, a vice-president of Def-Tec, to appear at Def-Tec's plant in Ohio for discovery related to Katz's suit against Batavia for patent infringement.¹⁴⁴¹ Only after Katz appeared at the appointed place and time was he informed that Def-Tec would not appear; a copy of Def-Tec's motion to stay discovery was mailed, by regular mail, to Katz two days before the scheduled appearance.¹⁴⁴²

Noting the "unlikelihood that regular mail would be expected to be delivered [to Katz] in New York the day [after it was] mail[ed] in Ohio," the court found that Def-Tec's counsel acted improperly in failing to timely notify Katz of Def-Tec's intention to dispute discovery.¹⁴⁴³ Consequently, the court awarded costs to Katz under Federal Rule of Appellate Procedure 39.¹⁴⁴⁴

D. Limitations on Damages

Certain circumstances, such as the presence of "intervening rights" concerning a reissue patent claim or the failure to provide patent marking, may limit a recovery of damages.

1. Intervening rights

Section 252 of Title 35, which relates to the effect of a reissue patent, provides for intervening rights. As noted in *BIC Leisure*

1437. EMS' "expert witness testified at trial that no reasonable person could find infringement, that Carroll Touch did not subscribe to its [asserted] interpretation of the [claims until the] infringement suit, and that patent counsel for AMP[,] [Carroll Touch's parent company] AMP management that the accused EMS devices did not infringe the . . . patent." *Id.*

1438. *Id.* at 1578, 27 U.S.P.Q.2d (BNA) at 1845-46.

1439. *Id.* at 1578-79, 27 U.S.P.Q.2d (BNA) at 1846.

1440. 984 F.2d 422, 425, 25 U.S.P.Q.2d (BNA) 1547, 1549 (Fed. Cir. 1993).

1441. *Katz v. Batavia Marine & Sporting Supplies, Inc.*, 984 F.2d 422, 425, 25 U.S.P.Q.2d (BNA) 1547, 1549 (Fed. Cir. 1993).

1442. *Id.*

1443. *Id.*

1444. *Id.*

Products, Inc. v. Windsurfing International, Inc.,¹⁴⁴⁵ “[t]he accused infringer may raise the defense of intervening rights only when none of the infringed claims of the reissue patent were present in the original patent.”¹⁴⁴⁶

“The second paragraph of section 252 provides for two separate and distinct defenses under the doctrine of intervening rights: ‘absolute’ intervening rights and ‘equitable’ intervening rights.”¹⁴⁴⁷ Concerning the first sentence, which defines “absolute” intervening rights, the court explained that it “provides an accused infringer with an absolute right to use or sell a product that was made, used, or purchased before the grant of the reissue patent, so long as this activity does not infringe a claim of the reissue patent that was in the original patent.”¹⁴⁴⁸ The second sentence, which pertains to “equitable” intervening rights, provides for a court to grant much broader rights by permitting the “continued manufacture, use, or sale of additional products covered by the reissue patent when the defendant made, purchased, or used identical products, or made substantial preparations to make, use, or sell identical products, before the reissue date.”¹⁴⁴⁹ This latter right, which is not absolute, is dictated by the equities to protect investments made before reissue.¹⁴⁵⁰

In *BIC Leisure*, Windsurfing challenged the propriety of the district court’s finding that absolute intervening rights limited damages on the ground that BIC failed to litigate this issue during the liability phase.¹⁴⁵¹ The Federal Circuit observed that BIC’s absolute intervening-rights defense addressed a damages issue—the identification of the sales of BIC’s sailboards that properly served to measure Windsurfing’s damages.¹⁴⁵² Absolute intervening rights did not become an issue until Windsurfing secured a liability judgment against BIC.¹⁴⁵³ The court noted that although BIC did not plead the defense of absolute intervening rights, BIC provided Windsurfing with ample notice of its intent to prove intervening rights, which prevented prejudice to Windsurfing.¹⁴⁵⁴ The court held that the district court properly admitted BIC’s evidence relevant to the issue under Rule

1445. 1 F.3d 1214, 27 U.S.P.Q.2d (BNA) 1671 (Fed. Cir. 1993).

1446. *BIC Leisure Prods., Inc. v. Windsurfing Int’l, Inc.*, 1 F.3d 1214, 1220, 27 U.S.P.Q.2d (BNA) 1671, 1676 (Fed. Cir. 1993).

1447. *Id.*

1448. *Id.* at 1220-21, 27 U.S.P.Q.2d (BNA) at 1676.

1449. *Id.* at 1221, 27 U.S.P.Q.2d (BNA) at 1676.

1450. *Id.*

1451. *Id.* at 1220, 27 U.S.P.Q.2d (BNA) at 1676.

1452. *Id.* at 1221, 27 U.S.P.Q.2d (BNA) at 1677.

1453. *Id.*

1454. *Id.* at 1221-22, 27 U.S.P.Q.2d (BNA) at 1677.

15(b) of the Federal Rules of Civil Procedure and committed no error in considering BIC's absolute intervening-rights defense.¹⁴⁵⁵

The Federal Circuit also found no error in the district court's application of intervening rights.¹⁴⁵⁶ After noting that no reissue claim that BIC infringed was present in Windsurfing's original patent, the court considered whether the remaining requirements for invoking the defense of intervening rights were also met.¹⁴⁵⁷ Before the reissue date, BIC had a number of sailboards in inventory and was bound to purchase a number of sailboards on order, all of which were found to be properly excluded from the computation of damages.¹⁴⁵⁸ The Federal Circuit, therefore, sustained the district court's ruling that BIC established the defense of absolute intervening rights to damages on these sailboards.¹⁴⁵⁹

The court considered both absolute and equitable intervening rights in *Westvaco Corp. v. International Paper Co.*¹⁴⁶⁰ Westvaco appealed the district court's denial of intervening rights and award of damages for sales before the grant of the reissue patent.¹⁴⁶¹ The district court rejected Westvaco's defense of intervening rights under § 252 based on its conclusions that: (1) the defense was inapplicable because Westvaco's product infringed claims 5 and 6 of the reissue patent, which were not substantially different from claims of the original patent; and (2) assuming *arguendo* that Westvaco made out a case for applying intervening rights, the factual circumstances tipped the equities against allowing Westvaco to benefit by the defense.¹⁴⁶²

The original patent included claims 1-14, which were carried over into the reissue patent, with claims 1, 5, and 10 being amended.¹⁴⁶³ Claims 15-42 were newly added in the reissue patent.¹⁴⁶⁴ IPC asserted claims 5, 6, 33, and 38 of the reissue patent against Westvaco; of these, only claims 5 and 6 were also in the original patent, with claim 6, which depended on claim 5, being unchanged from the original patent.¹⁴⁶⁵ The court, therefore, analyzed claims 5 and 6 to determine whether they were, in terms of § 252, "identical" in

1455. *Id.*

1456. *Id.* at 1222, 27 U.S.P.Q.2d (BNA) at 1677.

1457. *Id.*

1458. *Id.*, 27 U.S.P.Q.2d (BNA) at 1677-78.

1459. *Id.*, 27 U.S.P.Q.2d (BNA) at 1677.

1460. 991 F.2d 735, 741-43, 26 U.S.P.Q.2d (BNA) 1353, 1358-61 (Fed. Cir. 1993).

1461. *Westvaco Corp. v. International Paper Co.*, 991 F.2d 735, 741-43, 26 U.S.P.Q.2d (BNA) 1353, 1358-61 (Fed. Cir. 1993).

1462. *Id.* at 740, 26 U.S.P.Q.2d (BNA) at 1357.

1463. *Id.* at 737, 26 U.S.P.Q.2d (BNA) at 1355.

1464. *Id.*

1465. *Id.*

scope to any claims of the original patent, i.e., without substantive change.¹⁴⁶⁶

IPC amended the language of the original claim 5, which defined a container for liquids containing essential oils and flavors constructed from laminated layers, by changing the recitation that certain layers are "coated on" or "co-extruded on" one another to a recitation that they are "interior to" and "exterior to" one another.¹⁴⁶⁷ Westvaco argued that the scope of reissue claim 5 was substantially broader than that of original claim 5 because of the change in claim language, and the Federal Circuit agreed.¹⁴⁶⁸

In contrast with the district court, the Federal Circuit did not construe the changes as merely clarifying the original patent claims.¹⁴⁶⁹ The Federal Circuit interpreted the deletion from original claim 5 of the requirement that various layers be "coated" or "co-extruded" as removing a structural limitation.¹⁴⁷⁰ Moreover, the addition of the terms "exterior to" and "interior to" was interpreted to broaden claim 5 so that it could encompass a laminate having layers disposed between the layers explicitly recited.¹⁴⁷¹ The court also inferred from IPC's failure to sue Westvaco for infringement of claims 5 and 6 of the original patent that IPC believed that the scope of these claims had changed.¹⁴⁷²

The court therefore concluded that the district court erred in determining substantive identity between original and reissue claims 5 and 6.¹⁴⁷³ Consequently, absolute intervening rights barred IPC from recovering damages accrued before the date of its reissue patent.¹⁴⁷⁴

The court then turned to the question of equitable intervening rights.¹⁴⁷⁵ "Westvaco [argued] that, because it spent in excess of one million dollars in developing the accused product, it had made the necessary 'substantial preparation,' which would entitle it to equitable intervening rights [under section 252]."¹⁴⁷⁶ The court pointed out that such substantial preparation alone did not automati-

1466. *Id.* at 741, 26 U.S.P.Q.2d (BNA) at 1358 (citing *Seattle Box Co. v. Industrial Crating & Packing, Inc.*, 731 F.2d 818, 827-28, 221 U.S.P.Q. (BNA) 568, 574 (Fed. Cir. 1984)).

1467. *Id.* at 738, 26 U.S.P.Q.2d (BNA) at 1355.

1468. *Id.* at 741, 26 U.S.P.Q.2d (BNA) at 1358.

1469. *Id.* at 742, 26 U.S.P.Q.2d (BNA) at 1359.

1470. *Id.* at 741-42, 26 U.S.P.Q.2d (BNA) at 1358.

1471. *Id.*, 26 U.S.P.Q.2d (BNA) at 1358-59.

1472. *Id.* at 742, 26 U.S.P.Q.2d (BNA) at 1359.

1473. *Id.*

1474. *Id.*

1475. *Id.*

1476. *Id.* at 743, 26 U.S.P.Q.2d (BNA) at 1360.

cally vest Westvaco with intervening rights, because "the plain language of the second sentence of the second paragraph of section 252 indicates that it is within the district court's discretion to award intervening rights."¹⁴⁷⁷ Because Westvaco had not shown, or even alleged, that the district court's denial of equitable intervening rights amounted to an abuse of discretion, the Federal Circuit affirmed the denial of equitable intervening rights.¹⁴⁷⁸

2. *Inadequate patent marking*

The failure to properly mark a product to indicate that it is patented may also limit a patentee's recovery from an infringer. Section 287(a) provides that, in the event of failure to mark, no damages shall be recovered by the patentee in any action for infringement, except on proof that the infringer was notified of the infringement and continued to infringe thereafter, in which event damages may be recovered only for the infringement occurring after such notice.¹⁴⁷⁹

*American Medical Systems, Inc. v. Medical Engineering Corp.*¹⁴⁸⁰ illuminates the consequences of failing to properly mark or provide notice. The district court found that MEC infringed AMS' patent, but limited the recoverable damages to those incurred after the filing of the lawsuit due to AMS' failure to mark its patented products pursuant to 35 U.S.C. § 287(a).¹⁴⁸¹ The patent in suit had product claims directed to a packaged pre-filled and pre-sterilized prostheses and method claims directed to a process of making and sterilizing the packaged pre-filled and pre-sterilized prostheses.¹⁴⁸² Before the patent issued, AMS shipped thousands of unmarked prostheses.¹⁴⁸³ AMS shipped more unmarked prostheses after the patent issued, and did not begin marking until about two months after the patent had issued.¹⁴⁸⁴ The district court concluded that § 287(a) obliged AMS to have marked more than a *de minimis* number of unmarked products after the patent issued.¹⁴⁸⁵

1477. *Id.*

1478. *Id.*

1479. 35 U.S.C. § 287(a) (1988).

1480. 6 F.3d 1523, 28 U.S.P.Q.2d (BNA) 1321 (Fed. Cir. 1993).

1481. *American Medical Sys., Inc. v. Medical Eng'g Corp.*, 6 F.3d 1523, 1534, 28 U.S.P.Q.2d (BNA) 1321, 1328-29 (Fed. Cir. 1993).

1482. *Id.* at 1527, 28 U.S.P.Q.2d (BNA) at 1323.

1483. *Id.* at 1534, 28 U.S.P.Q.2d (BNA) at 1329.

1484. *Id.*

1485. *Id.* at 1535, 28 U.S.P.Q.2d (BNA) at 1329.

On appeal, AMS argued that the district court erred in construing § 287(a).¹⁴⁸⁶ AMS contended that it was entitled to damages from the time it began consistently marking its product in compliance with the statute.¹⁴⁸⁷ Noting that the statute does not require marking to begin within any particular time of patent issuance,¹⁴⁸⁸ the Federal Circuit agreed with AMS and held that § 287(a) allows damages from the time when marking begins in compliance with the statute or from the time when actual notice is given.¹⁴⁸⁹ The court emphasized, however, "once marking has commenced, marking must be substantially both consistent and continuous in order for the patentee to rely upon the constructive notice provisions of the statute."¹⁴⁹⁰ Moreover, the public cannot be put on notice if the patentee marks certain products while continuing to ship unmarked products.¹⁴⁹¹

The court, therefore, found that AMS was entitled to damages from the earlier of when it began the required marking and when it actually notified MEC of its infringement.¹⁴⁹² Because actual notice, which was not provided until the filing of the lawsuit, occurred after marking, AMS was held entitled to damages from the time it complied with the marking statute.¹⁴⁹³ The court remanded for a determination of this time, i.e., the time when AMS consistently marked substantially all of its patented products and was no longer distributing unmarked products.¹⁴⁹⁴

With respect to the method claims, however, the court did not agree with AMS that the district court erred in limiting recoverable damages.¹⁴⁹⁵ Observing that the notice provisions of § 287, in general, do not apply to patented methods, the court held that this rule does not apply where, as here, the patent claims both a product and a method of marking it, because there is a tangible item capable of being marked to give notice of the method claims.¹⁴⁹⁶ In these circumstances, a patentee is obliged to mark the product to avail itself of the constructive notice provisions.¹⁴⁹⁷ In the present case,

1486. *Id.*

1487. *Id.*

1488. *Id.*, 28 U.S.P.Q.2d (BNA) at 1330 (citing *Wm. Bros. Boiler & Mfg. v. Gibson-Stewart Co.*, 312 F.2d 385, 386, 136 U.S.P.Q. (BNA) 239, 240 (6th Cir. 1963); *Bros Inc. v. W.E. Grace Mfg.*, 320 F.2d 594, 599, 138 U.S.P.Q. (BNA) 357, 359 (5th Cir. 1963)).

1489. *Id.* at 1536, 28 U.S.P.Q.2d (BNA) at 1330.

1490. *Id.* at 1537, 28 U.S.P.Q.2d (BNA) at 1331.

1491. *Id.* at 1538, 28 U.S.P.Q.2d (BNA) at 1332.

1492. *Id.* at 1537, 28 U.S.P.Q.2d (BNA) at 1331.

1493. *Id.*, 28 U.S.P.Q.2d (BNA) at 1331-32.

1494. *Id.* at 1538, 28 U.S.P.Q.2d (BNA) at 1332.

1495. *Id.*

1496. *Id.*

1497. *Id.* at 1538-39, 28 U.S.P.Q.2d (BNA) at 1332.

because a tangible product was made by the claimed method, the Federal Circuit held that AMS was required to mark the product in order to recover damages under its method claims.¹⁴⁹⁸

EPILOGUE

Although the Federal Circuit's decisions of 1993, for the most part, did not cause major waves, some added interesting ripples marking the law's continuous ebb and flow. The Supreme Court, on the other hand, provided a clear beacon to correct the appellate court's previous course of practice regarding vacatur of declaratory judgments. The authors hope that this article will aid the practitioner in navigating through the body of patent law, guided by such precedential landmarks.

1498. *Id.* at 1539, 28 U.S.P.Q.2d (BNA) at 1332.