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2001 Patent Law Decisions of the Federal Circuit

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2001 Patent Law Decisions of the Federal Circuit

Keywords

2001 Patent Law decisions, Federal Circuit, Patentability, Patent Validity

AREA SUMMARIES

2001 PATENT LAW DECISIONS OF THE FEDERAL CIRCUIT

JOSEPH FERRARO*

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INTRODUCTION

The Senate Report accompanying the Federal Courts Improvement Act of 1982¹ promised that the Court of Appeals for the Federal Circuit would have a “rich docket,” composed of “unusually complex and technical” cases.² Since then, the richness and complexity of the court’s docket has grown as the court has applied the patent laws to increasingly sophisticated technologies. The patent law opinions published by the Federal Circuit in 2001 illustrate the breadth of the court’s work. The opinions are summarized here by subject matter. Those opinions that provide a detailed analysis of the construction of particular claim terms are listed in the appendix.

1. Pub. L. No. 97-164, 96 Stat. 25 (1982) (creating the Court of Appeals for the Federal Circuit).

2. S. REP. NO. 97-275, at 6-7 (1981), *reprinted in* 1982 U.S.C.C.A.N. 11, 16-17.

I. PROCEDURAL ASPECTS

A. *Subject Matter Jurisdiction*

Federal courts are courts of limited jurisdiction.³ They may hear cases raising a federal question, such as a dispute arising out of the patent laws, or controversies among parties having diverse citizenship.⁴ Once they have acquired subject matter jurisdiction, federal courts may also exercise supplemental jurisdiction over state law claims that are part of the same case or controversy.⁵ If jurisdiction of the district court is based, in whole or in part, on the existence of a patent issue, the Federal Circuit has exclusive appellate jurisdiction.⁶ The Federal Circuit also has jurisdiction of appeals from final determinations of the International Trade Commission made under 19 U.S.C. § 1337⁷ and from interlocutory decisions in such cases.⁸

In *Crater Corp. v. Lucent Technologies, Inc.*,⁹ the plaintiff (“Crater”) alleged that the defendants (“Lucent”) had infringed Crater’s patent for an underwater coupling device.¹⁰ Lucent moved to dismiss for lack of subject matter jurisdiction, asserting that any work it had performed using the claimed device was done with the authorization and consent of the United States Government pursuant to a classified development contract.¹¹ Under 28 U.S.C. § 1498, the patentee’s exclusive remedy for infringement by the United States Government or its contractors¹² is an action in the Court of Federal Claims.¹³ The Federal Circuit held that § 1498 is to be applied “as a codification of a

3. See U.S. CONST. art. III, § 2.

4. 28 U.S.C. §§ 1331, 1332(a) (1994 & Supp. V 1999) (outlining federal question jurisdiction and providing the standard for diversity of citizenship jurisdiction); *id.* § 1338(a) (“The district courts shall have original jurisdiction of any civil action arising under any Act of Congress relating to patents . . .”).

5. See 28 U.S.C. § 1367(a) (1994) (requiring all claims to be related to the original claim so that they meet Article III requirements).

6. *Id.* § 1295(a)(1).

7. *Id.* § 1295(a)(6).

8. *Id.* § 1292(d).

9. 255 F.3d 1361, 59 U.S.P.Q.2d (BNA) 1044 (Fed. Cir. 2001).

10. *Id.* at 1361, 59 U.S.P.Q.2d (BNA) at 1045.

11. *Id.* at 1365, 59 U.S.P.Q.2d (BNA) at 1046-47.

12. 28 U.S.C. § 1498(a) (“[T]he use or manufacture of an invention described in and covered by a patent of the United States by a contractor, a subcontractor, or any person, firm or corporation for the Government and with the authorization or consent of the Government shall be construed as use or manufacture for the United States.”).

13. *Id.*; see also *Crater Corp.*, 255 F.3d at 1365, 59 U.S.P.Q.2d (BNA) at 1046 (noting that § 1498(a) both grants jurisdiction to the court of claims and provides an affirmative defense to contractors).

defense and not as a jurisdictional statute,”¹⁴ and that the district court should have treated the motion to dismiss for lack of jurisdiction as a motion for summary judgment.¹⁵ The court held that the motion for summary judgment should have been granted since Crater had not presented evidence sufficient to raise a material issue of fact as to whether there had been any commercial sales of the alleged infringing product or to contradict the evidence that all sales had been made to the government pursuant to the government contract.¹⁶ The court remanded the state law claims to the district court so that it could determine whether, in its discretion, it would retain jurisdiction over them.¹⁷

In *Schaefer Fan Co. v. J & D Manufacturing*,¹⁸ the Federal Circuit considered the question of whether the federal court had subject matter jurisdiction over a claim arising out of an alleged breach of a settlement agreement that the parties had made to resolve a prior infringement lawsuit.¹⁹ Although an action for breach of contract is usually a state court matter, a federal court may have ancillary jurisdiction to enforce a settlement agreement arising out of federal litigation,²⁰ if the party’s obligation to comply with the agreement is made part of the order of dismissal by a provision retaining jurisdiction over the agreement or by incorporation of the agreement into the order of dismissal.²¹ Here, the dismissal order stated that it was made “pursuant to a confidential settlement agreement,” and the agreement provided that either party could bring a motion before the district court to enforce the terms of the agreement.²² Because the court order relied upon the agreement and the agreement gave both parties the power of enforcement, both parties agreed to the court’s jurisdiction when the agreement was incorporated into the order to dismiss.²³

14. *Crater Corp.*, 255 F.3d at 1364, 59 U.S.P.Q.2d at 1046 (quoting *Manville Sales Corp. v. Paramount Sys., Inc.*, 917 F.2d 544, 554, 16 U.S.P.Q.2d (BNA) 1587, 1595 (Fed. Cir. 1990)).

15. *Id.*, 59 U.S.P.Q.2d (BNA) at 1046.

16. *Id.* at 1369, 59 U.S.P.Q.2d (BNA) at 1049.

17. *Id.* at 1371, 59 U.S.P.Q.2d (BNA) at 1051.

18. 265 F.3d 1282, 60 U.S.P.Q.2d (BNA) 1194 (Fed. Cir. 2001).

19. *Id.* at 1286, 60 U.S.P.Q.2d (BNA) at 1197.

20. *Id.*, 60 U.S.P.Q.2d (BNA) at 1197 (citing *Kokkonen v. Guardian Life Ins. Co. of Am.*, 511 U.S. 375 (1994)).

21. *Id.*, 60 U.S.P.Q.2d (BNA) at 1197 (quoting *Miener v. Mo. Dep’t of Mental Health*, 62 F.3d 1126, 1127 (8th Cir. 1995)).

22. *Id.* at 1286-87, 60 U.S.P.Q.2d (BNA) at 1197.

23. *Id.* at 1287, 60 U.S.P.Q.2d (BNA) at 1198.

Judge Dyk dissented, arguing that under *Kokkonen v. Guardian Life Insurance Co. of America*,²⁴ the federal courts do not have automatic continuing jurisdiction over actions to enforce settlement agreements arising out of federal lawsuits.²⁵ In this case, Judge Dyk contended the district court merely approved the stipulation which referred to the settlement agreement, and then entered a separate order of dismissal which did not mention the agreement.²⁶ Since there was no evidence that the district court had reviewed the agreement or was aware of the language granting jurisdiction, there was no basis for a finding that the court intended to retain jurisdiction.²⁷

B. Personal Jurisdiction

Courts must also have personal jurisdiction over the parties of a case in order to properly hear their claims.²⁸ Federal courts may exercise their powers over a defendant in an appropriate case if the defendant is present in the forum state.²⁹ In the alternative, personal jurisdiction is appropriate if the defendant has sufficient contacts with the forum state such that the assertion of the federal court's power will not "offend traditional notions of fair play and substantial justice."³⁰

In *Inamed Corp. v. Kuzmak*,³¹ a former licensee and corporate resident in California brought suit in California against the patentee, a resident of New Jersey.³² The Federal Circuit noted that the determination of personal jurisdiction required two inquiries: first, whether the forum's long-arm statute allows service of process, and second, whether asserting personal jurisdiction would violate due process.³³ Determining that California's long-arm statute is co-extensive with the limits of due process, the court focused solely upon the second inquiry.³⁴

24. 511 U.S. 375 (1994).

25. *Schaefer Farm Co.*, 265 F.3d at 1291-93, 60 U.S.P.Q.2d (BNA) at 1201-02 (Dyk, J., dissenting).

26. *Id.* at 1292-93, 60 U.S.P.Q.2d (BNA) at 1201-1202 (Dyk, J., dissenting).

27. *Id.* at 1292, 60 U.S.P.Q.2d (BNA) at 1202-03.

28. *See Int'l Shoe Co. v. Washington*, 326 U.S. 310, 316 (1945) (noting that historically, part of the federal courts' jurisdiction involved de facto power over a defendant's person).

29. *See id.* (stating that originally, a person's physical presence in the forum was a prerequisite to binding him to a court's jurisdiction) (citing *Pennoyer v. Neff*, 95 U.S. 714, 733 (1877)).

30. *Id.* at 316 (internal quotations omitted).

31. 249 F.3d 1356, 58 U.S.P.Q.2d (BNA) 1774 (Fed. Cir. 2001).

32. *Id.* at 1358-59, 58 U.S.P.Q.2d (BNA) at 1775-76.

33. *Id.* at 1359, 58 U.S.P.Q.2d (BNA) at 1776.

34. *Id.* at 1360, 58 U.S.P.Q.2d (BNA) at 1776.

The Federal Circuit summarized the requirements for due process as involving three factors: whether the defendant has purposefully directed its activities at residents of the forum, whether the claim arises out of or relates to those activities, and whether the assertion of personal jurisdiction is reasonable and fair.³⁵ In the present case, the court considered relevant an infringement letter that the defendant sent into the state relating to the activities of the former licensee.³⁶ While the Federal Circuit has repeatedly held that “the sending of an infringement letter, without more, is insufficient to satisfy the requirements of due process when exercising jurisdiction over an out-of-state patentee,”³⁷ in this case, the court also relied on the fact that the defendant had successfully negotiated four license agreements with the plaintiff, and so determined that the defendant purposefully directed its activities at the forum.³⁸ The litigation also met the second due process requirement since the claim arose out of the act of sending the infringement letter.³⁹

In an attempt to avoid jurisdiction, the defendant relied on his illness and inability to travel.⁴⁰ The court determined that these factors did not require denying jurisdiction on the basis of due process, since alternative means were available through which the defendant could obtain relief.⁴¹ The court sought to limit cases where a defendant may defeat otherwise constitutional personal jurisdiction “to the rare situation in which the plaintiff’s interest and the state’s interest in adjudicating the dispute in the forum are so attenuated that they are clearly outweighed by the burden of subjecting the defendant to litigation within the forum.”⁴²

In *Pieczenik v. Dyax Corp.*,⁴³ the Federal Circuit affirmed the dismissal of an infringement action brought in New York by the patentee and licensee of patents directed to DNA products and

35. *Id.* at 1359, 58 U.S.P.Q.2d (BNA) at 1776.

36. *Id.*, 58 U.S.P.Q.2d (BNA) at 1776-77.

37. *Id.* at 1361, 58 U.S.P.Q.2d (BNA) at 1777.

38. *Id.* at 1361-62, 58 U.S.P.Q.2d (BNA) at 1777-78.

39. *See id.* at 1362, 58 U.S.P.Q.2d (BNA) at 1778 (concluding that a defendant’s physical presence within the state was not required, where the negotiation efforts, carried out almost exclusively by mail and telephone, were purposefully directed at California residents).

40. *See id.* at 1363, 58 U.S.P.Q.2d (BNA) at 1778 (acknowledging that the inventor’s back injuries prevented him from traveling long distances and sitting or standing at length).

41. *See id.*, 58 U.S.P.Q.2d (BNA) at 1778-79 (suggesting alternatives such as filing for a change of venue or making a forum non conveniens motion).

42. *Id.*, 58 U.S.P.Q.2d (BNA) at 1779 (quoting *Akro Corp. v. Luker*, 45 F.3d 1541, 1549, 33 U.S.P.Q.2d (BNA) 1505, 1511 (Fed. Cir. 1995)).

43. 265 F.3d 1329, 60 U.S.P.Q.2d (BNA) 1305 (Fed. Cir. 2001).

processes.⁴⁴ The Federal Circuit held that because New York's long-arm statute did not exhaust the limits of due process,⁴⁵ it needed to consider only whether New York law would permit the assertion of jurisdiction over a defendant based on the conduct alleged.⁴⁶ The court found the two alleged grounds for jurisdiction insufficient under New York law.⁴⁷ First, the alleged shipment of products to New York, made according to the claimed process, did not create a basis for jurisdiction because the products themselves were not alleged to infringe the patent; thus, the use of patented technology in Massachusetts to make the products did not create a basis for jurisdiction.⁴⁸ Second, an agreement to license the defendant's technology (which the plaintiffs claimed was dominated by their patents) to a New York corporation could not form a basis for personal jurisdiction, where the plaintiff did not allege that the agreement was negotiated or executed in New York, and the agreement did not require the defendant to provide any services in New York or to ship any goods into New York.⁴⁹

C. Standing

Article III of the Constitution permits the federal courts to decide only actual cases or controversies.⁵⁰ The federal courts have created the standing requirements to ensure that cases or controversies are litigated by parties with an appropriate legal interest in their outcome.⁵¹ In order to establish standing and invoke federal jurisdiction under Article III, a party must establish three elements: first, the plaintiff must have sustained an injury in fact which is concrete and particularized and actual or imminent, as opposed to conjectural or hypothetical; second, there must be a causal connection between the injury and the conduct complained of; and third, it must be likely that the injury will be redressed by a favorable

44. *Id.* at 1330-31, 60 U.S.P.Q.2d (BNA) at 1305-06.

45. *Id.* at 1333, 60 U.S.P.Q.2d (BNA) at 1307-08 (citing *Talbot v. Johnson Newspaper Corp.*, 522 N.E.2d 1027, 1029 (N.Y. 1988)).

46. *Id.*, 60 U.S.P.Q.2d (BNA) at 1307.

47. *Id.*, 60 U.S.P.Q.2d (BNA) at 1307-08 (stating that both transactions failed to meet the narrow "nexus test," which requires that the cause of action arise from a business transaction in New York).

48. *Id.* at 1334, 60 U.S.P.Q.2d (BNA) at 1308.

49. *See id.* at 1334-35, 60 U.S.P.Q.2d (BNA) at 1308-09 (listing five factors that New York courts focus on to determine whether a cause of action based on a contractual relationship meets jurisdictional requirements).

50. U.S. CONST. art. III, § 2.

51. *See, e.g.,* *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560 (1999) ("[T]he core component of standing is an essential and unchanging part of the case or controversy requirement of Article III.").

decision.⁵² Failure to meet standing requirements will bar a party from bringing a claim into the federal courts.⁵³

In *Mentor H/S, Inc. v. Medical Device Alliance, Inc.*,⁵⁴ the Federal Circuit raised the question of whether an exclusive licensee had standing to sue in its own name, even though the issue had not been raised in the district court.⁵⁵ Under 35 U.S.C. § 281, only a patentee can bring an action for patent infringement, although the term "patentee" includes "not only the patentee to whom the patent was issued but also the successors in title to the patentee."⁵⁶ Thus, a licensee can qualify as a patentee if it holds all substantial rights in the patent and is, in effect, an assignee.⁵⁷ If the exclusive licensee does not have all substantial rights, then it has standing to sue third parties only as a co-plaintiff with the patentee.⁵⁸ In the present case, the court interpreted the contract documents and determined that the patent owner retained significant ownership rights in the patent, including the right to develop and manufacture products, to supervise and control the licensee's product development, and the first obligation to sue infringers.⁵⁹ The exclusive licensee was authorized to sue only in the event that the owner failed to do so.⁶⁰ The Federal Circuit invited the licensee to move pursuant to Federal Rule of Civil Procedure 21 to add the patent owner as a party plaintiff, and then granted the motion, holding that to do so at the appellate stage would not prejudice the defendants, since they already had adequate discovery from the patentee's principals.⁶¹

In *Intellectual Property Development, Inc. v. TCI Cablevision of California, Inc.*,⁶² the Federal Circuit applied the three part constitutional test for standing described above to determine that an exclusive licensee had constitutional standing to bring a patent infringement action, although it had properly been required to join the patentee as a necessary party.⁶³ The exclusive licensee was not an assignee in this case because the patentee retained substantial rights to the patent,

52. *Id.* at 560-61 (citations omitted).

53. *See id.* at 561 (stating that these elements are an indispensable part of the plaintiff's case, not mere pleading requirements, and thus the plaintiff bears the burden of proof to maintain his claim in federal court).

54. 240 F.3d 1016, 57 U.S.P.Q.2d (BNA) 1819 (Fed. Cir. 2001).

55. *Id.* at 1017, 57 U.S.P.Q.2d (BNA) at 1820.

56. 35 U.S.C. § 100(d) (1994).

57. *Mentor H/S, Inc.*, 240 F.3d at 1017, 57 U.S.P.Q.2d (BNA) at 1820.

58. *Id.*, 57 U.S.P.Q.2d (BNA) at 1820.

59. *Id.* at 1018, 57 U.S.P.Q.2d (BNA) at 1820.

60. *Id.*, 57 U.S.P.Q.2d (BNA) at 1820.

61. *Id.* at 1019, 57 U.S.P.Q.2d (BNA) at 1821.

62. 248 F.3d 1333, 58 U.S.P.Q.2d (BNA) 1681 (Fed. Cir. 2001).

63. *Id.* at 1340, 58 U.S.P.Q.2d (BNA) at 1687.

including the right to withhold its consent to infringement litigation and the right to prevent the assignment of the license agreement to a third party.⁶⁴ Nevertheless, although it was not an assignee, the licensee had constitutional standing to sue.⁶⁵ The Federal Circuit held that the statutory language of 35 U.S.C. § 281 did not limit standing to patentees and assignees.⁶⁶ Since the exclusive licensee satisfied the three-part Article III standing test, the court had subject matter jurisdiction over the action.⁶⁷ The requirement that the patentee be joined as a necessary party in an infringement suit brought by an exclusive licensee that did not have all substantial rights in the patent, was not constitutional, but prudential i.e., a judicially self-imposed limit on the exercise of jurisdiction.⁶⁸ Thus, the court was not required to dismiss the action for lack of jurisdiction so that it could be re-filed.⁶⁹

In *Lans v. Digital Equipment Corp.*,⁷⁰ the Federal Circuit affirmed the dismissal of an action brought by an inventor who had assigned his patent to a corporation of which he was the sole shareholder and managing director.⁷¹ The Federal Circuit held that because the assignor lacked title to the patent, he had no standing to bring an infringement action.⁷² The Federal Circuit also held that the district court had not abused its discretion in denying the assignor's motion to amend the pleadings to add the assignee.⁷³

In *Chou v. University of Chicago*,⁷⁴ the Federal Circuit confronted an issue of first impression: whether a putative inventor who has an obligation to assign her invention to another is entitled to sue for correction of inventorship under 35 U.S.C. § 256.⁷⁵ The court held that § 256 does not require that those seeking to invoke the provision have any potential ownership interest in the patent.⁷⁶ In this case, the putative inventor, although required to assign her interests, retained

64. *Id.* at 1344-45, 58 U.S.P.Q.2d (BNA) at 1687 (finding that such limitations on the assignment of rights are significant factors weighing in favor of finding a transfer of fewer than all substantial rights).

65. *Id.* at 1347, 58 U.S.P.Q.2d (BNA) at 1689.

66. *Id.* at 1345, 58 U.S.P.Q.2d (BNA) at 1690.

67. *Id.*, 58 U.S.P.Q.2d (BNA) at 1690.

68. *Id.*, 58 U.S.P.Q.2d (BNA) at 1690.

69. *Id.* at 1348-49, 58 U.S.P.Q.2d (BNA) at 1691.

70. 252 F.3d 1320, 59 U.S.P.Q.2d (BNA) 1057 (Fed. Cir. 2001).

71. *Id.* at 1324, 59 U.S.P.Q.2d (BNA) at 1059.

72. *Id.* at 1325, 59 U.S.P.Q.2d (BNA) at 1060.

73. *Id.* at 1328, 59 U.S.P.Q.2d (BNA) at 1062 (denying the party standing for lack of legal rights and interests and affirming the district court's denial pursuant to Rule 60(b)(2)).

74. 254 F.3d 1347, 59 U.S.P.Q.2d (BNA) 1257 (Fed. Cir. 2001).

75. *Id.* at 1355, 59 U.S.P.Q.2d (BNA) at 1259.

76. *Id.* at 1358, 59 U.S.P.Q.2d (BNA) at 1260.

a right to receive twenty-five percent of the proceeds of certain licensing activities.⁷⁷ Since this financial interest was sufficient to confer constitutional standing on the putative inventor, the court was not required to consider her contention that a reputational interest alone would be enough to satisfy the requirements of Article III standing.⁷⁸

In *Viskase Corp. v. American National Can Co.*,⁷⁹ the Federal Circuit held that the district court had correctly refused to reopen its judgment when reexamination proceedings and a petition to correct inventorship resulted in the addition of an inventor to one of the patents-in-suit.⁸⁰ The action had been brought by the assignee of the patents.⁸¹ Since the added inventor had an obligation to assign the invention to the same assignee, the inventor had no ownership interest in the patent and therefore was not required to join in the litigation.⁸²

In *Intellectual Property Development, Inc. v. TCI Cablevision of California Inc.*,⁸³ the Federal Circuit also considered whether a defendant had standing to appeal when the district court had dismissed the plaintiff's infringement complaint with prejudice after the plaintiff had filed a statement of non-liability and a motion for voluntary dismissal.⁸⁴ The Federal Circuit held that only an aggrieved party has standing to appeal and therefore a party that receives all that it has sought is generally not aggrieved by a judgment and cannot appeal from it.⁸⁵ In this case, however, the district court's order dismissing the complaint with prejudice failed to address the merits of the defendant's counterclaims for declaratory judgment on the issues of invalidity and unenforceability, and the defendant therefore had standing to appeal.⁸⁶

D. *Vacatur and Remand*

In *Tronzo v. Biomet, Inc.*,⁸⁷ the Federal Circuit held that the district

77. *Id.*, 59 U.S.P.Q.2d (BNA) at 1261.

78. *Id.* at 1359, 59 U.S.P.Q.2d (BNA) at 1262 (noting that a potential loss of licensing proceeds is an injury-in-fact).

79. 261 F.3d 1316, 59 U.S.P.Q.2d (BNA) 1823 (Fed. Cir. 2001).

80. *Id.* at 1328, 59 U.S.P.Q.2d (BNA) at 1831.

81. *Id.*, 59 U.S.P.Q.2d (BNA) at 1832.

82. *Id.* at 1329, 59 U.S.P.Q.2d (BNA) at 1832 (stating that absent fraud or deceptive intent, a correction of inventorship does not affect validity or enforceability of the patent).

83. 248 F.3d 1333, 58 U.S.P.Q.2d (BNA) 1681 (Fed. Cir. 2001).

84. *Id.* at 1339, 58 U.S.P.Q.2d (BNA) at 1685.

85. *Id.* at 1340, 58 U.S.P.Q.2d (BNA) at 1685.

86. *Id.* at 1343, 58 U.S.P.Q.2d (BNA) at 1687.

87. 236 F.3d 1342, 57 U.S.P.Q.2d (BNA) 1385 (Fed. Cir. 2001).

court, on remand, had misinterpreted the Federal Circuit's mandate by reducing punitive damages when it had been authorized to reconsider only the issue of compensatory damages.⁸⁸ On a prior appeal, the Federal Circuit had remanded the case for a new compensatory damages determination and, on remand, the district court reduced compensatory damages from \$7,134,000 to \$520 and reduced punitive damages from \$20,000,000 to \$52,000.⁸⁹ The Federal Circuit held that, by failing to appeal the award of punitive damages on the prior appeal, Biomet had waived this issue and was barred from raising it on remand.⁹⁰ The court held that the appeal on compensatory damages did not raise an issue as to the amount of punitive damages although the issue was ripe on the prior appeal. As a result, the Federal Circuit reinstated the punitive damage award.⁹¹

In *Litton Systems, Inc. v. Honeywell Inc.*,⁹² the Federal Circuit upheld summary judgment of non-infringement.⁹³ On a prior appeal, in light of its decision in *Warner Jenkinson Co. v. Hilton Davis Chemical Co.*,⁹⁴ the Supreme Court remanded the case for reconsideration.⁹⁵ The Federal Circuit construed certain claim terms, affirmed a judgment of no literal infringement, and remanded for consideration of infringement under the doctrine of equivalents.⁹⁶ On remand, the district court granted summary judgment of non-infringement, holding that there could be no infringement under the doctrine of equivalents because of prosecution history estoppel, *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*⁹⁷ having been decided in the

88. *Id.* at 1347-48, 57 U.S.P.Q.2d (BNA) at 1389.

89. *Id.* at 1349, 57 U.S.P.Q.2d (BNA) at 1388-89.

90. *Id.*, 57 U.S.P.Q.2d (BNA) at 1389.

91. *Id.* at 1352, 57 U.S.P.Q.2d (BNA) at 1391.

92. 238 F.3d 1376, 57 U.S.P.Q.2d (BNA) 1653 (Fed. Cir. 2001).

93. *Id.* at 1380, 57 U.S.P.Q.2d (BNA) at 1656.

94. 520 U.S. 17, 18-19 (1997) (holding that the doctrine of equivalents is not inconsistent with the Patent Act, and the doctrine must be applied to individual elements of the patent claim and not to an invention as a whole).

95. *Litton Sys., Inc.*, 238 F.3d 1376, 1379, 57 U.S.P.Q.2d (BNA) 1653, 1655 (Fed. Cir. 2001) (discussing the complex procedural history of the case).

96. *See Litton Sys., Inc. v. Honeywell, Inc.*, 140 F.3d 1449, 1455, 46 U.S.P.Q.2d (BNA) 1321, 1324 (Fed. Cir. 1998) (suggesting that amendment of a patent claim does not automatically bar all equivalents for the element that is the subject of the amendment).

97. 234 F.3d 558, 563, 56 U.S.P.Q.2d (BNA) 1865, 1868 (Fed. Cir. 2000) (holding that an amendment to a patent claim for any reason, that is related to patentability, will give rise to prosecution history estoppel, which will bar a finding of infringement under the doctrine of equivalents for the amended claim element). On May 28, 2002, the Supreme Court issued a unanimous decision vacating and remanding the Federal Circuit's decision. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 122 S. Ct. 1831 (May 28, 2002) (N0. 00-1543). In its decision, the Court ruled that any claim narrowing amendment made to comply with the patent statute—not just amendments made to avoid prior art—will give rise to prosecution history estoppel.

interim.⁹⁸ In *Litton Systems*, the Federal Circuit held that, although the flexible bar approach had been applied in this case on the prior appeal, the law of the case doctrine did not require that the same approach be used on remand, since controlling authority had since made a contrary rule of law applicable to the issue.⁹⁹

In *Aqua Marine Supply v. AIM Machining, Inc.*,¹⁰⁰ after the district court had granted summary judgment to the defendants on the issue of infringement and had granted a declaratory judgment of invalidity, the parties settled the action and jointly moved to vacate the district court's declaratory judgment of invalidity.¹⁰¹ The district court denied the motion to vacate and the patentee appealed from the declaratory judgment of invalidity.¹⁰² The Federal Circuit held that the appeal was moot and dismissed it. The court further held that *vacatur* of the declaratory judgment would not be appropriate because mootness had resulted from the voluntary action of the party seeking relief from the judgment.¹⁰³

In *Durel Corp. v. Osram Sylvania Inc.*,¹⁰⁴ the district court granted summary judgment, holding the patents infringed and not invalid.¹⁰⁵ The Federal Circuit reversed the infringement determination, holding that there could be no infringement as a matter of law, and that the district court had erred in granting summary judgment on the validity issues.¹⁰⁶ The court decided that it would be "a poor use of judicial resources" to remand for determination of the unresolved issue of validity in light of its infringement ruling.¹⁰⁷ The court vacated the district court's grant of partial summary judgment holding the patents not invalid.¹⁰⁸

But the Court rejected the Federal Circuit's view that prosecution history estoppel, whenever it applies, creates a "complete bar" to the application of the doctrine of equivalents. Thus, many of the cases decided by the Federal Circuit in 2001, in which it applied the "complete bar," may no longer be reliable precedent on the issue of the scope to be given to prosecution history estoppel.

98. *Litton Sys., Inc.*, 238 F.3d at 1378, 57 U.S.P.Q.2d (BNA) at 1654.

99. *Id.* at 1380, 57 U.S.P.Q.2d (BNA) at 1656 (noting that law of the case is a discretionary judicial doctrine that precludes reconsideration of an issue decided earlier, unless exceptional circumstances exist).

100. 247 F.3d 1216, 58 U.S.P.Q.2d (BNA) 1536 (Fed. Cir. 2001).

101. *Id.* at 1218-19, 58 U.S.P.Q.2d (BNA) at 1537.

102. *Id.* at 1219, 58 U.S.P.Q.2d (BNA) at 1538.

103. *Id.* at 1221, 58 U.S.P.Q.2d (BNA) at 1539 (stating that where mootness results from a settlement, the losing party has voluntarily forfeited his right to appeal).

104. 256 F.3d 1298, 59 U.S.P.Q.2d (BNA) 1238 (Fed. Cir. 2001).

105. *Id.* at 1302-03, 59 U.S.P.Q.2d (BNA) at 1240.

106. *Id.* at 1305, 59 U.S.P.Q.2d (BNA) at 1242-43.

107. *Id.* at 1308, 59 U.S.P.Q.2d (BNA) at 1245.

108. *Id.*, 59 U.S.P.Q.2d (BNA) at 1245.

E. Preemption

Under the Constitution, Congress has the power to preempt state law.¹⁰⁹ Even where a federal statute does not contain an express provision preempting state law, state law may nevertheless be preempted if Congress intends the federal law to “occupy the field” or where the state law would interfere with the accomplishment of the congressional purpose.¹¹⁰

In *Kroll v. Finnerty*,¹¹¹ the Federal Circuit held that statutes authorizing the Patent and Trademark Office to adopt regulations concerning the conduct of attorneys and agents appearing before it and to discipline them for misconduct¹¹² did not preempt the authority of the New York State Disciplinary Committee to bring a disciplinary action against an attorney, who was a member of the New York and patent bar, concerning the attorney’s alleged misconduct in connection with several patent applications.¹¹³ The Federal Circuit held that the allegation of preemption was “so attenuated and unsubstantial as to be absolutely devoid of merit,”¹¹⁴ such that the district court lacked jurisdiction to proceed to the merits of the complaint.¹¹⁵ The case was remanded to the district court for the purpose of dismissing the complaint for lack of subject matter jurisdiction.¹¹⁶

F. Declaratory Judgments

A federal court “may declare the rights and other legal relations of any interested party” only in a “case of actual controversy within its

109. U.S. CONST. art. VI, cl. 2.

110. See *Crosby v. Nat’l Foreign Trade Council*, 530 U.S. 363, 372-73 (2000) (stating that state law may be deemed invalid under the Supremacy Clause).

111. 242 F.3d 1359, 58 U.S.P.Q.2d (BNA) 1097 (Fed. Cir. 2001).

112. See 35 U.S.C. § 2(b)(2)(D) (1994) (The Patent and Trademark Office may establish regulations which “may govern the recognition and conduct of agents, attorneys or other persons representing applicants or other parties before the office”); *id.* § 32 (“The Director may, after notice and opportunity for a hearing, suspend or exclude, either generally or in any particular case, from further practice before the Patent and Trademark Office, any person, agent, or attorney shown to be incompetent or disreputable, or guilty of gross misconduct, or who does not comply with the regulations established under section 2(b)(2)(D) of this title”).

113. 242 F.3d at 1365-66, 58 U.S.P.Q.2d (BNA) at 1100 (quoting *Sperry v. State of Florida*, 393 U.S. 379, 402 (1963)) (“[T]he State maintains control over the practice of law within its borders, except to the limited extent necessary for accomplishing federal objectives.”).

114. *Id.* at 1366, 58 U.S.P.Q.2d (BNA) at 1099 (quoting *Hagens v. Lavine*, 415 U.S. 528, 536-37 (1974)).

115. *Id.*, 58 U.S.P.Q.2d (BNA) at 1099.

116. *Id.* at 1366-67, 58 U.S.P.Q.2d (BNA) at 1102.

jurisdiction.”¹¹⁷ In order to determine whether subject matter jurisdiction exists in actions to declare patent rights, the court applies a two part justiciability test: first, there must be an explicit threat or other action by the patentee which creates a reasonable apprehension that the declaratory judgment plaintiff will face an infringement suit; and second, there must be present activity on the part of the declaratory judgment plaintiff which would constitute infringement or concrete steps taken with the intent to conduct such activity.¹¹⁸ The actual controversy “must be extant at all stages of the review, not merely at the time the complaint is filed.”¹¹⁹

Thus, in *Intellectual Property Development, Inc. v. TCI Cablevision of California, Inc.*,¹²⁰ the Federal Circuit held that, by filing a statement of non-liability and a motion for voluntary dismissal, the patentee and its exclusive licensee had deprived the court of subject matter jurisdiction to consider the declaratory judgment counterclaims.¹²¹ The statement of non-liability removed any reasonable apprehension by the defendant that it would face an infringement suit.¹²²

G. Standard of Review and Applicable Law

The Federal Circuit has characterized the issue of claim construction as a question of law,¹²³ and it reviews the district court's claim construction de novo.¹²⁴ Similarly, the Federal Circuit reviews decisions granting summary judgment de novo.¹²⁵ The Federal Circuit also regards prosecution history estoppel as a question of law and has reviewed decisions on prosecution history estoppel de novo.¹²⁶ Thus,

117. 28 U.S.C. § 2201(a).

118. See *Super Sack Mfg. Corp. v. Chase Packaging Corp.*, 57 F.3d 1054, 1058, 35 U.S.P.Q.2d (BNA) 1139, 1142 (Fed. Cir. 1995) (explaining that the purpose of the two-part test is to determine whether there is a real and immediate need for judicial attention).

119. *Preiser v. Newkirk*, 422 U.S. 395, 401 (1975).

120. 248 F.3d 1333, 58 U.S.P.Q.2d (BNA) 1681 (Fed. Cir. 2001).

121. *Id.* at 1341, 58 U.S.P.Q.2d (BNA) at 1685-86.

122. *Id.*, 58 U.S.P.Q.2d (BNA) at 1684-85.

123. See *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 970-71, 34 U.S.P.Q.2d (BNA) 1321, 1322 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996).

124. See, e.g., *Wenger Mfg., Inc. v. Coating Mach. Sys., Inc.*, 239 F.3d 1225, 1231, 57 U.S.P.Q.2d (BNA) 1679, 1683 (Fed. Cir. 2001); *Union Pac. Res. Co. v. Chesapeake Energy Corp.*, 236 F.3d 684, 689, 57 U.S.P.Q.2d (BNA) 1293, 1295 (Fed. Cir. 2001).

125. See, e.g., *Pioneer Magnetics, Inc. v. Micro Linear Corp.*, 238 F.3d 1341, 1344, 57 U.S.P.Q.2d (BNA) 1553, 1555 (Fed. Cir. 2001); *Litton Sys., Inc. v. Honeywell, Inc.*, 238 F.3d 1376, 1379, 57 U.S.P.Q.2d (BNA) 1653, 1655 (Fed. Cir. 2001). The court, however, reviews decisions denying summary judgment for abuse of discretion. See, e.g., *Ecolab, Inc. v. Envirochem, Inc.*, 264 F.3d 1358, 1364, 60 U.S.P.Q.2d (BNA) 1173, 1177 (Fed. Cir. 2001); *Wenger Mfg., Inc.*, 239 F.3d at 1231, 57 U.S.P.Q.2d (BNA) at 1683.

126. See, e.g., *Biovail Corp. Int'l v. Andrx Pharms., Inc.*, 239 F.3d 1297, 1299, 57 U.S.P.Q.2d (BNA) 1813, 1815 (Fed. Cir. 2001); *Pioneer Magnetics, Inc.*, 238 F.3d at

a substantial number of infringement claims have been disposed of without trial based upon claim construction and prosecution history estoppel summary judgment decisions. Other questions of law that the Federal Circuit reviews *de novo* include determinations of enablement,¹²⁷ obviousness,¹²⁸ indefiniteness,¹²⁹ subject matter jurisdiction¹³⁰ and personal jurisdiction.¹³¹

The Federal Circuit reviews findings of fact for clear error.¹³² Such findings include determinations of both literal infringement and infringement under the doctrine of equivalents,¹³³ the factual underpinnings of an enablement determination,¹³⁴ and the factual findings underlying a decision on inequitable conduct (i.e., whether information withheld was material, and whether it was withheld with intent to deceive).¹³⁵ The Federal Circuit also reviews for clear error the district court's determination of whether a case is "exceptional" within the meaning of 35 U.S.C. § 285 so as to support an award of attorney's fees.¹³⁶ The Federal Circuit, however, reviews the district court's decision of whether to grant attorney's fees or other enhanced damages for abuse of discretion rather than clear error.¹³⁷ Similarly, the court reviews for abuse of discretion the district court's determination of whether to hold a patent unenforceable due to inequitable conduct.¹³⁸

In reviewing the district court's grant or denial of a preliminary injunction, the Federal Circuit considers whether the district court abused its discretion, committed an error of law or seriously misjudged the evidence.¹³⁹ The Federal Circuit also applies the deferential abuse of discretion standard in reviewing decisions granting or denying a new trial,¹⁴⁰ granting or denying equitable

1344, 57 U.S.P.Q.2d (BNA) at 155.

127. See, e.g., *Union Pac. Res. Co.*, 236 F.3d at 690, 57 U.S.P.Q.2d (BNA) at 1296.

128. See, e.g., *In re Roemer*, 258 F.3d 1303, 1307, 59 U.S.P.Q.2d (BNA) 1527, 1529 (Fed. Cir. 2001).

129. See, e.g., *Union Pac. Res. Co.*, 236 F.3d at 692, 57 U.S.P.Q.2d (BNA) at 1297.

130. See, e.g., *Wenger Mfg., Inc.*, 239 F.3d at 1231, 57 U.S.P.Q.2d (BNA) at 1683.

131. See, e.g., *Inamed Corp. v. Kuzmak*, 249 F.3d 1356, 1359, 58 U.S.P.Q.2d (BNA) 1774, 1776 (Fed. Cir. 2001).

132. See *infra* notes 133-35 and accompanying text (providing examples of cases in which the Federal Circuit re-examined lower courts' findings of fact).

133. See, e.g., *Biovail Corp. Int'l v. Andrx Pharms., Inc.*, 239 F.3d 1297, 1300, 57 U.S.P.Q.2d (BNA) 1813, 1815 (Fed. Cir. 2001).

134. See, e.g., *Union Pac. Res. Co.*, 236 F.3d at 690, 57 U.S.P.Q.2d (BNA) at 1296.

135. See *id.* at 693, 57 U.S.P.Q.2d (BNA) at 1299.

136. *Id.* at 694, 57 U.S.P.Q.2d (BNA) at 1299.

137. *Id.*, 57 U.S.P.Q.2d (BNA) at 1299.

138. *Id.*, 57 U.S.P.Q.2d (BNA) at 1299-1300.

139. See, e.g., *Globetrotter Software, Inc. v. Elan Computer Group, Inc.*, 236 F.3d 1363, 1367, 57 U.S.P.Q.2d (BNA) 1542, 1544-45 (Fed. Cir. 2001).

140. See, e.g., *Shockley v. Arcan, Inc.*, 248 F.3d 1349, 1358, 58 U.S.P.Q.2d (BNA)

intervening rights,¹⁴¹ denying a motion to amend pleadings¹⁴² and decisions on the equitable defense of laches.¹⁴³

In reviewing decisions by the district court on motions for judgment as a matter of law, the Federal Circuit reapplies the standard used by the district court, and seeks to determine whether there is legally sufficient evidence from which a reasonable jury could find for the nonmoving party.¹⁴⁴ Finally, the Federal Circuit reviews a jury's findings of fact to determine if substantial evidence supports the factual determinations supporting the jury's verdict.¹⁴⁵

H. Evidentiary Issues: Privilege

The doctrine of privilege has a long history in common law and allows a party not to disclose communications that meet certain requirements of confidentiality.¹⁴⁶ Four common elements exist to establish a privilege against the disclosure of evidence: "(1) the communications must originate in confidence that they will not be disclosed [;] (2) . . . confidentiality must be essential to the full and satisfactory maintenance of the relation between the parties [;] (3) [t]he relation must be one which in the opinion of the community ought to be sedulously fostered [;] (4) [t]he injury that would inure to the relation by the disclosure of the communications must be greater than the benefits thereby gained for the correct disposal of litigation."¹⁴⁷ Among these privileges is an attorney-client privilege that limits disclosure of communications made in confidence to an attorney, a privilege that extends only to the client and not third parties.¹⁴⁸ In conjunction with attorney-client privilege, the doctrine of work product protects materials prepared in

1692, 1696 (Fed. Cir. 2001); *Electro Scientific Indus. v. Gen. Scanning, Inc.*, 247 F.3d 1341, 1349, 58 U.S.P.Q.2d (BNA) 1498, 1503.

141. See, e.g., *Shockley*, 248 F.3d at 1358, 58 U.S.P.Q.2d (BNA) at 1696.

142. See, e.g., *Advanced Cardiovascular Sys., Inc. v. Medtronic, Inc.*, 265 F.3d 1294, 1303, 60 U.S.P.Q.2d (BNA) 1161, 1167 (Fed. Cir. 2001).

143. See, e.g., *Écolab, Inc. v. Envirochem, Inc.*, 264 F.3d 1358, 1364, 60 U.S.P.Q.2d (BNA) 1173, 1177 (Fed. Cir. 2001).

144. See, e.g., *Electro Scientific Indus.*, 247 F.3d at 1349, 58 U.S.P.Q.2d (BNA) at 1503; *Litton Sys., Inc. v. Honeywell, Inc.*, 238 F.3d 1376, 1379-80, 57 U.S.P.Q.2d (BNA) 1653, 1656 (Fed. Cir. 2001).

145. See, e.g., *Shockley*, 248 F.3d at 1357, 58 U.S.P.Q.2d (BNA) at 1696.

146. See *Radiant Burners, Inc. v. Am. Gas Assoc.*, 320 F.2d 314, 318 (7th Cir. 1963) (discussing Wigmore's *Treatise on Evidence*).

147. 8 J. WIGMORE, EVIDENCE AT TRIALS IN COMMON LAW 2290, at 542 (J. McNaughton Rev. 1961).

148. See *Fisher v. United States*, 425 U.S. 391, 398 (1976) (holding that attorney-client privilege is available only to the party seeking counsel); see also FED. R. EVID. 501 ("[T]he privilege of a witness, person . . . shall be governed by the principles of common law . . .").

anticipation of litigation or for trial.¹⁴⁹

In *In re Pioneer Hi-Bred International, Inc.*,¹⁵⁰ an action alleging patent infringement and other claims relating to recombinant DNA technology for conferring pesticide resistance on plants, the defendant sought a writ of mandamus to vacate orders of the district court requiring the defendant to produce materials and information claimed to be privileged or protected under work product privilege.¹⁵¹ Although the remedy of mandamus is generally “available only in extraordinary situations to correct a clear abuse of discretion or usurpation of judicial power,”¹⁵² it may also be used to prevent privileged communications from being improperly exposed.¹⁵³ With respect to the question of whether the defendant had waived its attorney-client privilege, the Federal Circuit applies the law of the regional circuit, here, the Eighth Circuit.¹⁵⁴ In this case, the district court held that the defendant had waived the privilege by referring to advice of counsel in a proxy statement submitted to the Securities and Exchange Commission (“SEC”) and to the public.¹⁵⁵ The advice related to the tax consequences of a merger.¹⁵⁶ The district court also held that the privilege had been waived by disclosure of certain communications to expert witnesses, by disclosure of communications during merger negotiations, and possibly by the defendant’s designation of in-house counsel as its Rule 30(b)(6) representative.¹⁵⁷

The Federal Circuit held that the district court had overstated the scope of the waiver.¹⁵⁸ The Federal Circuit further held that the privilege with respect to merger negotiations was not waived by disclosure of the existence of the merger, the negotiations between the parties or the property rights of the respective parties, but is waived only when a party relies on or discloses advice of counsel in connection with the merger.¹⁵⁹ In this case, the only advice of counsel

149. See *Hickman v. Taylor*, 329 U.S. 495, 511 (1947) (holding that the disclosure of an attorney’s thoughts and writings prepared for litigation would create inefficiency, unfairness, and would not serve the cause of justice); FED R. CIV. P. 26(b)(3) (“[T]he court shall protect against disclosures of the mental impressions, conclusions, opinions, or legal theories of an attorney or other representative of a party concerning the litigation.”).

150. 238 F.3d 1370, 57 U.S.P.Q.2d (BNA) 1658 (Fed. Cir. 2001).

151. *Id.* at 1372-73, 57 U.S.P.Q.2d (BNA) at 1659.

152. *Id.* at 1373, 57 U.S.P.Q.2d (BNA) at 1660.

153. *Id.* at 1374, 57 U.S.P.Q.2d (BNA) at 1660.

154. *Id.*, 57 U.S.P.Q.2d (BNA) at 1660.

155. *Id.* at 1373, 57 U.S.P.Q.2d (BNA) at 1659.

156. *Id.*, 57 U.S.P.Q.2d (BNA) at 1659.

157. *Id.*, 57 U.S.P.Q.2d (BNA) at 1659.

158. *Id.* at 1376, 57 U.S.P.Q.2d (BNA) at 1662.

159. *Id.* at 1374, 57 U.S.P.Q.2d (BNA) at 1660.

disclosed or relied upon related to the tax consequences of the merger.¹⁶⁰ Thus, privilege with respect to that subject was waived.¹⁶¹ There was no waiver, however, with respect to privilege on other matters such as the financial benefits of the merger or the merger's effect on intellectual property.¹⁶²

The Federal Circuit agreed that under the 1993 amendments to Federal Rule of Civil Procedure 26, attorney-client privilege and work product protection are waived by the disclosure of confidential information to an expert witness, irrespective of whether the expert has relied on the documents or information in forming his opinions.¹⁶³ The Federal Circuit held, however, that the mere designation of in-house counsel to testify as a corporate representative under Federal Rule of Civil Procedure 30(b)(6) did not result in the waiver of any attorney-client privilege or work product protection.¹⁶⁴

In *GFI, Inc. v. Franklin Corp.*,¹⁶⁵ the holder of a patent on a sectional sofa appealed from a judgment that, among other things, had held one of the patents in suit unenforceable for inequitable conduct.¹⁶⁶ The patentee claimed that the district court had improperly forced it to disclose privileged information.¹⁶⁷ The Federal Circuit again applied the law of the regional circuit to review the district court's ruling on waiver of attorney-client privilege.¹⁶⁸ The Federal Circuit affirmed the district court's finding that the patentee had waived privilege when its patent attorney testified in a prior litigation concerning his state of mind, his knowledge of prior art and communications with his client concerning, among other things, the duty of disclosure and various items of prior art.¹⁶⁹

I. Claim and Issue Preclusion

Both claim and issue preclusion stand for the notion that something determined by a court cannot later be disputed by the same parties. Under the broader doctrine of claim preclusion, or *res judicata*, a final judgment on the merits of an action precludes the

160. *Id.*, 57 U.S.P.Q.2d (BNA) at 1660-61.

161. *Id.* at 1375, 57 U.S.P.Q.2d (BNA) at 1661.

162. *Id.* at 1374-75, 57 U.S.P.Q.2d (BNA) at 1661.

163. *Id.* at 1375, 57 U.S.P.Q.2d (BNA) at 1661.

164. *Id.* at 1376, 57 U.S.P.Q.2d (BNA) at 1662.

165. 265 F.3d 1268, 60 U.S.P.Q.2d (BNA) 1141 (Fed. Cir. 2001).

166. *Id.* at 1272, 60 U.S.P.Q.2d (BNA) at 1142.

167. *Id.*, 60 U.S.P.Q.2d (BNA) at 1142.

168. *Id.*, 60 U.S.P.Q.2d (BNA) at 1142-43 (reviewing findings of fact using the clearly erroneous standard and reviewing determinations of law *de novo*).

169. *Id.* at 1273, 60 U.S.P.Q.2d (BNA) at 1143.

parties from relitigating issues that were or could have been raised in that action.¹⁷⁰ Under the doctrine of issues preclusion, or collateral estoppel, once a court of competent jurisdiction determines an issue, that decision precludes either of the parties from raising that issue in subsequent suits based on a different cause of action.¹⁷¹ Unlike claim preclusion, however, issue preclusion does not prevent parties from relitigating issues never raised in the prior suit.¹⁷²

In *Flex-Foot, Inc. v. CRP, Inc.*,¹⁷³ the parties arbitrated an infringement dispute relating to a patent for a prosthetic foot device.¹⁷⁴ That arbitration was conducted pursuant to a settlement agreement which had terminated prior litigation and had not only provided for arbitration, but also provided that the defendant would not challenge the validity, enforceability or scope of the patent in any subsequent proceedings.¹⁷⁵ The defendant sought, however, to vacate the arbitrators' award and to persuade the district court to consider its invalidity defense.¹⁷⁶ The district court affirmed the arbitrators' award.¹⁷⁷

The Federal Circuit held that while the stipulation of dismissal with prejudice following the prior settlement agreement did not give rise to collateral estoppel, it gave rise to "contractual estoppel."¹⁷⁸ The court went on to consider the question of whether a contractually created estoppel was the kind of "licensee estoppel" the court in *Lear v. Adkins*¹⁷⁹ declared void as against public policy.¹⁸⁰ The Federal Circuit distinguished *Lear* on the ground that there, the license did not contain or accompany any promise by the licensee not to challenge the validity of the patent.¹⁸¹

170. 18 JAMES WILLIAM MOORE ET AL., MOORE'S FEDERAL PRACTICE § 132.01 (3d ed. 1997).

171. *Id.*

172. *Id.*

173. 238 F.3d 1362, 57 U.S.P.Q.2d (BNA) 1635 (Fed. Cir. 2001).

174. *Id.* at 1364, 57 U.S.P.Q.2d (BNA) at 1637.

175. *Id.*, 57 U.S.P.Q.2d (BNA) at 1636-37.

176. *Id.*, 57 U.S.P.Q.2d (BNA) at 1637.

177. *Id.*, 57 U.S.P.Q.2d (BNA) at 1637 (entering a permanent injunction against the defendant and concluding that the defendant was collaterally estopped from challenging the validity of the patent).

178. *Id.* at 1367-68, 57 U.S.P.Q.2d (BNA) at 1639.

179. 395 U.S. 653 (1969).

180. *Flex-Foot, Inc.*, 238 F.3d at 1367-68, 57 U.S.P.Q.2d (BNA) at 1639 (construing *Lear v. Adkins*, 395 U.S. 653 (1969), which overruled the doctrine of licensee estoppel and held that the technical requirements of contract law were outweighed by the public interest in permitting competition in the use of public ideas).

181. *Id.* at 1368, 57 U.S.P.Q.2d (BNA) at 1640 (contrasting *Lear* to the instant case where the defendant had clearly and unambiguously entered into a voluntary settlement promising not to challenge the patent in the future).

Moreover, the Federal Circuit stated that there is a compelling public interest in enforcing settlement agreements.¹⁸² Thus, if an accused infringer, having challenged patent validity and having had an opportunity to conduct discovery, has voluntarily elected to settle the litigation and agreed not to challenge validity, the accused infringer is contractually estopped from raising any such challenge in any subsequent proceedings.¹⁸³

In *Aqua Marine Supply v. AIM Machining, Inc.*,¹⁸⁴ the Federal Circuit suggested, without deciding the issue, that a patentee might be able to relitigate the question of patent validity in a future lawsuit against a different alleged infringer despite the fact that the district court had entered a declaratory judgment of invalidity.¹⁸⁵ After judgment had been entered, but before appeal, the patentee and alleged infringer had entered into a settlement agreement which provided for the settlement and dismissal with prejudice of all claims by and between all parties, as well as for the *vacatur* of the district court's declaratory judgment.¹⁸⁶ The district court, however, refused to vacate its judgment and the Federal Circuit dismissed the appeal from that decision as moot.¹⁸⁷

In *Hallco Manufacturing Co. v. Foster*,¹⁸⁸ the Federal Circuit considered, as a threshold issue, whether the declaratory judgment barred plaintiff, by the doctrine of claim preclusion, from seeking a declaration in a subsequent litigation that its redesigned product did not infringe a patent and that the patent was invalid.¹⁸⁹ The parties were competitors in the market for reciprocating conveyors used to move cargo into and out of trucks, and had settled a prior lawsuit involving the same patent and a prior-generation conveyor with prejudice.¹⁹⁰ Pursuant to the settlement, the alleged infringer accepted a non-exclusive, royalty-bearing license.¹⁹¹ The Federal

182. *Id.* at 1369, 57 U.S.P.Q.2d (BNA) at 1640-41 (acknowledging that *res judicata* was not an important consideration in *Lear*).

183. *Id.* at 1370, 57 U.S.P.Q.2d (BNA) at 1641 (noting that upholding a settlement agreement that was reached in such a situation promotes judicial economy and encourages settlement of disputes).

184. 247 F.3d 1216, 58 U.S.P.Q.2d (BNA) 1536 (Fed. Cir. 2001).

185. *Id.* at 1221, 58 U.S.P.Q.2d (BNA) at 1539 (suggesting that the district court's judgment could be used as a defense by the other infringer).

186. *Id.* at 1218-19, 59 U.S.P.Q.2d (BNA) at 1537-38.

187. *Id.* at 1220, 58 U.S.P.Q.2d (BNA) at 1539 (holding that, although a case would not be automatically rendered moot by a settlement of the infringement question if the validity issue was still in dispute, the infringer here had no interest in defending the judgment of invalidity).

188. 256 F.3d 1290, 59 U.S.P.Q.2d (BNA) 1346 (Fed. Cir. 2001).

189. *Id.* at 1294, 59 U.S.P.Q.2d (BNA) at 1348.

190. *Id.* at 1293, 59 U.S.P.Q.2d (BNA) at 1348.

191. *Id.*, 59 U.S.P.Q.2d (BNA) at 1348.

Circuit reviewed a number of prior cases on claim preclusion and concluded that if the settlement agreement did not explicitly reserve the right on the part of the alleged infringer to pursue a validity defense in later litigation and if the underlying cause of action was the same as the one brought earlier, then the alleged infringer would have no right to raise invalidity.¹⁹² Thus, if the accused device in the second litigation was the same as or essentially the same as the device accused in the previously settled suit, then relitigation of the validity defense as well as the infringement issue would be prohibited.¹⁹³ The court remanded the action to the district court for a determination of whether the newly accused device was the same or essentially the same as the device involved in the settled case.¹⁹⁴

In *Innovad Inc. v. Microsoft Corp.*,¹⁹⁵ the patentee sued a number of defendants for alleged infringement of patents relating to an automatic telephone dialer system.¹⁹⁶ On appeal, the patentee challenged the district court's claim construction, which had resulted in summary judgment of non-infringement.¹⁹⁷ The defendants argued that, since the patentee had appealed from the judgment as to several defendants but had not appealed as to one of the defendants, the doctrine of issue preclusion prohibited the patentee from challenging the district court's claim construction underlying that judgment.¹⁹⁸ The Federal Circuit noted that the doctrine of issue preclusion prevented relitigation in a second suit of issues already litigated and determined in a prior suit.¹⁹⁹ Such prevention of relitigation occurs only if the issues were identical, the issues were actually previously litigated, the resolution of the issue was essential to a final judgment in the first action, and the allegedly precluded party had a full and fair opportunity to litigate the issue.²⁰⁰ In this case, the court concluded that there was no "first" or "second" action for the purpose of the issue preclusion doctrine since the allegedly preclusive judgment was rendered in the very action being appealed.²⁰¹ A "full and fair opportunity to litigate," the Federal

192. *Id.* at 1298, 59 U.S.P.Q.2d (BNA) at 1351-52 (stating that the court would not "give parties the power to agree to waste the resources of the courts in revisiting infringement determinations that have already been made.").

193. *Id.* at 1296-97, 59 U.S.P.Q.2d (BNA) at 1350-51 (citing *Scosche Indus. v. Visor Gear, Inc.*, 121 F.3d 675, 43 U.S.P.Q.2d (BNA) 1659 (Fed. Cir. 1997)).

194. *Id.* at 1298, 59 U.S.P.Q.2d (BNA) at 1352.

195. 260 F.3d 1326, 59 U.S.P.Q.2d (BNA) 1676 (Fed. Cir. 2001).

196. *Id.* at 1330, 59 U.S.P.Q.2d (BNA) at 1678.

197. *Id.*, 59 U.S.P.Q.2d (BNA) at 1678.

198. *Id.* at 1334, 59 U.S.P.Q.2d (BNA) at 1681.

199. *Id.*, 59 U.S.P.Q.2d (BNA) at 1681.

200. *Id.*, 59 U.S.P.Q.2d (BNA) at 1681.

201. *Id.*, 59 U.S.P.Q.2d (BNA) at 1681 (finding that no action before the court

Circuit held, includes the right to appeal.²⁰² Moreover, settlements would be discouraged by a rule that required an appellant to include in its appeal all parties involved in the district court.²⁰³ The patentee was free to appeal as to some defendants and to settle with others without being precluded from challenging the district court's claim construction.²⁰⁴

II. PATENTABILITY AND VALIDITY

A. Anticipation

In order to invalidate a patent claim for anticipation, a party must show that the invention is not novel.²⁰⁵ This means that a single prior source must contain all of the essential elements of the invention.²⁰⁶ Anticipation cannot be shown simply by combining the elements from more than one reference.²⁰⁷

In *Karsten Manufacturing Corp. v. Cleveland Golf Co.*,²⁰⁸ the Federal Circuit upheld the district court's ruling, on summary judgment, that six claims of a patent for an improved golf club head were invalid as anticipated by a prior art club head.²⁰⁹ In this case, the patentee argued that the claims should be narrowly construed to avoid describing a prior art club head which was literally covered by the claims but different from the club head shown in the drawings of the patent.²¹⁰ The Federal Circuit recognized that claims amenable to more than one construction should be read, when possible, to preserve their validity, but held that, if the claim language encompasses the prior art, the court cannot narrow the claims in litigation so as to exclude it.²¹¹ Although the prior art club head and the embodiments illustrated in the patent were not identical, the differences were not reflected in the language of the claims.²¹² The

had been fully resolved through "prior litigation").

202. *Id.*, 59 U.S.P.Q.2d (BNA) at 1681.

203. *Id.*, 59 U.S.P.Q.2d (BNA) at 1681-82.

204. *Id.*, 59 U.S.P.Q.2d (BNA) at 1681-82.

205. 1 DONALD S. CHISUM, CHISUM ON PATENTS § 3.02 (1998).

206. *Id.*

207. *Id.*

208. 242 F.3d 1376, 58 U.S.P.Q.2d (BNA) 1286 (Fed. Cir. 2001).

209. *Id.* at 1383, 58 U.S.P.Q.2d (BNA) at 1291-92 (stating that, in order to find an invention invalid for lack of novelty, "[t]he invention must have been known to the art in the detail of the claim; that is, all of the elements and limitations of the claim must be shown in a single prior reference, arranged as in the claim.") (citing *C.R. Bard, Inc. v. M3 Sys., Inc.*, 157 F.3d 1340, 1349, 48 U.S.P.Q.2d (BNA) 1225, 1229-30 (Fed. Cir. 1998)).

210. *Id.*, 58 U.S.P.Q.2d (BNA) at 1291-92.

211. *Id.* at 1384, 58 U.S.P.Q.2d (BNA) at 1292.

212. *Id.*, 58 U.S.P.Q.2d (BNA) at 1292.

court stated that the role of claim construction “is to describe the claim scope as it was intended when examined and obtained by the applicant, not as it might have been limited upon a different record of prosecution and prior art.”²¹³

In *Electro Scientific Industries v. General Scanning, Inc.*,²¹⁴ the patentee owned two related patents on a system and a method for using lasers to vaporize links to defective memory cells on silicon chips.²¹⁵ After a jury trial, the claims of one patent were found valid as neither anticipated nor obvious, while the claims of a related patent, although not anticipated, were found to be obvious.²¹⁶ The defendant requested judgment as a matter of law, arguing, among other things, that the invalid claims anticipated the claims of the patent that the jury had found valid.²¹⁷ The district court denied the motion for judgment of invalidity and the Federal Circuit affirmed. The court observed that the claims differed in one very important feature: while the invalid claims disclosed a system for vaporizing non-metal links, the claim which the jury found valid explicitly claimed a system for severing metal links.²¹⁸ The court held that the jury had sufficient evidence to find the metal link vaporizing system valid over the prior art, including expert testimony, scientific papers and patents, the failure of others to sever metal links, and the skepticism of those skilled in the art about whether lasers could be used to vaporize metal links without harming the underlying silicon.²¹⁹

In *Bristol-Myers Squibb Co. v. Ben Venue Laboratories, Inc.*,²²⁰ the Federal Circuit affirmed in part and reversed in part a district court’s summary judgment that claims to a method of treating cancer using the anti-tumor drug paclitaxel were invalid as anticipated by a prior art reference.²²¹ Responding to the patentee’s argument that “new uses of old processes are patentable,”²²² the Federal Circuit held that,

213. *Id.*, 58 U.S.P.Q.2d (BNA) at 1292.

214. 247 F.3d 1341, 58 U.S.P.Q.2d (BNA) 1498 (Fed. Cir. 2001).

215. *Id.* at 1348, 58 U.S.P.Q.2d (BNA) at 1502.

216. *Id.*, 58 U.S.P.Q.2d (BNA) at 1502.

217. *Id.* at 1350, 58 U.S.P.Q.2d (BNA) at 1504.

218. *Id.* at 1351, 58 U.S.P.Q.2d (BNA) at 1504-05.

219. *Id.*, 58 U.S.P.Q.2d (BNA) at 1504-05. Additional secondary evidence of non-obviousness included the commercial success of one of the patentee’s own laser systems and evidence that the defendant had copied the claimed system. *Id.*, 58 U.S.P.Q.2d (BNA) at 1504-05.

220. 246 F.3d 1368, 58 U.S.P.Q.2d (BNA) 1508 (Fed. Cir. 2001).

221. *Id.* at 1371, 58 U.S.P.Q.2d (BNA) at 1510.

222. *Id.* at 1376, 58 U.S.P.Q.2d (BNA) at 1514. While the court acknowledged that patent law defines a patentable process to include “a new use of a known process,” 35 U.S.C. § 100(b) (1994), it held that the process claimed here was not new, and that the patent claimed “newly discovered results” of a known process.

where the prior art reference contained a disclosure of each of the limitations of the claimed inventions, the prior reference would invalidate the subsequent claims, even where the prior reference disparages the present invention, and even though the author of the prior art reference did not actually carry out the treatment program he recommended.²²³ The Federal Circuit noted that the prior art reference, while suggesting the use of premedication, did not disclose the specific classes of premedicants claimed by the patentee.²²⁴ Although anticipation requires a showing that each limitation of the claim is found in a single reference, the disclosure of a small genus may anticipate the species of that genus, even species that are not explicitly recited.²²⁵ The Federal Circuit therefore remanded to the district court to determine whether there were so few suitable classes of premedicants that a general suggestion to premedicate would have been understood by one skilled in the art as a suggestion to use the specific classes of agents mentioned in the claims.²²⁶

In *Telemac Cellular Corp. v. Topp Telecom, Inc.*,²²⁷ the patent described a mobile phone system that automatically debits the cost of each call from a prepaid credit account stored within the cellular phone.²²⁸ The district court granted summary judgment because certain claims were anticipated by prior art.²²⁹ The Federal Circuit noted that while anticipation is a question of fact, it may still be decided on summary judgment if the material facts are not in dispute.²³⁰ In this case, the claim required the use of a “complex billing algorithm.”²³¹ The prior

Bristol-Myers Squibb Co., 246 F.3d at 1376, 58 U.S.P.Q.2d (BNA) at 1514. Such results were held to be inherent, e.g., *In re May*, 574 F.2d 1082, 1090, 197 U.S.P.Q. (BNA) 601, 607 (C.C.P.A. 1978), and therefore unpatentable. *Bristol-Myers Squibb Co.*, 246 F.3d at 1376, 58 U.S.P.Q.2d (BNA) at 1514.

223. *Bristol-Myers Squibb Co.*, 246 F.3d at 1377, 58 U.S.P.Q.2d (BNA) at 1514-15. The prior art reference (“Kris”) used paclitaxel in a three hour infusion, as described in the claims of the patent-in-suit, but observed no anti-tumor response. *Id.* at 1372, 58 U.S.P.Q.2d (BNA) at 1511. Kris did, however, report hypersensitivity reactions in patients who received doses of paclitaxel higher than those claimed in the Bristol-Myers patent. *Id.*, 58 U.S.P.Q.2d (BNA) at 1511. Kris suggested that further studies with, inter alia, pre-treatment regimens, were needed to see whether such dosages could be given safely, but Kris did not carry out such studies. *Id.*, 58 U.S.P.Q.2d (BNA) at 1511.

224. *Id.* at 1380, 58 U.S.P.Q.2d (BNA) at 1517.

225. *Id.*, 58 U.S.P.Q.2d (BNA) at 1517 (citing *In re Petering*, 301 F.2d 676, 682, 133 U.S.P.Q. (BNA) 275, 280 (C.C.P.A. 1962)).

226. *Id.*, 58 U.S.P.Q.2d (BNA) at 1517.

227. 247 F.3d 1316, 58 U.S.P.Q.2d (BNA) 1545 (Fed. Cir. 2001).

228. *Id.* at 1319, 58 U.S.P.Q.2d (BNA) at 1546.

229. *Id.* at 1331-32, 58 U.S.P.Q.2d (BNA) at 1555-56.

230. *Id.* at 1327, 58 U.S.P.Q.2d (BNA) at 1552.

231. *Id.*, 58 U.S.P.Q.2d (BNA) at 1552. The basic “complex billing algorithm” of the claim was construed by the court to include the ability to calculate call charges for local, long distance, international and roaming calls. *Id.* at 1326-27, 58

art disclosed a debit phone that calculated call charges using charge rates stored within the phone.²³² Although the prior art reference did not expressly identify the rate categories included within the claimed billing algorithm, the district court found those features inherent.²³³ The Federal Circuit noted that, to anticipate a claimed invention, a prior art reference must disclose every limitation of the claimed invention, either explicitly or inherently.²³⁴ Inherency is a question of fact,²³⁵ which the court may decide by recourse to extrinsic evidence.²³⁶ Such evidence must make clear that “the missing feature is necessarily present and that it would be so recognized by persons of ordinary skill in the relevant art.”²³⁷ The Federal Circuit reviewed the evidence²³⁸ and, finding no genuine issue of material fact, affirmed the partial summary judgment of invalidity due to anticipation.²³⁹

In *Acromed Corp. v. Sofamor Danek Group, Inc.*,²⁴⁰ the court did not find that a missing element was inherent in a prior art reference for purposes of anticipation.²⁴¹ The patent in this case related to a bone screw for attaching plates to a spine, connecting broken bones or connecting prostheses to bones.²⁴²

U.S.P.Q.2d (BNA) at 1551.

232. *Id.* at 1327, 58 U.S.P.Q.2d (BNA) at 1552.

233. *Id.* at 1321, 58 U.S.P.Q.2d (BNA) at 1547.

234. *Id.* at 1327, 58 U.S.P.Q.2d (BNA) at 1552 (holding that the prior art anticipates if it necessarily functions in accordance with, or includes, the claimed limitations) (citing *In re Schreiber*, 128 F.3d 1473, 1477, 44 U.S.P.Q.2d (BNA) 1429, 1431 (Fed. Cir. 1997)).

235. *Id.*, 58 U.S.P.Q.2d (BNA) at 1552.

236. *Id.* at 1328, 58 U.S.P.Q.2d (BNA) at 1553.

237. *Id.*, 58 U.S.P.Q.2d (BNA) at 1553. Inherency may, however, not be “coterminous” with the knowledge of artisans of ordinary skill. *See, e.g.*, *MEHL/Biophile Int’l Corp. v. Milgraum*, 192 F.3d 1362, 1365, 52 U.S.P.Q.2d (BNA) 1303, 1305 (Fed. Cir. 1999) (recognizing that artisans of ordinary skill may not recognize the inherent characteristic of the prior art); *Atlas Powder Co. v. Ireco Inc.*, 190 F.3d 1342, 1347, 51 U.S.P.Q.2d (BNA) 1943, 1946-47 (Fed. Cir. 1999) (noting that although an artisan of ordinary skill may not recognize the inherent characteristic, “the discovery of a previously unappreciated property of prior art composition . . . does not render the old composition patentably new to the discoverer.”).

238. *Telemac Cellular Corp.*, 247 F.3d at 1328, 58 U.S.P.Q.2d (BNA) at 1552. The prior art reference based charges on “data normally included in a Call Detail Record.” *Id.*, 58 U.S.P.Q.2d (BNA) at 1552. The court looked to several of the patentee’s internal documents and other patents as well as to testimony to conclude that a Call Detail Record would include each of the four rate categories required by the “complex algorithm” of the claim. *Id.* at 1329, 58 U.S.P.Q.2d (BNA) at 1552-54.

239. *Id.* at 1329, 58 U.S.P.Q.2d (BNA) at 1554 (stating that “broad conclusory statements” by experts were not sufficient, absent substantive testimony of record, to create a genuine issue of fact).

240. 253 F.3d 1371, 59 U.S.P.Q.2d (BNA) 1130 (Fed. Cir. 2001).

241. *See id.* at 1383-84, 59 U.S.P.Q.2d (BNA) at 1138-39 (concluding that the patent did not disclose the “means integral” as cited in the claims).

242. *Id.* at 1376-77, 59 U.S.P.Q.2d (BNA) at 1134. The missing element was a “means . . . for engaging a portion of the . . . opening in the bone portion to restrict

In *Rapoport v. Dement*,²⁴³ the Federal Circuit affirmed a decision of the Board of Patent Appeals and Interferences relating to claims for a method for the treatment of sleep apnea by the use of azapirone compounds.²⁴⁴ The prior art suggested the use of such compounds for treating anxiety in patients who had sleep apnea, but did not suggest the use of such compounds for treating sleep apnea itself.²⁴⁵ The Board held that the claimed method was not inherent in the prior reference.²⁴⁶ After applying the substantial evidence test, the Federal Circuit affirmed the Board's decision.²⁴⁷

In *Brown v. 3M*,²⁴⁸ the patent claimed a system for resetting computer clocks to avoid Y2K problems that the Federal Circuit found was anticipated by prior art.²⁴⁹ The system in question provided for resetting year-date data stored in 2-digit, 3-digit or 4-digit representations, while the prior art disclosed a system for resetting years stored in a 2-digit format.²⁵⁰ The court stated "[t]hat which infringes, if later, anticipates, if earlier,"²⁵¹ and held that the claim was anticipated by the prior art because the claim would be infringed by a system which reset only dates stored in a 2-digit format as well as by systems that could reset dates stored in other formats.²⁵²

Chief Judge Mayer, noting that the prior art was before the examiner, dissented on the ground that the claim required a system that would reset the clock irrespective of whether the data was in 2-digit, 3-digit or 4-digit format (or in any combination).²⁵³ Thus, he concluded that a system capable of resetting only 2-digit dates would not infringe.²⁵⁴

movement . . . and to block effluence from the opening . . ." *Id.*, 59 U.S.P.Q.2d (BNA) at 1134.

243. 254 F.3d 1053, 59 U.S.P.Q.2d (BNA) 1215 (Fed. Cir. 2001).

244. *Id.* at 1059, 59 U.S.P.Q.2d (BNA) at 1220 (finding the phrase "treatment of sleep apnea" as referring to the treatment of the underlying sleep apnea disorder and not to the treatment of other conditions secondary to sleep apnea itself).

245. *Id.* at 1060, 59 U.S.P.Q.2d (BNA) at 1220 (stating that the written description of the application contained no evidence of the treatment's effect on the symptomatology commonly associated with sleep apnea).

246. *Id.*, 59 U.S.P.Q.2d (BNA) at 1220.

247. *Id.* at 1060-61, 59 U.S.P.Q.2d (BNA) at 1221 ("What a reference teaches is a question of fact Therefore we review the Board's characterization . . . for substantial evidence.").

248. 265 F.3d 1349, 60 U.S.P.Q.2d (BNA) 1375 (Fed. Cir. 2001).

249. *Id.* at 1353, 60 U.S.P.Q.2d (BNA) at 1378.

250. *Id.* at 1351-52, 60 U.S.P.Q.2d (BNA) at 1377.

251. *Id.* at 1352, 60 U.S.P.Q.2d (BNA) at 1377 (citing *Polaroid Corp. v. Eastman Kodak Co.*, 789 F.2d 1256, 1573, 229 U.S.P.Q. (BNA) 561, 574 (Fed. Cir. 1986)).

252. *Id.*, 60 U.S.P.Q.2d (BNA) at 1377.

253. *Id.* at 1353-54, 60 U.S.P.Q.2d (BNA) at 1378 (Mayer, C.J., dissenting) (emphasizing that in order to anticipate the prior art the reference must disclose every limitation, while in the instant case the reference did not).

254. *Id.*, 60 U.S.P.Q.2d (BNA) at 1378-79 (noting that the burden of proving a

B. Obviousness

Even if an invention is not identically described in a single prior art reference, the invention is not patentable if the differences between that which one seeks to patent 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 having ordinary skill in the art to which the subject matter pertains.²⁵⁵ To establish a prima facie case of obviousness there must be some suggestion or motivation to modify the reference or combine the reference teachings, some reasonable expectation of success, and the prior art must teach or suggest all the claim limitations.²⁵⁶ Four factual determinations, described in *Graham v. John Deere, Co.*,²⁵⁷ ought to be made when obviousness is in question: (1) a determination of the scope and contents of the prior art; (2) the differences between the prior art and that which one seeks to be patented; (3) the level of ordinary skill needed in the art; and (4) evidence of secondary considerations, such as commercial success.²⁵⁸

In *Amazon.com, Inc. v. Barnesandnoble.com, Inc.*,²⁵⁹ the Federal Circuit vacated a preliminary injunction, which prohibited the defendant's use of a website feature that allegedly infringed the plaintiff's patent for a method and system for "single action" ordering of items on the Internet.²⁶⁰ The Federal Circuit held that, while Amazon.com had demonstrated it was likely to succeed at trial on its infringement case,²⁶¹ the defendant had raised substantial questions of invalidity.²⁶² The court noted that at the preliminary injunction stage, a challenger to a patent "can raise substantial questions of invalidity on evidence that would not suffice to support a judgment of invalidity at trial."²⁶³ In this case, the district court failed to recognize that several prior art references raised substantial questions of invalidity and therefore the

patent anticipated is particularly high when the prior art was before the examiner during prosecution of the application) (quoting *Hewlett Packard Co. v. Baush & Lomb Inc.*, 909 F.2d 1464, 1467, 15 U.S.P.Q.2d (BNA) 1525, 1527 (Fed. Cir. 1990)).

255. 35 U.S.C. § 103 (1994).

256. LESTER HOROWITZ, *PATENT OFFICE RULES AND PRACTICE: MANUAL OF PATENT EXAMINING PROCEDURE* § 2142 (8th ed. 2001).

257. 383 U.S. 1, 17-18 (1966).

258. *Id.*

259. 239 F.3d 1343, 57 U.S.P.Q.2d (BNA) 1747 (Fed. Cir. 2001).

260. *Id.* at 1346, 57 U.S.P.Q.2d (BNA) at 1748.

261. *Id.* at 1358-65, 57 U.S.P.Q.2d (BNA) at 1757-63.

262. *Id.* at 1358, 57 U.S.P.Q.2d (BNA) at 1757 (noting that some of their prior art references appeared to have used "single action" ordering technology).

263. *Id.*, 57 U.S.P.Q.2d (BNA) at 1757 (citing *Helifix Ltd. v. Blok-Lok, Ltd.*, 208 F.3d 1339, 1352, 54 U.S.P.Q.2d (BNA) 1299, 1308 (Fed. Cir. 2000)).

Federal Circuit vacated the preliminary injunction.²⁶⁴

In *Karsten Manufacturing Corp. v. Cleveland Golf Co.*,²⁶⁵ the Federal Circuit reversed a district court holding of invalidity based on obviousness.²⁶⁶ The Federal Circuit reviewed the district court's determination on the issue of obviousness as a question of law based on underlying questions of fact,²⁶⁷ and, because there was no dispute as to the underlying facts, the court reviewed the judgment of invalidity by applying the law to the undisputed facts.²⁶⁸ Where an invention is alleged to be "obvious in view of a combination of references, there must be some suggestion, motivation, or teaching in the prior art that would have led a person of ordinary skill in the art to select the references and combine them in a way that would produce the claimed invention."²⁶⁹ In the present case, the Federal Circuit held that the teachings of the prior art references were conflicting and could not reasonably be viewed as suggesting their combination.²⁷⁰ The court reversed as a matter of law and remanded the claims for determination of the question of infringement.²⁷¹

*In re Haruna*²⁷² involved a design patent for an ornamental design for a prerecorded optical disk.²⁷³ The Federal Circuit reversed a decision in which the Board of Patent Appeals held the claim obvious in light of a prior art utility patent that disclosed a disk similar to the claimed invention but which had used an opaque, instead of transparent, outer rim.²⁷⁴ The court noted that color may play a role in the patentability of a design and it distinguished prior cases in which the prior art did not teach away from the claimed invention.²⁷⁵

264. *Id.* at 1359, 57 U.S.P.Q.2d (BNA) at 1756-57. In the case of one reference, the district court apparently concluded that the prior art reference could not raise an issue of obviousness because the author of the reference had never thought of combining or modifying the prior art to create the "single action" invention. *Id.* at 1364, 57 U.S.P.Q.2d (BNA) at 1762. The Federal Circuit pointed out that this approach was erroneous as a matter of law, since the appropriate inquiry was not what the author did or did not personally realize at the time, but what a hypothetical person of ordinary skill in the art would have understood from the references at the time the patent application was filed. *Id.*, 57 U.S.P.Q.2d (BNA) at 1761-62.

265. 242 F.3d 1376, 58 U.S.P.Q.2d (BNA) 1286 (Fed. Cir. 2001).

266. *Id.* at 1385, 58 U.S.P.Q.2d (BNA) at 1293.

267. *Id.* at 1384, 58 U.S.P.Q.2d (BNA) at 1292.

268. *Id.* at 1385, 58 U.S.P.Q.2d (BNA) at 1293.

269. *Id.*, 58 U.S.P.Q.2d (BNA) at 1293.

270. *Id.*, 58 U.S.P.Q.2d (BNA) at 1293. One prior art reference showed a club design for raising the head's center of gravity, while the second prior art reference showed a club design for lowering it. *Id.*, 58 U.S.P.Q.2d (BNA) at 1293.

271. *Id.* at 1385-86, 58 U.S.P.Q.2d (BNA) at 1293.

272. 249 F.3d 1327, 58 U.S.P.Q.2d (BNA) 1517 (Fed. Cir. 2001).

273. *Id.* at 1329, 58 U.S.P.Q.2d (BNA) at 1518 (discussing design differences).

274. *Id.* at 1336, 58 U.S.P.Q.2d (BNA) at 1523 (finding that the transparent outer rim cannot conceal the defects in the disk, as does the opaque rim).

275. *Id.*, 58 U.S.P.Q.2d (BNA) at 1522.

In *Electro Scientific Industries, Inc. v. General Scanning, Inc.*,²⁷⁶ the Federal Circuit sustained a jury verdict of invalidity based on obviousness where there was sufficient evidence to allow the jury to find that a prior art reference inherently contained certain claim limitations with respect to a system for severing links to defective memory cells on a microchip.²⁷⁷ Prior art disclosed the use of lasers for trimming thin film resistors, and expert testimony supported the conclusion that this was an analogous art to using lasers to sever non-metal links.²⁷⁸ In addition, the patentee had failed to introduce any objective secondary evidence of non-obviousness.²⁷⁹

The Federal Circuit addressed obviousness-type double patenting in *Eli Lilly & Co. v. Barr Laboratories, Inc.*²⁸⁰ The court reviewed the policy reasons for the doctrine of obviousness-type double patenting, which was created by the courts to prevent an inventor from obtaining inappropriate extensions of the right to exclude others from practicing a claimed invention by making claims in a later patent not patentably distinct from claims in a commonly owned earlier patent.²⁸¹ The analysis involves two steps: first, as a matter of law, the court construes the claim in the earlier patent and the claim in the later patent to determine the differences; second, the court decides whether the differences in subject matter between the two claims make them patentably distinct.²⁸² A later patent claim is not patentably distinct from the earlier claim if the later claim is either obvious over, or anticipated by, the earlier claim.²⁸³ In this case, the court held that the biological property of inhibiting serotonin uptake was inherent in the use of fluoxetine hydrochloride for treating depression in humans.²⁸⁴ Thus, a later claim which describes the use of fluoxetine hydrochloride to inhibit serotonin uptake was held obvious over an earlier-issued claim to the use of the same compound to treat anxiety in humans.²⁸⁵

276. 247 F.3d 1341, 58 U.S.P.Q.2d (BNA) 1498 (Fed. Cir. 2001).

277. *Id.* at 1351, 58 U.S.P.Q.2d (BNA) at 1505 (noting testimony that showed that the prior art reference “encompassed laser cutting of any element of a circuit”).

278. *Id.* at 1351-52, 58 U.S.P.Q.2d (BNA) at 1505.

279. *Id.*, 58 U.S.P.Q.2d (BNA) at 1505.

280. 251 F.3d 955, 58 U.S.P.Q.2d (BNA) 1865 (Fed. Cir. 2001).

281. *Id.* at 967, 58 U.S.P.Q.2d (BNA) at 1877-78 (holding that the doctrine has no explicit statutory basis but is necessary to prevent inappropriate term extensions) (citing *In re Longi*, 759 F.2d 887, 892, 225 U.S.P.Q. (BNA) 645, 648 (Fed. Cir. 1985)).

282. *Id.* at 968, 58 U.S.P.Q.2d (BNA) at 1878.

283. *Id.*, 58 U.S.P.Q.2d (BNA) at 1878.

284. *Id.* at 969, 58 U.S.P.Q.2d (BNA) at 1879 (noting that “a panoply of evidence supports the recognition of this inherent biological function of fluoxetine hydrochloride”).

285. *Id.*, 58 U.S.P.Q.2d (BNA) at 1879 (finding that the difference between the claims was that the former described the treatment of anxiety in humans and the

Judge Newman dissented on the ground that the claim that described the specific biological properties of the compound had been filed nine years earlier than the earlier-issued claim for the use of the compound to treat anxiety in humans.²⁸⁶ She argued that the obviousness-type double patenting rejection was appropriate where neither of the patents was prior art against the other, but not, as here, where the two claims lacked a common priority date.²⁸⁷

In *In re Zurko*,²⁸⁸ the Federal Circuit reversed a finding by the Board of Patent Appeals and Interferences, which rejected an application describing a method for creating a secure computer environment.²⁸⁹ The claims provided for relaying commands to a user along a “trusted path” and for the user to send a confirming signal back along the trusted path.²⁹⁰ The Board had held that communication through such trusted paths was “basic knowledge.”²⁹¹ The Federal Circuit held that the Board’s decision was not supported by substantial evidence because the Board’s “assessment of basic knowledge and commonsense was not based on any evidence in the record.”²⁹²

In *Okajima v. Bourdeau*,²⁹³ the Federal Circuit affirmed a decision by the Board of Patent Appeals and Interferences, which held that the senior party’s claims were not unpatentable for obviousness.²⁹⁴ The claims related to a snowboard boot.²⁹⁵ The Board concluded that it would not have been obvious to one of skill in the art to combine prior art boots in order to produce the claimed invention.²⁹⁶ The Federal Circuit held that the Board was not required, as a matter of law, to make findings of fact regarding the level of skill in the art

latter described inhibiting serotonin uptake in animals).

286. *Id.* at 974, 58 U.S.P.Q.2d (BNA) at 1866 (Newman, J., dissenting).

287. *Id.* at 973, 58 U.S.P.Q.2d (BNA) at 1867-68 (Newman, J., dissenting).

288. 258 F.3d 1379, 59 U.S.P.Q.2d (BNA) 1693 (Fed. Cir. 2001).

289. *Id.* at 1381, 58 U.S.P.Q.2d (BNA) at 1694 (reversing because the factual findings lacked substantial evidence).

290. *Id.* at 1382, 58 U.S.P.Q.2d (BNA) at 1695.

291. *Id.* at 1383, 59 U.S.P.Q.2d (BNA) at 1695.

292. *Id.* at 1385-86, 59 U.S.P.Q.2d (BNA) at 1697.

[T]he Board clearly has expertise in the subject matter This expertise may provide sufficient support for conclusions as to peripheral issues. With respect to core factual findings in a determination of patentability, however, the Board cannot simply reach conclusions based on its own understanding or experience—or on its assessment of what would be basic knowledge or common sense.

Id., 59 U.S.P.Q.2d (BNA) at 1697.

293. 261 F.3d 1350, 59 U.S.P.Q.2d (BNA) 1795 (Fed. Cir. 2001).

294. *Id.* at 1352, 59 U.S.P.Q.2d (BNA) at 1795.

295. *Id.* at 1352-53, 59 U.S.P.Q.2d (BNA) at 1796.

296. *Id.* at 1354-55, 59 U.S.P.Q.2d (BNA) at 1797 (noting that appellant claimed error because the Board did not make any findings of fact regarding the skill level in the art).

where the parties agree that the level of skill was high.²⁹⁷ The Federal Circuit affirmed the Board's conclusion that there was no motivation in the art to combine the prior art references to produce the invention.²⁹⁸ Since the Board's decision set forth distinct findings of fact in a manner that a district court is required to do under Federal Rule of Civil Procedure 52(a), the Board's findings deserved broad deference.²⁹⁹

In *Sandt Technology, Ltd. v. Resco Metal & Plastics Corp.*,³⁰⁰ the Federal Circuit reviewed the district court's adoption of a magistrate judge's report, which held Claim 1 of the patent in suit invalid as anticipated by a device invented by the defendant's president and Claims 3 and 19 obvious in light of prior art.³⁰¹ The district judge, however, held all claims in the patent invalid, including the dependent claims, without a specific discussion of his reasoning.³⁰² With respect to the obviousness determination, the Federal Circuit summarized the *Graham* factors³⁰³ and reviewed the district court's obviousness determination de novo because it had been made on motion for summary judgment and the district court had not made findings of underlying fact.³⁰⁴ The court held that there was no error in the district court's claim construction or in its determination that the use of studs instead of welds to fasten a security device for coin-operated payphones was an obvious change.³⁰⁵ The Federal Circuit remanded, however, for consideration of whether claims other than claims 1, 3 and 19 were invalid.³⁰⁶ Although the parties had cross-moved for summary judgment on all claims, they had presented evidence on only 3 of the 21 claims of the patent.³⁰⁷ Since all claims are presumed valid independently of the other claims, the district court could not hold the dependent claims invalid simply because independent

297. *Id.* at 1385, 59 U.S.P.Q.2d (BNA) at 1797 ("While it is always preferable . . . to specify the level of skill . . . , the absence of specific findings on the level of skill in the art does not give rise to reversible error 'where the prior art itself reflects an appropriate level and a need for testimony is not shown.'" (quoting *Litton Indus. Prods., Inc. v. Solid State Sys. Corp.*, 755 F.2d 158, 163, 225 U.S.P.Q. (BNA) 34, 38 (Fed. Cir. 1985))).

298. *Id.* at 1355, 59 U.S.P.Q.2d (BNA) at 1798 (differentiating between the two references on the basis that one described lateral movement and the other described forward movement).

299. *Id.* at 1356, 59 U.S.P.Q.2d (BNA) at 1798.

300. 264 F.3d 1344, 60 U.S.P.Q.2d (BNA) 1091 (Fed. Cir. 2001).

301. *Id.* at 1349, 60 U.S.P.Q.2d (BNA) at 1093.

302. *Id.* at 1355, 60 U.S.P.Q.2d (BNA) at 1098.

303. *See supra* note 257 and accompanying text (listing the factors).

304. *Sandt Tech.*, 264 F.3d at 1354, 60 U.S.P.Q.2d (BNA) at 1097.

305. *Id.* at 1355, 60 U.S.P.Q.2d (BNA) at 1097.

306. *Id.* at 1357, 60 U.S.P.Q.2d (BNA) at 1099.

307. *Id.* at 1355-56, 60 U.S.P.Q.2d (BNA) at 1098.

claims were properly found invalid.³⁰⁸

In *In re Inland Steel Co.*,³⁰⁹ the Board of Patent Appeals and Interferences invalidated, on reexamination, a patent relating to a method for producing cold-rolled electrical steel with improved magnetic properties.³¹⁰ The Federal Circuit held that the Board was supported by substantial evidence in finding that a prior art reference taught the use of antimony in both hot-band annealing and in cold-rolling.³¹¹ Although the prior art reference focused on the use of antimony in conjunction with hot-band annealing, the Board correctly found that the reference nevertheless teaches that the addition of antimony improves the magnetic properties of the steel even in the absence of a hot-band annealing step.³¹² The Federal Circuit also found supported by substantial evidence the Board's finding that there was a motivation to combine two closely related prior art references because they addressed the same problem in the same field of art and produced complementary solutions.³¹³

In *Loral Fairchild Corp. v. Matsushita Electronic Industries*,³¹⁴ the Federal Circuit reversed a summary judgment of invalidity based on obviousness.³¹⁵ The patent claimed a process for manufacturing a charge-coupled device (CCD).³¹⁶ The district court had granted summary judgment on the ground that the invention was obvious in view of a publication made prior to the filing date.³¹⁷ The Federal Circuit reviewed the requirements for summary judgment³¹⁸ and the parties' burdens of proof.³¹⁹ In this case, the patentee did not argue

308. *Id.*, 60 U.S.P.Q.2d (BNA) at 1098 (quoting 35 U.S.C. § 282 (Supp. V 1999) for the proposition that "[a]ll claims are 'presumed valid independently of the validity of the other claims.'").

309. 265 F.3d 1354, 60 U.S.P.Q.2d (BNA) 1396 (Fed. Cir. 2001).

310. *Id.* at 1356, 60 U.S.P.Q.2d (BNA) at 1398.

311. *Id.* at 1360-61, 60 U.S.P.Q.2d (BNA) at 1401 (adding that there was no compelling evidence contrary to the Board's position).

312. *Id.* at 1360, 60 U.S.P.Q.2d (BNA) at 1401.

313. *Id.* at 1362, 60 U.S.P.Q.2d (BNA) at 1402.

314. 266 F.3d 1358, 60 U.S.P.Q.2d (BNA) 1361 (Fed. Cir. 2001).

315. *Id.* at 1360, 60 U.S.P.Q.2d (BNA) at 1362.

316. *Id.*, 60 U.S.P.Q.2d (BNA) at 1362.

317. *Id.*, 60 U.S.P.Q.2d (BNA) at 1363 (noting that the district court also ruled that application of the doctrine of equivalents was precluded by the prior art publication).

318. *Id.* at 1361, 60 U.S.P.Q.2d (BNA) at 1363. Summary judgment is proper only when no reasonable jury could return a verdict for the non-moving party; the trial court must assume that all evidence presented by the non-movant is credible and must draw all reasonable inferences therefrom in the non-movant's favor. *See Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 255 (1986).

319. *Loral Fairchild Corp.*, 266 F.3d at 1361, 60 U.S.P.Q.2d (BNA) at 1363. The challenger, at trial, would need to prove by clear and convincing evidence that the publication, which was relied on for proving obviousness, was published prior to the patentee's reduction of the invention to practice; the patentee would have the

that it conceived the invention prior to the publication date and then diligently worked toward reducing it to practice, but argued that it actually reduced the invention to practice before the publication was made.³²⁰

The Federal Circuit held that on a motion for summary judgment, the district court may not assess the credibility of testimony.³²¹ Thus, the inventor's assertion that he had reduced his invention to practice prior to the publication date of the alleged invalidating reference was taken as true for purposes of summary judgment.³²² To establish an actual reduction to practice, however, the inventor's testimony had to be corroborated by independent evidence,³²³ the sufficiency of which is evaluated under a "rule of reason" considering all the pertinent evidence.³²⁴ In this case, the corroborating evidence consisted of contemporaneously made, custom-fabricated lithographic masks as well as contemporaneous proposals to provide CCDs produced using the claimed process.³²⁵ The Federal Circuit regarded this evidence as sufficient, reversed the grant of summary judgment and remanded the case for further proceedings.³²⁶

In a concurring opinion, Judge Newman asserted that the significant date to consider when seeking to antedate a reference is the date of invention, i.e. the date of conception, not the date of reduction to practice.³²⁷ Judge Newman also argued that while corroboration is necessary in a patent office interference proceeding, it is not appropriate to require it in an infringement action because the evidentiary standard for antedating a reference in response to a validity challenge is not the same as the Patent Office requirement for establishing priority in an interference contest.³²⁸

burden of producing evidence of its asserted actual reduction to practice prior to the filing date of its patent application. *Id.* at 1362, 60 U.S.P.Q.2d (BNA) at 1364.

320. *Id.* at 1362-63, 60 U.S.P.Q.2d (BNA) at 1364 (stating that reduction to practice is complete once the invention has been made and shown to work for its intended purpose).

321. *Id.* at 1363, 60 U.S.P.Q.2d (BNA) at 1365.

322. *Id.*, 60 U.S.P.Q.2d (BNA) at 1365.

323. *Id.*, 60 U.S.P.Q.2d (BNA) at 1365 (citing *Cooper v. Goldfarb*, 154 F.3d 1321, 1330, 47 U.S.P.Q.2d (BNA) 1896, 1903 (Fed. Cir. 1998)).

324. *Id.*, 60 U.S.P.Q.2d (BNA) at 1365.

325. *Id.* at 1363-64, 60 U.S.P.Q.2d (BNA) at 1365.

326. *Id.* at 1365, 60 U.S.P.Q.2d (BNA) at 1366.

327. *Id.*, 60 U.S.P.Q.2d (BNA) at 1366-67 (Newman, J., concurring).

328. *Id.* at 1366, 60 U.S.P.Q.2d (BNA) at 1367-68 ("Antedating a reference is a common occurrence, governed by a stable and non-controversial jurisprudence. Let us not add uncertainties to this law.").

C. Prior Invention

U.S. patent law is unique in that the patent right is granted to the first inventor, rather than the first to file a patent application.³²⁹ To benefit as a prior inventor, a party must show that he not only conceived the invention but also reduced it to practice first or exercised diligence in reducing it to practice.³³⁰ Where an invention has been intentionally concealed or suppressed, however, the party may forfeit all rights to the invention.³³¹

In *Purdue Pharma L.P. v. Boehringer Ingelheim GmbH*,³³² the district court granted the patentee's motion for a preliminary injunction on patents related to a formulation of "controlled release oxycodone" for pain medication.³³³ The defendant argued that the patent was anticipated by the claims of a parent patent, which the defendant contended was prior art because the inventive entity of the parent was different from that of its progeny.³³⁴ The patentee claimed, however, that the inventions disclosed in the patents-in-suit were conceived and reduced to practice before the filing date of the parent application.³³⁵ The district court relied on the testimony of one of the inventors, as corroborated by documentary evidence, to find conception and reduction to practice.³³⁶ Under the rule of reason, the district court did not err in holding the proof adequate.³³⁷

In *Mycogen Plant Science, Inc. v. Monsanto Co.*,³³⁸ the Federal Circuit reviewed a jury verdict of invalidity based upon prior invention with respect to all of the claims of two patents which described a method

329. ROBERT L. HARMON, PATENTS AND THE FEDERAL CIRCUIT § 3.4(d) (3d ed. 1994).

330. *Id.*

331. *Id.*

332. 237 F.3d 1359, 57 U.S.P.Q.2d (BNA) 1647 (Fed. Cir. 2001).

333. *Id.* at 1364, 57 U.S.P.Q.2d (BNA) at 1650.

334. *Id.* at 1365, 57 U.S.P.Q.2d (BNA) at 1651.

335. *Id.*, 57 U.S.P.Q.2d (BNA) at 1651. Conception and reduction to practice are questions of law, based on subsidiary findings of fact. In order to antedate a prior art reference, the patentee must show either an earlier reduction to practice or an earlier conception followed by diligence in reducing the invention to practice. Conception requires proof that the inventor had formed a definite and permanent idea of the complete and operative invention; reduction to practice requires that the inventor actually have prepared the composition and knew that it would work. *See, e.g.,* Price v. Symsek, 988 F.2d 1187, 1190, 26 U.S.P.Q.2d (BNA) 1031, 1037-38 (Fed. Cir. 1993) (holding that 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); Hybritech v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 1376, 231 U.S.P.Q. (BNA) 81, 87 (Fed. Cir. 1986) (defining conception as a final idea as it is to be applied in practice).

336. *Purdue Pharma L.P.*, 237 F.3d at 1366, 57 U.S.P.Q.2d (BNA) at 1651.

337. *Id.*, 57 U.S.P.Q.2d (BNA) at 1651-52.

338. 243 F.3d 1316, 58 U.S.P.Q.2d (BNA) 1030 (Fed. Cir. 2001).

for designing a synthetic *Bacillus thuringiensis* (“Bt”) gene so that it would be expressed more efficiently in plants.³³⁹ The Federal Circuit found that the jury’s factual findings were supported by substantial evidence and the facts sufficient to support the judgment as a matter of law.³⁴⁰ The court noted that for Monsanto to establish that it was the prior inventor, it was required to prove by clear and convincing evidence that it either reduced its invention to practice first or conceived the invention first and then acted diligently to reduce the invention to practice.³⁴¹ In order to establish an actual reduction to practice, the inventor must prove that he made an embodiment or carried out a process that met all of the limitations of the claim and determined that it would work for its intended purpose.³⁴²

In this case, the patentee claimed that the Monsanto inventors did not appreciate that they had used any of the claimed processes in synthesizing their gene at the time of reduction to practice.³⁴³ While prior cases have held that accidental, unappreciated results should not be regarded as anticipatory,³⁴⁴ the work which Monsanto performed in preparing its synthetic genes was carried out as part of a research program specifically directed to that end.³⁴⁵ Therefore, the court held that Monsanto’s prior invention of genes causing increased Bt expression in plants cannot be regarded as accidental.³⁴⁶

In a second action between the same two parties, *Mycogen Plant Science, Inc. v. Monsanto Co.*,³⁴⁷ Mycogen sued for infringement of a third patent also related to a synthetic gene for increasing Bt production in plants.³⁴⁸ This patent was a parent to the two patents

339. *Id.* at 1324-26, 58 U.S.P.Q.2d (BNA) at 1036-38.

340. *Id.* at 1331-37, 58 U.S.P.Q.2d (BNA) at 1037-38 (finding that the district court’s grant of judgment as a matter of law to enter a finding of infringement effectively cured potential inconsistency in jury verdicts).

341. *Id.* at 1332, 58 U.S.P.Q.2d (BNA) at 1043 (citing *Price v. Symsek*, 988 F.2d 1187, 1190, 26 U.S.P.Q.2d (BNA) 1031, 1033 (Fed. Cir. 1993)).

342. *Id.*, 58 U.S.P.Q.2d (BNA) at 1043. In cases where determining that the invention will work requires testing, reduction to practice is not complete until testing has been carried out and the inventor has recognized and appreciated that the tests were successful. *See, e.g., Estee Lauder Inc. v. L’Oreal*, 129 F.3d 588, 594-95, 44 U.S.P.Q.2d (BNA) 1610, 1615 (Fed. Cir. 1997) (commenting that successful test results are irrelevant unless those results are appreciated by the inventor).

343. *Mycogen Plant Sci., Inc.*, 243 F.3d at 1335, 58 U.S.P.Q.2d (BNA) at 1044-45. The processes related to replacing codons of the bt gene with codons that would be more acceptable to a plant host. *Id.*, 58 U.S.P.Q.2d (BNA) at 1044-45.

344. *See, e.g., Erbel Process Co. v. Minn. & Ontario Paper Co.*, 261 U.S. 45, 66 (1923) (holding that accidental results do not constitute anticipation); *Tilghman v. Proctor*, 102 U.S. 707, 711-12 (1880) (establishing that accidental discovery does not suffice for proving anticipation).

345. *Mycogen Plant Sci. Inc.*, 243 F.3d at 1336, 58 U.S.P.Q.2d (BNA) at 1046.

346. *Id.* at 1336, 58 U.S.P.Q.2d (BNA) at 1046.

347. 252 F.3d 1306, 58 U.S.P.Q.2d (BNA) 1891 (Fed. Cir. 2001).

348. *Id.* at 1309, 58 U.S.P.Q.2d (BNA) at 1893.

that the jury in the prior action held invalid based on Monsanto's prior invention.³⁴⁹ On granting summary judgment, the district court ruled that Monsanto's prior invention had been reduced to practice before the invention underlying Mycogen's third patent.³⁵⁰ The Federal Circuit, however, noted that collateral estoppel did not resolve the question of whether Mycogen had been first to conceive the invention and was thereafter diligent in reducing it to practice.³⁵¹ In order to prevail on its prior invention defense, Monsanto was required to show that a reasonable fact finder would have concluded by a clear and convincing standard that Mycogen's inventors—assuming Mycogen had conceived the invention first—had not been diligent during the critical period in reducing the invention to practice.³⁵² To prove reasonable diligence, a party need not establish that it worked continuously on the invention, or that it ceased all other work while reducing the invention to practice.³⁵³ The Federal Circuit concluded that there was a triable issue of fact as to whether Mycogen was diligent in reducing the invention to practice, and reversed the grant of summary judgment.³⁵⁴

In *Apotex USA Inc. v. Merck & Co.*,³⁵⁵ the Federal Circuit affirmed the district court's summary judgment holding invalid, on the ground of prior invention, patents relating to a process for making a formulation of enalapril sodium for use in treating high blood pressure.³⁵⁶ It was undisputed that Merck had invented the patented process in the United States well before the date of conception by the

349. *Id.*, 58 U.S.P.Q.2d (BNA) at 1893.

350. *Id.* at 1312, 58 U.S.P.Q.2d (BNA) at 1896.

351. *Id.* at 1310-11, 58 U.S.P.Q.2d (BNA) at 1894 ("As a result of collateral estoppel, a judgment of invalidity in one patent action renders the patent invalid in any later action based on the same patent. Collateral estoppel also applies to common issues in actions involving different but related patents.^h). Likewise, where the two patents include common claim terms, those claim terms must be construed consistently with each other; thus, claim construction litigated in a prior action is determinative of the construction of common terms raised in a later action. *See* *Blonder Tongue Labs. v. Univ. of Ill. Found.*, 402 U.S. 313, 349-50 (1971) (confirming that a plea of estoppel is available to those who are charged with infringing a patent that has already been declared invalid); *Amgen, Inc. v. Genetics Inst., Inc.*, 98 F.3d 1328, 1329-32, 40 U.S.P.Q.2d (BNA) 1524, 1524-27 (Fed. Cir. 1996) (defining issue and claim preclusion).

352. *Mycogen Plant Sci., Inc.*, 252 F.3d at 1312, 58 U.S.P.Q.2d (BNA) at 1894. The critical period is defined as the period between Monsanto's conception of the invention and reduction of the invention to practice. *Id.*, 58 U.S.P.Q.2d (BNA) at 1894.

353. *Id.* at 1316, 58 U.S.P.Q.2d (BNA) at 1898-99 (noting that short gaps where no work was done did not necessitate a finding of lack of reasonable diligence).

354. *Id.* at 1335, 58 U.S.P.Q.2d (BNA) at 1046.

355. 254 F.3d 1031, 59 U.S.P.Q.2d (BNA) 1139 (Fed. Cir. 2001).

356. *Id.* at 1039-40, 59 U.S.P.Q.2d (BNA) at 1144-46.

plaintiff's assignor.³⁵⁷ The sole issue was whether Merck had suppressed or concealed the process.³⁵⁸ The Federal Circuit held that the "in this country" language of 35 U.S.C. § 102(g) modifies the place of invention but does not require that activities negating abandonment, suppression or concealment take place in this country.³⁵⁹ The court then addressed the issue (which the court had not squarely addressed in prior cases) of how the burdens of proof should be allocated on a defense under § 102(g).³⁶⁰ Reasoning that the rule should recognize the presumption of patent validity but should also be consistent with ways in which the burdens are allocated under established interference law, the court held that the challenger must produce clear and convincing evidence of prior invention.³⁶¹ Once an accused infringer has proven that it was first to invent, the patentee bears the burden of coming forward with evidence sufficient to create a genuine issue of material fact as to whether the prior inventor has suppressed or concealed the invention.³⁶² The challenger, however, retains the ultimate burden of persuasion on the defense of invalidity throughout the litigation, and the standard remains clear and convincing evidence.³⁶³

The Federal Circuit reviewed the case law distinguishing between two types of suppression or concealment: active suppression or concealment, and the legal inference of suppression or concealment arising from unreasonable delay in filing a patent application or in otherwise disclosing the invention to the public.³⁶⁴ In this case, Merck did not disclose its invention to the public for nearly five years after it perfected its process and began using it commercially.³⁶⁵ The court

357. *Id.* at 1035-36, 59 U.S.P.Q.2d (BNA) at 1142.

358. *Id.* at 1036, 59 U.S.P.Q.2d (BNA) at 1142 (stating that suppression or concealment is a question of law that the Federal Circuit reviews de novo).

359. *Id.*, 59 U.S.P.Q.2d (BNA) at 1142 (finding that the plain language of the statute and the legislative history clearly indicate that the invention need only be made in the United States).

360. *Id.* at 1036-37, 59 U.S.P.Q.2d (BNA) at 1142-43 (commenting that while interference law would not require proof negating suppression or concealment once a party establishes an earlier date of invention, infringement actions would require the challenger to carry the burden of proof on this issue).

361. *Id.*, 59 U.S.P.Q.2d (BNA) at 1142-43.

362. *Id.*, 59 U.S.P.Q.2d (BNA) at 1143.

363. *Id.* at 1037, 59 U.S.P.Q.2d (BNA) at 1143.

364. *See, e.g.*, *Fujikawa v. Wattanasin*, 93 F.3d 1559, 1567, 39 U.S.P.Q.2d (BNA) 1895, 1901 (Fed. Cir. 1996) (describing intentional suppression as when an inventor intentionally withholds his/her invention with the purpose of maximizing his/her own profit); *Peeler v. Miller*, 535 F.2d 647, 655, 190 U.S.P.Q. 117, 122 (C.C.P.A. 1976) (noting that whether the length or circumstances of the delay are unreasonable must be decided on the unique facts of each case).

365. *Apotex USA Inc.*, 254 F.3d at 1039 n.3, 59 U.S.P.Q.2d (BNA) at 1145 n.3 (noting that if Merck's process could be reverse engineered, the invention would

held that such a delay raised a question of material fact as to suppression and concealment sufficient to shift the burden of proof back to Merck.³⁶⁶ The Federal Circuit held, however, that Merck had succeeded in rebutting the inference of suppression or concealment because it ultimately disclosed the ingredients used in its process to the public, albeit outside the United States, well before its opponent's entry into the field.³⁶⁷

In *Dow Chemical Co. v. Astro-Valcour, Inc.*,³⁶⁸ the Federal Circuit affirmed the district court's summary judgment holding a patent invalid under 35 U.S.C. § 102(g).³⁶⁹ In this case, the Federal Circuit considered whether a prior invention can invalidate a patent even if the prior inventor did not realize that his invention was patentable.³⁷⁰ Here, the challenger made a plastic foam by following the teachings of a prior art patent, but used isobutane as a blowing agent.³⁷¹ The challenger understood that this process worked well and produced a desirable product, but did not immediately realize that the process was independently patentable over the prior art.³⁷² Reviewing the law, the Federal Circuit noted that, in order to establish a first inventor defense, the prior inventor must show that it made an invention and appreciated what it had made, even if it did not appreciate that the invention was patentable.³⁷³

In the absence of active suppression or concealment, the court addressed the issue of whether abandonment could be inferred solely from the prior inventor's delay in making the invention publicly known.³⁷⁴ While failure to file a patent application, to publish the invention, or to use the invention publicly may result in such an inference, mere delay is not sufficient, and each case must be decided

have been considered public upon commercialization and no presumption of concealment would have arisen).

366. *Id.* at 1037-38, 59 U.S.P.Q.2d (BNA) at 1144-45.

367. *Id.* at 1039-40, 59 U.S.P.Q.2d (BNA) at 1145 (finding that appellee published the product's ingredients six years before appellant's alleged conception).

368. 267 F.3d 1334, 60 U.S.P.Q.2d (BNA) 1519 (Fed. Cir. 2001).

369. *Id.* at 1336, 60 U.S.P.Q.2d (BNA) at 1520-21.

370. *Id.*, 60 U.S.P.Q.2d (BNA) at 1520-21.

371. *Id.* at 1336-37, 60 U.S.P.Q.2d (BNA) at 1520-21.

372. *Id.* at 1341, 60 U.S.P.Q.2d (BNA) at 1523-24.

373. *Id.* at 1340, 60 U.S.P.Q.2d (BNA) at 1523. The court distinguished cases where the prior inventor did not appreciate that he had made something new. *See, e.g.,* *Silvestri v. Grant*, 496 F.2d 593, 597, 121 U.S.P.Q. (BNA) 706, 708 (C.C.P.A. 1974) ("It is now well settled that in such a case there is no conception or reduction to practice where there has been no recognition or application of the existence of the new form."); *Heard v. Burton*, 333 F.2d 239, 241-43, 142 U.S.P.Q. (BNA) 97, 99-100 (C.C.P.A. 1964) (finding dispositive that the inventor believed he was only recreating prior art).

374. *Dow Chem. Co.*, 267 F.3d at 1342-44, 60 U.S.P.Q.2d (BNA) at 1524-25.

on its own facts.³⁷⁵ Delay may be excused if the inventor worked during the delay period to perfect or improve the invention.³⁷⁶ In cases where the invention is disclosed to the public by commercialization, delay has been excused “upon proof that the first inventor engaged in reasonable efforts to bring the invention to market.”³⁷⁷ Here, bringing the invention to market required the challenger to first procure financing and construct a new production plant that incorporated special safety provisions made necessary by the use of isobutane as a blowing agent.³⁷⁸ These efforts were sufficient to prevent a finding of suppression or concealment.³⁷⁹

D. On-Sale Bar

A party may be barred from obtaining a patent if the invention claimed was in public use or on sale in this country more than one year prior to the application.³⁸⁰ An on sale bar exists where the invention was embodied in or obvious from the object of sale, the invention was tested as operable and marketable, and the sale (or its offer) was for profitable, and not experimental, purposes.³⁸¹

In *Pfaff v. Wells Electronics, Inc.*,³⁸² the Supreme Court held that, to establish invalidity of a patent using the on-sale bar of 35 U.S.C. § 102(b), two conditions must be met prior to the critical date:³⁸³ “First, the product must be the subject of a commercial [sale or] offer for sale. . . . Second, the invention must be ready for patenting.”³⁸⁴ The Federal Circuit applied this test from *Pfaff* in several cases to resolve challenges to patents under 35 U.S.C. § 102(b).

In *Monon Corp. v. Stoughton Trailers, Inc.*,³⁸⁵ the Federal Circuit reviewed a district court’s decision granting summary judgment under 35 U.S.C. § 102(b) and holding invalid a patent on a trailer designed to hold more cargo without having larger outside

375. *Id.* at 1342, 60 U.S.P.Q.2d (BNA) at 1524 (refusing to create a bright-line rule about how long is too long in regard to an inventor’s delay in making his invention known).

376. *Id.* at 1343, 60 U.S.P.Q.2d (BNA) at 1525.

377. *Id.*, 60 U.S.P.Q.2d (BNA) at 1525 (quoting *Checkpoint Sys. Inc. v. United States Int’l Trade Comm’n*, 54 F.3d 756, 762, 35 U.S.P.Q.2d (BNA) 1042, 1047 (Fed. Cir. 1995)).

378. *Id.*, 60 U.S.P.Q.2d (BNA) at 1525 (noting that “a prior inventor is not required to take the fastest route to commercialization . . .”).

379. *Id.*, 60 U.S.P.Q.2d (BNA) at 1525.

380. See HARMON, *supra* note 329, § 3.4(c).

381. *Id.*

382. 525 U.S. 55 (1998).

383. *Id.* at 57-58 (defining the critical date as one year before the date on which the patent application was filed).

384. *Id.* at 57.

385. 239 F.3d 1253, 57 U.S.P.Q.2d (BNA) 1699 (Fed. Cir. 2001).

dimensions than prior art trailers.³⁸⁶ In this case, the patentee relied upon an argument that the use or sale of its patented device was primarily experimental.³⁸⁷ In concluding that there was an issue of fact as to whether the sales here were experimental rather than commercial, the Federal Circuit took under consideration the testing conditions, whether the patentee had control over the experimentation, and whether the sale involved a payment.³⁸⁸ The Federal Circuit found plausible the patentee's assertion that it needed to test the trailers under conditions of actual use, which it could not do itself because it only manufactured trailers and did not operate them.³⁸⁹ As to control over the experimentation, the facts were in dispute, and the Federal Circuit found that the trial court had likely erred in judging the credibility of witnesses on this point.³⁹⁰ Finally, the court noted that the fact of payment is important, but not dispositive.³⁹¹ In this case, although payment was made for the trailers, it was undisputed that, upon completion of approximately one year of use, the buyer would return the trailer to the manufacturer for analysis in exchange for a full credit of the purchase price.³⁹² Thus, the court found that genuine issues of material fact precluded the award of summary judgment, and remanded the case for further proceedings.³⁹³

In *Crystal Semiconductor Corp. v. Tritech Microelectronics International, Inc.*,³⁹⁴ the Federal Circuit again found material issues of fact as to whether an alleged sale was experimental or commercial.³⁹⁵ In this case, the district court conducted a jury trial on infringement, validity, enforceability and damages, but, at the close of evidence, granted the patentee's motion for judgment as a matter of law that the patent was not invalid under 35 U.S.C. § 102(b).³⁹⁶ The Federal Circuit reviewed the disputed evidence as to whether certain sales and shipments were commercial exploitation or simply shipments of

386. *Id.* at 1257, 57 U.S.P.Q.2d (BNA) at 1702-03. The Federal Circuit reviewed the district court's ultimate decision to apply the on-sale bar as a question of law based upon underlying factual considerations. *Id.*, 57 U.S.P.Q.2d (BNA) at 1702. Whether the on-sale bar defense met the two conditions required by the Supreme Court in *Pfaff*, is an issue of fact. *Id.* at 1257, 57 U.S.P.Q.2d (BNA) at 1702.

387. *Id.* at 1258-59, 57 U.S.P.Q.2d (BNA) at 1704.

388. *Id.* at 1258-61, 57 U.S.P.Q.2d (BNA) at 1703-05.

389. *Id.* at 1258, 57 U.S.P.Q.2d (BNA) at 1704.

390. *Id.* at 1259-60, 57 U.S.P.Q.2d (BNA) at 1704.

391. *Id.* at 1260, 57 U.S.P.Q.2d (BNA) at 1705 (citing *Baker Oil Tools v. Geo Vann, Inc.*, 828 F.2d 1558, 1564, 4 U.S.P.Q.2d (BNA) 1210, 1214 (Fed. Cir. 1987)).

392. *Id.* at 1260-61, 57 U.S.P.Q.2d (BNA) at 1705.

393. *Id.* at 1264, 57 U.S.P.Q.2d (BNA) at 1707-08.

394. 246 F.3d 1336, 57 U.S.P.Q.2d (BNA) 1953 (Fed. Cir. 2001).

395. *Id.* at 1352-53, 57 U.S.P.Q.2d (BNA) at 1961-62.

396. *Id.* at 1342, 57 U.S.P.Q.2d (BNA) at 1955.

engineering samples to a customer site for confidential testing.³⁹⁷ Construing the evidence in a light favorable to the non-movant, the Federal Circuit held that it was sufficient to allow a reasonable jury to find an on-sale bar, and the Federal Circuit remanded for trial on this issue.³⁹⁸

In *Robotic Vision Systems, Inc. v. View Engineering, Inc.*,³⁹⁹ the patentee appealed from a judgment entered after a bench trial, holding that its patent was invalid under the on-sale bar provision of 35 U.S.C. § 102(b).⁴⁰⁰ In this case, the application of the on-sale bar turned on the second part of the *Pfaff* test, namely, whether the invention was ready for patenting prior to the critical date.⁴⁰¹

The patentee claimed that the invention was not ready for patenting because software necessary to implement the claimed method for scanning leads of integrated circuit devices did not exist at the time of the offer for sale.⁴⁰² The evidence established, however, that one of the inventors had described the invention prior to the critical date to a co-employee who was skilled in the art of writing software and code.⁴⁰³ This description was sufficiently specific to allow the co-employee to understand the method and to write the software code necessary to implement the method.⁴⁰⁴ Although one of the inventors, prior to the actual reduction of the invention to practice, had expressed some skepticism as to whether the invention would work, the court was not prevented from finding that the conception was complete prior to reduction to practice.⁴⁰⁵ The two-part test for finding an on-sale bar contains no requirement that the inventor have complete confidence that his invention will work for its intended purpose.⁴⁰⁶ The Federal Circuit affirmed the district court's judgment invalidating the patent because the district court's factual findings were not clearly erroneous, and supported its conclusions

397. *Id.* at 1352-53, 57 U.S.P.Q.2d (BNA) at 1961-62.

398. *Id.* at 1342, 57 U.S.P.Q.2d (BNA) at 1955.

399. 249 F.3d 1307, 58 U.S.P.Q.2d (BNA) 1723 (Fed. Cir. 2001).

400. *Id.* at 1309-10, 58 U.S.P.Q.2d (BNA) at 1724-25.

401. *Id.* at 1311, 58 U.S.P.Q.2d (BNA) at 1726.

An invention may be shown to be ready for patenting in at least two ways: 'by proof of reduction to practice; or by proof that prior to the critical date the inventor had prepared drawings or other descriptions of the invention that were sufficiently specific to enable a person skilled in the art to practice the invention.'

Id., 58 U.S.P.Q.2d (BNA) at 1726 (quoting *Pfaff v. Wells Elecs., Inc.*, 525 U.S. 55, 67-68 (1998)).

402. *Id.* at 1310, 58 U.S.P.Q.2d (BNA) at 1725-26.

403. *Id.* at 1311, 58 U.S.P.Q.2d (BNA) at 1726.

404. *Id.*, 58 U.S.P.Q.2d (BNA) at 1726.

405. *Id.* at 1312, 58 U.S.P.Q.2d (BNA) at 1727.

406. *Id.*, 58 U.S.P.Q.2d (BNA) at 1727.

that the invention had been the subject of a commercial offer for sale and was ready for patenting prior to the critical date.⁴⁰⁷

In *Group One Ltd. v. Hallmark Cards, Inc.*,⁴⁰⁸ the invention related to a machine and method for producing curled and shredded ribbons for decorative packaging.⁴⁰⁹ It was agreed that there had been no sale of the invention before the critical date, but it was alleged that there had been an offer to sell, which was sufficient to trigger the on-sale bar.⁴¹⁰

In finding an on-sale bar, the district court had relied on language from *RCA Corp. v. Data General Corp.*,⁴¹¹ which suggested that an offer could trigger the on-sale bar even if it “does not rise to the level of a formal ‘offer’ under contract law principles.”⁴¹² The Federal Circuit characterized this language as dictum, since, “[i]n *RCA*, the court found that the offer at issue could have been ‘accepted’ and therefore was in fact an offer in the contract sense.”⁴¹³ In addition, the Federal Circuit suggested that, under *Pfaff*, a “‘commercial offer for sale’ . . . must meet the level of an offer for sale in the contract sense, one that would be understood as such in the commercial community.”⁴¹⁴ Thus, the Federal Circuit held that an on-sale bar cannot be shown by “activity which does not rise to the level of a formal ‘offer’ under contract law principles.”⁴¹⁵

In determining whether an offer is sufficiently definite and formal to meet the on-sale bar test, the Federal Circuit also directed that the district courts should apply Federal Circuit law and should analyze the issue under the law of contracts as generally understood, looking primarily to the Uniform Commercial Code and to the Restatement of Contracts for guidance.⁴¹⁶ The parties did not dispute the district court’s conclusion that there had been no commercial offer to sell.⁴¹⁷ Thus, the Federal Circuit reversed the district court’s decision that

407. *Id.* at 1313, 58 U.S.P.Q.2d (BNA) at 1728.

408. 254 F.3d 1041, 59 U.S.P.Q.2d (BNA) 1121 (Fed. Cir. 2001).

409. *Id.* at 1043, 59 U.S.P.Q.2d (BNA) at 1122.

410. *Id.*, 59 U.S.P.Q.2d (BNA) at 1122. In order to take advantage of the bar by relying on an offer to sell, the challenger must demonstrate by clear and convincing evidence that there was a “definite sale or offer to sell” prior to the critical date and that “the subject matter of the sale or offer to sell fully anticipated the claimed invention.” *Id.* at 1045-46, 59 U.S.P.Q.2d (BNA) at 1124 (quoting *UMC Elecs. Co. v. United States*, 816 F.2d 647, 656, 2 U.S.P.Q.2d (BNA) 1465, 1472 (Fed. Cir. 1987)).

411. 887 F.2d 1056, 12 U.S.P.Q.2d (BNA) 1449 (Fed. Cir. 1989).

412. *Group One Ltd.*, 254 F.3d at 1046, 59 U.S.P.Q.2d (BNA) at 1125 (quoting *RCA Corp.*, 887 F.2d at 1062, 12 U.S.P.Q.2d (BNA) at 1154).

413. *Id.*, 59 U.S.P.Q.2d (BNA) at 1125.

414. *Id.*, 59 U.S.P.Q.2d (BNA) at 1125.

415. *Id.* at 1046-47, 59 U.S.P.Q.2d (BNA) at 1125.

416. *Id.* at 1047-48, 59 U.S.P.Q.2d (BNA) at 1126.

417. *Id.* at 1048, 59 U.S.P.Q.2d (BNA) at 1126.

there was an on-sale bar, which had been based upon the less demanding *RCA* standard.⁴¹⁸

In *Scaltech, Inc. v. Retec/Tetra, L.L.C.*,⁴¹⁹ the district court granted summary judgment of invalidity with respect to a patent on an improved process for treating oil refinery waste.⁴²⁰ First, the Federal Circuit found that there was a commercial offer for sale when the patentee offered to process the oil refinery waste of third parties and to return to them “clean oil, water and a deoiled wet slurry suitable to be sent to the coker.”⁴²¹ Thus, although the inventor did not offer to let others use its process, the Federal Circuit held that the invention was offered for sale.⁴²² Second, the Federal Circuit held that the offer included all claim limitations of the invention.⁴²³ In this case, the defendant argued that each claim limitation for all typical applications had to be covered by the offer.⁴²⁴ The Federal Circuit disagreed, holding that it is sufficient to show that one embodiment of the invention was offered for sale.⁴²⁵ Finally, the court held that the invention was ready for patenting.⁴²⁶ The patentee contended that the invention could not be ready for patenting until the inventor had conceived of each of the claim limitations.⁴²⁷ However, the Federal Circuit noted that “sale of the [invention] in question obviates any need for inquiry into conception.”⁴²⁸ Moreover, in this case, prior to the critical date, the inventor had prepared drawings or a description sufficient for enablement.⁴²⁹

In *Special Devices, Inc. v. OEA, Inc.*,⁴³⁰ the patentee had contracted with a supplier to have the patent’s commercial embodiment mass-produced more than one year before the filing of a patent application.⁴³¹ The district court granted summary judgment holding that this arrangement produced an on-sale bar.⁴³² There was no

418. *Id.* at 1048-49, 59 U.S.P.Q.2d (BNA) at 1126-27.

419. 269 F.3d 1321, 60 U.S.P.Q.2d (BNA) 1687 (Fed. Cir. 2001).

420. *Id.* at 1327, 60 U.S.P.Q.2d (BNA) at 1690.

421. *Id.* at 1329, 60 U.S.P.Q.2d (BNA) at 1692.

422. *Id.* at 1328-29, 60 U.S.P.Q.2d (BNA) at 1692.

423. *Id.* at 1329-30, 60 U.S.P.Q.2d (BNA) at 1692; *see also* *Atlas Powder v. Ireco, Inc.*, 190 F.3d 1342, 1347, 51 U.S.P.Q.2d (BNA) 1943, 1948 (Fed. Cir. 1999) (“The subject matter of the offer for sale must satisfy each claim limitation of the patent, though it may do so inherently.”).

424. *Scaltech, Inc.*, 269 F.3d at 1329, 60 U.S.P.Q.2d (BNA) at 1692.

425. *Id.* at 1330, 60 U.S.P.Q.2d (BNA) at 1693.

426. *Id.* at 1331, 60 U.S.P.Q.2d (BNA) at 1693-94.

427. *Id.*, 60 U.S.P.Q.2d (BNA) at 1694.

428. *Id.*, 60 U.S.P.Q.2d (BNA) at 1694 (quoting *Abbott Labs. v. Geneva Pharms., Inc.*, 182 F.3d 1315, 1318-19, 51 U.S.P.Q.2d (BNA) 1307, 1309 (Fed. Cir. 1999)).

429. *Id.*, 60 U.S.P.Q.2d (BNA) at 1694.

430. 270 F.3d 1353, 60 U.S.P.Q.2d (BNA) 1537 (Fed. Cir. 2001).

431. *Id.* at 1354, 60 U.S.P.Q.2d (BNA) at 1538.

432. *Id.* at 1353-54, 60 U.S.P.Q.2d (BNA) at 1538.

dispute that the arrangement was commercial and that the invention was ready for patenting at the time the supply contract was made.⁴³³ The patentee argued, however, that the on-sale bar had never expressly been applied to sales by a supplier to the inventor.⁴³⁴ The Federal Circuit rejected the idea that there should be an exception to the on-sale bar, which would allow an inventor to stockpile commercial embodiments of an invention prior to filing a patent application.⁴³⁵ The court held that 35 U.S.C. § 102(b) does not require that the inventor make the sale; it requires only that someone place the invention on sale.⁴³⁶

The Federal Circuit expressly repudiated the reasoning of a prior district court case, *M&R Marking System, Inc. v. Top Stamp, Inc.*,⁴³⁷ which had refused at the preliminary injunction stage to apply the on-sale bar to a sale from a manufacturer to the inventor.⁴³⁸ In that case, the district court had applied the “totality of the circumstances” test now abandoned by *Pfaff*.⁴³⁹ Finally, the Federal Circuit noted that its refusal to create a “supplier exception” furthered the primary policy of the on-sale bar, namely, to encourage inventors to enter the patent system promptly.⁴⁴⁰

In *Space Systems/Loral, Inc. v. Lockheed Martin Corp.*,⁴⁴¹ the district court granted summary judgment, holding that a patent on an attitude control system for maintaining the position and orientation of a satellite was invalid by reason of an on-sale bar.⁴⁴² Evidence showed that, prior to the critical date, the inventor prepared an “Engineering Change Proposal” that included a description of his idea and how he proposed to achieve it, some rough drawings, and an estimate of the cost of developing the system.⁴⁴³ The inventor testified, however, that when he sent the engineering proposal, he had only conceived of the idea and did not know whether it would work.⁴⁴⁴ He did not determine that the idea would work, until many

433. *Id.* at 1355, 60 U.S.P.Q.2d (BNA) at 1539.

434. *Id.*, 60 U.S.P.Q.2d (BNA) at 1539.

435. *Id.* at 1355-58, 60 U.S.P.Q.2d (BNA) at 1539-41.

436. *Id.* at 1355, 60 U.S.P.Q.2d (BNA) at 1539.

437. 926 F. Supp. 466 (D.N.J. 1996).

438. *Special Devices, Inc.*, 270 F.3d at 1357, 60 U.S.P.Q.2d (BNA) at 1541.

439. *Id.*, 60 U.S.P.Q.2d (BNA) at 1541. “The Supreme Court has disavowed the ‘totality of the circumstances’ test used in [*M&R Marketing Sys., Inc.*]” *Id.*, 60 U.S.P.Q.2d (BNA) at 1541 (quoting *Pfaff v. Wells Elecs., Inc.*, 525 U.S. 55, 66 n.11 (1998)).

440. *Special Devices, Inc.*, 270 F.3d at 1357, 60 U.S.P.Q.2d (BNA) at 1541.

441. 271 F.3d 1076, 60 U.S.P.Q.2d (BNA) 1861 (Fed. Cir. 2001).

442. *Id.* at 1077-78, 60 U.S.P.Q.2d (BNA) at 1862.

443. *Id.* at 1078, 60 U.S.P.Q.2d (BNA) at 1863.

444. *Id.* at 1079, 60 U.S.P.Q.2d (BNA) at 1863.

months later, after developing and testing an engineering model.⁴⁴⁵ The challenger did not produce evidence disputing the inventor's testimony.⁴⁴⁶ The district court found that it could not conclude as a matter of law that the engineering proposal was an "enabling disclosure."⁴⁴⁷ The district court did hold, however, that the patentee had "legal conception" of the invention and that it was, accordingly, ready for patenting.⁴⁴⁸ The Federal Circuit disagreed, holding that an invention is not ready for patenting if it has not been reduced to practice nor described before the critical date in sufficient detail to enable one skilled in the art to practice it.⁴⁴⁹ Thus, the Federal Circuit reversed and remanded.⁴⁵⁰

E. Enablement

The source of the enablement requirement is 35 U.S.C. § 112, which states that a patent must include a written description of the invention that enables any person skilled in the art to make it and use it.⁴⁵¹ To satisfy the requirement, a patentee must describe the invention so that one skilled in the art can make and use the invention without undue experimentation.⁴⁵² The description, however, need not include information that those skilled in the art already know.⁴⁵³

In *Union Pacific Resources Co. v. Chesapeake Energy Corp.*,⁴⁵⁴ the district court held that a patent on a method of horizontal drilling for oil and natural gas was invalid for lack of an enabling disclosure.⁴⁵⁵ The district court noted that the patent required various measurements to be correlated or "re-scaled" in order to determine the actual position of a borehole relative to the surrounding strata.⁴⁵⁶ The patent specification did not disclose how the re-scaling operation should be carried out.⁴⁵⁷ Indeed, the patentee considered the computer program that it had designed to perform the re-scaling step to be a trade secret.⁴⁵⁸ Based on all the evidence, the Federal Circuit agreed

445. *Id.*, 60 U.S.P.Q.2d (BNA) at 1863.

446. *Id.*, 60 U.S.P.Q.2d (BNA) at 1863.

447. *Id.*, 60 U.S.P.Q.2d (BNA) at 1863.

448. *Id.*, 60 U.S.P.Q.2d (BNA) at 1863.

449. *Id.*, 60 U.S.P.Q.2d (BNA) at 1864.

450. *Id.* at 1080-81, 60 U.S.P.Q.2d (BNA) at 1864.

451. 35 U.S.C. § 112 (1994).

452. ALAN L. DURHAM, PATENT LAW ESSENTIALS: A CONCISE GUIDE 69 (1999).

453. *Id.*

454. 236 F.3d 684, 57 U.S.P.Q.2d (BNA) 1293 (Fed. Cir. 2001).

455. *Id.* at 687, 57 U.S.P.Q.2d (BNA) at 1294.

456. *Id.* at 690, 57 U.S.P.Q.2d (BNA) at 1296.

457. *Id.* at 691, 57 U.S.P.Q.2d (BNA) at 1297.

458. *Id.* at 690, 57 U.S.P.Q.2d (BNA) at 1296.

with the district court that one skilled in the art would not understand how to perform the re-scaling operation from the information in the patent.⁴⁵⁹

In *Durol Corp. v. Osram Sylvania Inc.*,⁴⁶⁰ the patent at issue related to electroluminescent phosphor particles encapsulated in metal oxide coatings.⁴⁶¹ The Federal Circuit found the district court's analysis of the enablement question inadequate because the district court had examined only whether the patents enabled the use of the accused product.⁴⁶² The court noted that, to be enabling, the patent must teach those skilled in the art how to make and use the full scope of the claimed invention without undue experimentation.⁴⁶³ The defendant alleged that the patent was not enabling because undue experimentation would be required to produce certain metal oxide coatings from different precursors.⁴⁶⁴ The Federal Circuit responded by stating that, so long as the patent enabled the preparation of a particular metal oxide coating from at least one of the suggested precursors, the enablement requirement for that oxide coating would be satisfied.⁴⁶⁵ Because the district court had not made specific factual determinations as to whether the disclosure enabled the preparation of oxide coatings within the full scope of the claims, the Federal Circuit was unable to decide the issue as a matter of law.⁴⁶⁶ However, since the court had decided that the claims were not infringed by the accused product, a remand to consider the validity of the patent would have been inappropriate.⁴⁶⁷ Accordingly, the court simply vacated the portion of the district court's judgment that held that the patents were not invalid.⁴⁶⁸

In *Bio-Technology General Corp. v. Genentech, Inc.*,⁴⁶⁹ the patent was directed to a method for using recombinant DNA technology to produce human growth hormone ("hGH") in bacteria.⁴⁷⁰ After a jury trial, the district court granted judgment as a matter of law, holding that the claim at issue was invalid for lack of enablement.⁴⁷¹ The district court ruled that the patent was required to enable the

459. *Id.* at 691, 57 U.S.P.Q.2d (BNA) at 1297.

460. 256 F.3d 1298, 59 U.S.P.Q.2d (BNA) 1238 (Fed. Cir. 2001).

461. *Id.* at 1300-01, 59 U.S.P.Q.2d (BNA) at 1239.

462. *Id.* at 1306-07, 59 U.S.P.Q.2d (BNA) at 1244.

463. *Id.* at 1306, 59 U.S.P.Q.2d (BNA) at 1244.

464. *Id.* at 1307, 59 U.S.P.Q.2d (BNA) at 1244.

465. *Id.*, 59 U.S.P.Q.2d (BNA) at 1244.

466. *Id.* at 1307-08, 59 U.S.P.Q.2d (BNA) at 1244.

467. *Id.* at 1308, 59 U.S.P.Q.2d (BNA) at 1245.

468. *Id.*, 59 U.S.P.Q.2d (BNA) at 1245.

469. 267 F.3d 1325, 60 U.S.P.Q.2d (BNA) 1430 (Fed. Cir. 2001).

470. *Id.* at 1327, 60 U.S.P.Q.2d (BNA) at 1431.

471. *Id.* at 1329, 60 U.S.P.Q.2d (BNA) at 1433.

production of “mature” hGH, i.e., hGH of 191 amino acids, without an attached methionine molecule.⁴⁷² There was conflicting evidence on whether the use of the claimed method produced both “met-hGH” and mature hGH.⁴⁷³ The Federal Circuit, however, found that there was substantial evidence to support the jury’s conclusion that the defendant had failed to prove, by clear and convincing evidence, that the patent did not enable production of “any” mature hGH.⁴⁷⁴ The record contained extensive expert testimony that the patent enabled the production of some mature hGH, including the defendant’s own New Drug Application to the Food and Drug Administration, which stated that hGH made by the process of the patent included 93.8% met-hGH and 6.2% mature hGH.⁴⁷⁵

F. Written Description

The source of the written description requirement is 35 U.S.C. § 112, which states that a patent must include a “written description of the invention, and of the manner and process of making and using it.”⁴⁷⁶ Today, the written description requirement is usually at issue only when the claims have been amended during a patent application’s prosecution.⁴⁷⁷

In *Turbocare Division of Demag Delaval Turbomachinery Corp. v. General Electric Co.*,⁴⁷⁸ the patent related to a shaft-sealing system for fluid turbines.⁴⁷⁹ The original written description disclosed the use of flat springs located between the ends of ring segments.⁴⁸⁰ During prosecution, the patentee added a new claim, which placed the springs in a different location.⁴⁸¹ The district court held that the new claim constituted “new matter” and was invalid for failing to satisfy the written description requirement of 35 U.S.C. § 112(1).⁴⁸² The

472. *Id.*, 60 U.S.P.Q.2d (BNA) at 1433.

473. *Id.* at 1330-31, 60 U.S.P.Q.2d (BNA) at 1434.

474. *Id.*, 60 U.S.P.Q.2d (BNA) at 1434.

475. *Id.* at 1329-30, 60 U.S.P.Q.2d (BNA) at 1433. In reinstating the jury verdict as based on substantial evidence, the court noted that, “[w]hen scientific certainty is not available, and the scientific theories and evidence are within a reasonable range of difference of scientific opinion, resolution of such difference based on weight and credibility of evidence is the province of the trier of fact.” *Id.* at 1330-31, 60 U.S.P.Q.2d (BNA) at 1434 (citing *Comark Communications, Inc. v. Harris Corp.*, 156 F.3d 1182, 1189, 48 U.S.P.Q.2d (BNA) 1001, 1008 (Fed. Cir. 1998)).

476. 35 U.S.C. § 112 (1994).

477. DURHAM, *supra* note 452, at 76-77.

478. 264 F.3d 1111, 60 U.S.P.Q.2d (BNA) 1017 (Fed. Cir. 2001).

479. *Id.* at 1113, 60 U.S.P.Q.2d (BNA) at 1019.

480. *Id.* at 1119, 60 U.S.P.Q.2d (BNA) at 1023.

481. *Id.*, 60 U.S.P.Q.2d (BNA) at 1023.

482. *Id.* at 1118, 60 U.S.P.Q.2d (BNA) at 1022. When a new claim is added after the filing date, the new claim must find support in the original specification. This

Federal Circuit agreed, based on the evidence, that the alternative locations were neither disclosed nor inherent in the original disclosure and that no reasonable juror could find that the original disclosure was sufficiently detailed to enable one of skill in the art to recognize that the inventor had invented what was claimed.⁴⁸³ The court stated that in order for a disclosure to be inherent, “the missing descriptive matter must necessarily be present in the [original] application’s specification such that one skilled in the art would recognize such a disclosure.”⁴⁸⁴

G. Best Mode

The best mode requirement is found at 35 U.S.C. § 112, which states that a specification must provide “the best mode contemplated by the inventor for carrying out his invention.”⁴⁸⁵ The best mode requirement has both a subjective and objective element.⁴⁸⁶ To satisfy the subjective element, the inventor must disclose the one mode he felt was the best at the time of filing.⁴⁸⁷ Satisfaction of the objective element depends on whether that one best mode was disclosed in sufficient detail and clarity to allow one skilled in the art to realize it is the best mode and to be capable of practicing the mode himself.⁴⁸⁸

In *Mentor H/S Inc. v. Medical Device Alliance, Inc.*,⁴⁸⁹ the district court granted judgment as a matter of law, holding a patent related to a method for carrying out liposuction with the use of ultrasound invalid for failure to disclose a circuit used to stabilize the ultrasound frequency.⁴⁹⁰ The Federal Circuit, in reversing the district court, observed that a patent is required to disclose the “best mode contemplated by the inventor of carrying out his invention.”⁴⁹¹ The

requirement ensures that the patent applicant fully possessed the claimed subject matter on the application filing date. *Id.*, 60 U.S.P.Q.2d (BNA) at 1022.

483. *Id.* at 1119, 60 U.S.P.Q.2d at 1023-24.

484. *Id.*, 60 U.S.P.Q.2d (BNA) at 1023 (quoting *Tronzo v. Biomet, Inc.*, 156 F.3d 1154, 1159, 47 U.S.P.Q.2d (BNA) 1829, 1834 (Fed. Cir. 1998)).

485. See DURHAM, *supra* note 452, at 72.

486. *Id.* at 73-74.

487. *Id.* at 74.

488. *Id.*

489. 244 F.3d 1365, 58 U.S.P.Q.2d (BNA) 1321 (Fed. Cir. 2001).

490. *Id.* at 1371, 58 U.S.P.Q.2d (BNA) at 1323.

491. *Id.* at 1375, 58 U.S.P.Q.2d at 1326-27

Determining whether a patent fails to comply with the best mode requirement and is thus invalid involves two factual inquiries. First, the fact-finder must determine whether at the time an applicant filed an application for patent, the applicant had a best mode of practicing the invention, which is a subjective determination. Second, if the inventor had a best mode of practicing the invention, the fact-finder must determine whether the best mode was disclosed in sufficient detail to allow a skilled artisan to practice it without under experimentation, which is an objective determination.

patentee is not required to disclose each detail of prototypes made prior to filing the patent, nor is the applicant required to disclose unclaimed elements unless they are “necessary to the operation of the invention.”⁴⁹² The Federal Circuit held that the invention was directed to a method of using ultrasonic vibration to create heat and melt fat, not to a particular circuit developed by a technician.⁴⁹³ The court believed that such a circuit was outside of the inventor’s field of expertise.⁴⁹⁴ While the patent did disclose the inventor’s preferred frequencies of vibration, the defendants failed to show at trial that one skilled in the art would be unable to select an appropriate circuit to stabilize the frequency.⁴⁹⁵ Because substantial evidence supported the jury’s verdict, the Federal Circuit reversed the district court’s grant of judgment as a matter of law.⁴⁹⁶

In *Eli Lilly & Co. v. Barr Laboratories, Inc.*,⁴⁹⁷ the Federal Circuit affirmed a district court’s holding, on summary judgment, that the claims at issue did not violate the best mode requirement.⁴⁹⁸ The patent in question related to the pharmaceutical compound fluoxetine hydrochloride, the active ingredient in Lilly’s anti-depressant drug Prozac.⁴⁹⁹ The Federal Circuit applied the rule that “the inventor need not disclose a mode for obtaining unclaimed subject matter unless the subject matter is novel and essential for carrying out the best mode of the invention.”⁵⁰⁰ The court also added that production details and routine details need not be disclosed.⁵⁰¹ In the present case, the challenger claimed that the inventor failed to disclose his best mode for synthesizing a starting compound used to make the claimed compound.⁵⁰² The evidence established, however, that the starting compound was not claimed in the patent, nor was it novel.⁵⁰³ In fact, it was commercially available, and the inventor’s

Id., 58 U.S.P.Q.2d at 1326-27 (citing *Nobelpharma AB v. Implant Innovations, Inc.*, 141 F.3d 1054, 1064, 46 U.S.P.Q.2d (BNA) 1097, 1101 (Fed. Cir. 1998)).

492. *Id.*, 58 U.S.P.Q.2d (BNA) at 1327.

493. *Id.*, 58 U.S.P.Q.2d (BNA) at 1327.

494. *Id.*, 58 U.S.P.Q.2d (BNA) at 1327.

495. *Id.*, 58 U.S.P.Q.2d (BNA) at 1327.

496. *Id.* at 1376, 58 U.S.P.Q.2d (BNA) at 1327.

497. 251 F.3d 955, 58 U.S.P.Q.2d (BNA) 1865 (Fed. Cir. 2001).

498. *Id.* at 967, 58 U.S.P.Q.2d (BNA) at 1877.

499. *Id.* at 959, 58 U.S.P.Q.2d (BNA) at 1871.

500. *Id.* at 963, 58 U.S.P.Q.2d (BNA) at 1874 (citing *Applied Med. Res. Corp. v. United States Surgical Corp.*, 147 F.3d 1374, 1377, 47 U.S.P.Q.2d (BNA) 1289, 1291 (Fed. Cir. 1998)).

501. *Id.*, 58 U.S.P.Q.2d (BNA) at 1874 (citing *Young Dental Mfg. Co. v. Q3 Special Prods., Inc.*, 112 F.3d 1137, 1143, 42 U.S.P.Q.2d 1589, 1594-95 (Fed. Cir. 1997); *Wahl Instruments, Inc. v. Acvious, Inc.*, 950 F.2d 1575, 1581, 21 U.S.P.Q.2d (BNA) 1123, 1128 (Fed. Cir. 1991)).

502. *Id.* at 964, 58 U.S.P.Q.2d (BNA) at 1875.

503. *Id.* at 964-65, 58 U.S.P.Q.2d (BNA) at 1875-76.

method for synthesizing it was designed merely to increase efficiency and save costs.⁵⁰⁴ The court distinguished cases in which the intermediate compound itself was a novel compound.⁵⁰⁵ The Federal Circuit further held that the inventors did not need to disclose their preferred solvent for carrying out a recrystallization step, since this was a routine detail falling outside the best mode requirement.⁵⁰⁶ The patent did not claim a recrystallization process or a recrystallization solvent.⁵⁰⁷ Instead, the patent disclosed that a recrystallization step was used to purify the claimed compound.⁵⁰⁸ Since solvents and methods for performing recrystallization were well known to those of skill in the art, the inventor was not required to disclose his preferred but unclaimed solvent.⁵⁰⁹ The fact that some experimentation might be necessary to find an appropriate solvent did not result in a best mode violation.⁵¹⁰

H. Indefiniteness

Section 112 of the United States Code requires claims to “particularly” and “distinctly” define the subject matter claimed.⁵¹¹ In order to avoid being considered fatally indefinite, a claim must contain enough detail that those who are skilled in the art would understand the utilization and scope of the invention.⁵¹² The Federal Circuit has recently examined multiple indefiniteness issues.

In *Union Pacific Resources Co. v. Chesapeake Energy Corp.*,⁵¹³ the Federal Circuit affirmed the district court’s summary judgment holding a patent claim invalid for indefiniteness.⁵¹⁴ The claims at issue referred

504. *Id.*, 58 U.S.P.Q.2d (BNA) at 1875-76.

505. *Id.*, 58 U.S.P.Q.2d (BNA) at 1875-76 (distinguishing *N. Telecom, Inc. v. Datapoint Corp.*, 908 F.2d 931, 940-41, 15 U.S.P.Q.2d (BNA) 1321, 1328 (Fed. Cir. 1990); *Dana Corp. v. IPC Ltd.*, 860 F.2d 415, 418, 8 U.S.P.Q.2d (BNA) 1692, 1696-97 (Fed. Cir. 1988); *Clayton v. Akiba*, 214 U.S.P.Q. (BNA) 374 (Bd. Pat. App. 1982)).

506. *Id.* at 966, 58 U.S.P.Q.2d (BNA) at 1876.

507. *Id.*, 58 U.S.P.Q.2d (BNA) at 1877.

508. *Id.*, 58 U.S.P.Q.2d (BNA) at 1877.

509. *Id.*, 58 U.S.P.Q.2d (BNA) at 1877.

510. *Id.* at 966-67, 58 U.S.P.Q.2d (BNA) at 1877.

511. 35 U.S.C. § 112 (2000); *see also* HARMON, *supra* note 329, § 5.3, at 155-56 (providing information on how a patent is filed and examined).

512. *See* HARMON, *supra* note 329, § 5.3 (interpreting the requirements of “definiteness”).

513. 236 F.3d 684, 57 U.S.P.Q.2d (BNA) 1293 (Fed. Cir. 2001).

514. *Id.* at 694, 57 U.S.P.Q.2d (BNA) at 1299. Whether a claim is invalid for indefiniteness is a question of law reviewed *de novo*, and turns on whether one skilled in the art would understand the scope of the claim when reading it in light of the rest of the specification. *Id.* at 692, 57 U.S.P.Q.2d (BNA) at 1297; *see also* *Personalized Media Communications, L.L.C. v. Int’l Trade Comm’n*, 161 F.3d 696, 702, 48 U.S.P.Q.2d (BNA) 1880, 1886 (Fed. Cir. 1998) (finding that the claim construction may be reviewed *de novo* by the court of appeals); *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1576, 1 U.S.P.Q.2d (BNA) 1081, 1088 (Fed.

to a method for determining the location of a borehole relative to strata, which comprised a step of “comparing” information.⁵¹⁵ Neither the claim nor the specification explicitly defined the term “comparing,” nor did the patent suggest that the term “comparing” was used in a technical or scientific sense.⁵¹⁶ Based on trial testimony, it appeared that the “comparing” step referred to a complex correlation step suggested but “not explained” in the written description.⁵¹⁷ Accordingly, the Federal Circuit held that the district court properly granted summary judgment of invalidity based on the claims’ indefiniteness.⁵¹⁸

In *S3 Inc. v. NVIDIA Corp.*,⁵¹⁹ the Federal Circuit reversed a judgment of invalidity based on indefiniteness relating to an integrated circuit for use in computer video color displays.⁵²⁰ The claim was written in means-plus-function form.⁵²¹ The court held that the requirement that the claims must particularly and distinctly define the invention is met if a person experienced in the field of the invention would understand the scope of the subject matter, reading the claim in conjunction with the rest of the specification.⁵²² In claims subject to § 112 ¶ 6 of the Patent Code, the claimed function and the supporting structure in the specification must both be described with sufficient particularity to meet the requirements of § 112 ¶ 2 of the Patent Code.⁵²³ A claim cannot be regarded as indefinite simply because it is difficult to understand when viewed

Cir. 1986) (reviewing the claim construction for indefiniteness).

515. *Union Pac. Res. Co.*, 236 F.3d at 692, 57 U.S.P.Q.2d (BNA) at 1297-98.

516. *Id.*, 57 U.S.P.Q.2d (BNA) at 1297-98.

517. *Id.*, 57 U.S.P.Q.2d (BNA) at 1298.

518. *Id.* at 694, 57 U.S.P.Q.2d (BNA) at 1299-1300.

519. 259 F.3d 1364, 59 U.S.P.Q.2d (BNA) 1745 (Fed. Cir. 2001).

520. *Id.* at 1374, 59 U.S.P.Q.2d (BNA) at 1750.

521. *See id.* at 1367, 59 U.S.P.Q.2d (BNA) at 1746 (determining that if a claim uses “means-plus-function” form, then it must still meet the requirements of § 112 paragraph 2, which requires the means-plus-function claim to disclose the limitations in the specification so that they can be understood by those skilled in the art). Since the indefiniteness requirement involves claim construction, the Federal Circuit provides plenary review of decisions on indefiniteness. *See Atmel Corp. v. Info. Storage Devices, Inc.*, 198 F.3d 1374, 1378, 53 U.S.P.Q.2d (BNA) 1225, 1227 (Fed. Cir. 1999) (finding that indefiniteness is a question of law to be reviewed de novo); *Personalized Media Communications L.L.C. v. Int’l Trade Comm’n*, 161 F.3d 696, 705, 48 U.S.P.Q.2d (BNA) 1880, 1888 (Fed. Cir. 1998).

522. *See NVIDIA Corp.*, 259 F.3d at 1367, 59 U.S.P.Q.2d (BNA) at 1747. “If the claims when read in light of the specification reasonably apprise those skilled in the art of the scope of the invention, § 112 demands no more.” *Id.*, 59 U.S.P.Q.2d (BNA) at 1747 (citing *Miles Labs., Inc. v. Standon*, 997 F.2d 870, 875, 27 U.S.P.Q.2d (BNA) 1123, 1126 (Fed. Cir. 1993)).

523. *See id.* at 1367-68, 59 U.S.P.Q.2d (BNA) at 1747 (“[T]he corresponding structure(s) of a means-plus-function limitation must be disclosed in the written description in such a manner that one skilled in the art will know and understand what structure corresponds to the means limitation.”).

without benefit of the rest of the specification.⁵²⁴ In this case, the defendant argued, inter alia, that the specification did not disclose a structure corresponding to the “means . . . for selectively receiving” the limitation.⁵²⁵ While the specification disclosed a “selector,” it did not show the electronic structure of the selector or the details of its electronic operation.⁵²⁶ There was testimony that a person of skill in the art would recognize the selector shown in the specification to be an electronic device, “such as a simple multiplexer, whose structure is well known.”⁵²⁷ The court concluded this was adequate stating, “[i]t is not the criterion for compliance with § 112, whether a lay person having no skill whatsoever in this field would know how a selector is constructed.”⁵²⁸ Judge Gajarsa dissented, arguing that the district court was correct in holding the claims indefinite because the independent claims used the term “video information data stream” inconsistently.⁵²⁹

In *Exxon Research & Engineering Co. v. United States*,⁵³⁰ the Court of Federal Claims held a patent invalid for indefiniteness on summary judgment.⁵³¹ The claims related to a method for converting natural gas into liquid hydrocarbon products and included the terms “for a period sufficient to increase substantially the initial catalyst,” and “substantial absence of slug flow.”⁵³² The Court of Federal Claims found these terms indefinite.⁵³³

The Federal Circuit noted that, in this case, the specification defines “substantially increased” as an increase of at least thirty percent and provides reasonable guidance through the examples of how the increase should be measured.⁵³⁴ The court also observed that the specification discloses suggestions for how long a “period sufficient” might be, and the parties agreed that a “period sufficient” could be determined by doing activity checks.⁵³⁵ The Federal Circuit noted that, “[w]hen a word of degree is used the district court must

524. *See id.*, 59 U.S.P.Q.2d (BNA) at 1748 (finding that when determining whether a claim is indefinite, the claim must be examined in light of the specification).

525. *Id.* at 1370, 59 U.S.P.Q.2d (BNA) at 1749.

526. *Id.* at 1370-71, 59 U.S.P.Q.2d (BNA) at 1749.

527. *Id.*, 59 U.S.P.Q.2d (BNA) at 1749.

528. *Id.* at 1371, 59 U.S.P.Q.2d (BNA) at 1750.

529. *Id.* at 1371-72, 59 U.S.P.Q.2d (BNA) at 1750 (Gajarsa, J., dissenting) (finding the majority's reference to intrinsic evidence insufficient to salvage the claims at issue).

530. 265 F.3d 1371, 60 U.S.P.Q.2d (BNA) 1272 (Fed. Cir. 2001).

531. *Id.* at 1373, 60 U.S.P.Q.2d (BNA) at 1274.

532. *Id.* at 1374, 60 U.S.P.Q.2d (BNA) at 1275.

533. *Id.*, 60 U.S.P.Q.2d (BNA) at 1275-76.

534. *Id.* at 1377, 60 U.S.P.Q.2d (BNA) at 1277-78.

535. *Id.* at 1378-79, 60 U.S.P.Q.2d (BNA) at 1279.

determine whether the patent's specification provides some standard for measuring that degree."⁵³⁶ In this case, the specification provided guidance as to what was meant by "substantial absence" with a reasonable degree of particularity and definiteness.⁵³⁷ Accordingly, the Federal Circuit reversed the summary judgment of invalidity and remanded the case to the Court of Federal Claims.⁵³⁸

I. *Inventorship*

An inventor is anyone who conceived the invention, and can include more than one person.⁵³⁹ For more than one person to be named as an inventor, they must have collaborated, but they need not have physically worked on every claim nor must they have collaborated at the same time.⁵⁴⁰ If an application names the wrong inventors, it can generally be corrected without affecting the validity of the patent, so long as it occurred through error and without deception.⁵⁴¹ The Federal Circuit discussed inventorship in three separate instances.

In *Acromed Corp. v. Sofamor Danek Group, Inc.*,⁵⁴² the district court granted judgment as a matter of law that the plaintiff's patent for a plate system used for implantation into a patient's spinal column was not invalid for failure to name an inventor.⁵⁴³ The challenger to the

536. *Id.* at 1381, 60 U.S.P.Q.2d (BNA) at 1280 (quoting *Seattle Box Co. v. Indus. Crating & Packing, Inc.*, 731 F.2d 818, 826, 221 U.S.P.Q. (BNA) 568, 574 (Fed. Cir. 1984)).

537. *Id.*, 60 U.S.P.Q.2d (BNA) at 1280-81 (indicating that because the specification taught that slug flow should be avoided due to a possibility of interference with reactor operations, one skilled in the art would know that whether there was a "substantial absence" could be determined with reference to whether reactor efficiency was materially affected).

538. *Id.*, 60 U.S.P.Q.2d (BNA) at 1280-81.

If one skilled in the art would understand the bounds of the claim when read in light of the specification, then the claim satisfies section 112 paragraph 2 [W]e have not held that a claim is indefinite merely because it poses a difficult issue of claim construction By finding claims indefinite only if reasonable efforts at claim construction prove futile, we accord respect to the statutory presumption of patent validity.

Id. at 1375, 60 U.S.P.Q.2d (BNA) at 1276 (citations omitted).

539. See ALAN L. DURHAM, PATENT LAW ESSENTIALS § 6.1, at 41 (1991) (describing the role of the 'inventor' in a patent application).

540. *Id.* at 42 (noting that inventors who are unaware of each other's work could not be considered joint inventors, regardless of whether their work overlaps).

541. *Id.*

542. 253 F.3d 1371, 59 U.S.P.Q.2d (BNA) 1130 (Fed. Cir. 2001).

543. *Id.* at 1381, 59 U.S.P.Q.2d (BNA) at 1137. The Federal Circuit reviews the district court's determination of inventorship as a question of law, without deference. See *Ethicon, Inc. v. Surgical Corp.*, 135 F.3d 1456, 1460, 45 U.S.P.Q.2d (BNA) 1545, 1547 (Fed. Cir. 1988). The presumption of validity which is accorded to each issued patent also applies to create a presumption that the inventors named in the patent are the true and only inventors. See *Hess v. Advanced Cardiovascular Sys. Inc.*, 106

patent asserted that the patent failed to name as an inventor a person who conceived the idea of using arcuate recesses and a conical nut to prevent movement of screws in a plate having elongated slots.⁵⁴⁴ The evidence suggested that the purportedly omitted inventor, however, was simply following the instructions of the named inventor when he made his alleged contribution.⁵⁴⁵ Moreover, the court observed that the patent claim was a “combination” claim and that all of the individual elements of the claim, including arcuate recesses in a plate, were part of the prior art.⁵⁴⁶ The claimed invention, however, was a new combination.⁵⁴⁷ Thus, the challenger had failed to present clear and convincing evidence that the allegedly omitted inventor had actually made an inventive contribution.⁵⁴⁸

In *Winbond Electronics Corp. v. International Trade Commission*,⁵⁴⁹ the Federal Circuit affirmed a decision of the International Trade Commission holding that the alleged infringers failed to establish that a patent was unenforceable for failure to name the correct inventors.⁵⁵⁰ In an earlier proceeding, the Commission had declared the patent unenforceable for failure to name an inventor, presumably one Mr. Gupta, whom the respondents had argued was an inventor.⁵⁵¹ Following the Commission’s decision, the assignee of the patent obtained a Certificate of Correction adding Mr. Gupta as an inventor.⁵⁵² In a second proceeding, the Administrative Law Judge again found the patent unenforceable, concluding that Mr. Gupta was not an inventor.⁵⁵³ The Commission, however, disagreed and held that the Certificate of Correction listed the correct inventors.⁵⁵⁴

F.3d 976, 980, 41 U.S.P.Q.2d (BNA) 1782, 1785-86 (Fed. Cir. 1997). A party seeking to invalidate a patent for failure to name an inventor must present clear and convincing evidence that the person omitted actually invented the claimed invention. See *Environ Prods. v. Furon Co.*, 215 F.3d 1261, 1265, 55 U.S.P.Q.2d (BNA) 1038, 1042 (Fed. Cir. 2000). To prove that an omitted individual was an inventor, the purported inventor must have contributed to the conception of the invention and must provide corroborating evidence of any asserted contributions to the conception. See *Fina Oil & Chem. Co. v. Ewen*, 123 F.3d 1466, 1474, 43 U.S.P.Q.2d (BNA) 1935, 1942 (Fed. Cir. 1997). Moreover, the contribution must be one that is “not insignificant in quality, when that contribution is measured against the dimension of the full invention.” *Pannu v. Iolab Corp.*, 155 F.3d 1344, 1351, 47 U.S.P.Q.2d (BNA) 1657, 1663 (Fed. Cir. 1998).

544. See *Acromed Corp.*, 253 F.3d at 1379, 59 U.S.P.Q.2d (BNA) at 1136.

545. *Id.* at 1380, 59 U.S.P.Q.2d (BNA) at 1136.

546. *Id.* at 1381, 59 U.S.P.Q.2d (BNA) at 1137.

547. *Id.*, 59 U.S.P.Q.2d (BNA) at 1137.

548. *Id.*, 59 U.S.P.Q.2d (BNA) at 1137.

549. 262 F.3d 1363, 60 U.S.P.Q.2d (BNA) 1029 (Fed. Cir. 2001).

550. *Id.* at 1372, 60 U.S.P.Q.2d (BNA) at 1035.

551. *Id.* at 1368, 60 U.S.P.Q.2d (BNA) at 1032.

552. *Id.* at 1368-69, 60 U.S.P.Q.2d (BNA) at 1032.

553. *Id.* at 1369, 60 U.S.P.Q.2d (BNA) at 1032.

554. *Id.*, 60 U.S.P.Q.2d (BNA) at 1032-33.

The Federal Circuit held that the presumption of validity applies to the Certificate of Correction as well as to the original patent.⁵⁵⁵ The Federal Circuit agreed with the Commission that the testimony offered by the respondents did not provide clear and convincing evidence to establish that Mr. Gupta was not an inventor.⁵⁵⁶

In *Fina Technology, Inc. v. Ewen*,⁵⁵⁷ the Federal Circuit reversed an order of the district court, which had directed the Patent Office to issue a Certificate of Correction reversing the order of inventors named in the patent.⁵⁵⁸ The Federal Circuit held that the court had no authority under 35 U.S.C. § 255 or § 256 to order the Patent Office to change the order of inventors of an issued patent.⁵⁵⁹ Section 256 has been interpreted to apply to two kinds of error, misjoinder and non-joinder, but the language is not broad enough to allow the court to require a change in the order in which the inventors are listed.⁵⁶⁰ Section 255 deals with clerical errors and it does not authorize action by the district court, nor is the order in which the inventors are listed the kind of error contemplated by that section.⁵⁶¹ The Manual of Patent Examining Procedure instructs the examiners to list the inventors in the order used in the inventors' oath or declaration.⁵⁶² Since the order in which the names appear is of no legal consequence,⁵⁶³ the court's inability to require a change poses no legal concern.

J. Other Patent Office Procedures

1. Interferences

When two patent applications claim the same invention, the applications are deemed "interfering" and the Patent Office may

555. *Id.* at 1371, 60 U.S.P.Q.2d (BNA) at 1034. "Because Atmel complied with [Rule 324], it properly corrected the inventors of the '903 patent and acquired a presumption of validity for the correction." *Id.*, 60 U.S.P.Q.2d (BNA) at 1034. Rule 324 requires a party who is requesting a correction of inventorship to submit a "proper petition" which includes a statement from the person being added as an inventor that there was no deceptive intention on his or her part, a statement from the current named inventors as to the requested change, and a statement from all parties submitting a statement agreeing to the change of inventorship in the patent. *Id.*, 60 U.S.P.Q.2d (BNA) at 1034.

556. *Id.* at 1372, 60 U.S.P.Q.2d (BNA) 1035.

557. 265 F.3d 1325, 60 U.S.P.Q.2d (BNA) 1314 (Fed. Cir. 2001).

558. *Id.* at 1325-26, 60 U.S.P.Q.2d (BNA) at 1315.

559. *Id.* at 1328, 60 U.S.P.Q.2d (BNA) at 1317.

560. *Id.*, 60 U.S.P.Q.2d (BNA) at 1316-17.

561. *Id.*, 60 U.S.P.Q.2d (BNA) at 1317.

562. *See* MANUAL OF PATENT EXAMINING PROCEDURE § 605.04(f) (7th ed. Rev. 1 2001).

563. *Id.*

declare an “interference” to determine which applicant was the first to invent.⁵⁶⁴ In an interference, the applicant to file first is referred to as the “senior party” and all other applicants are “junior parties.”⁵⁶⁵

In *Cooper v. Goldfarb*,⁵⁶⁶ the Board of Patent Appeals and Interferences awarded priority of invention to the junior party.⁵⁶⁷ The question on appeal was whether priority should have been given to the engineer, the senior party, who developed a material for use in vascular grafts or to the surgeon, the junior party, who tested the material and recognized the importance of certain structural features.⁵⁶⁸ The material had a structure consisting of solid nodes connected by thin fibrils.⁵⁶⁹ The distance between the nodes, or fibril length, was important to the suitability of the material for use as a vascular graft.⁵⁷⁰

On a prior appeal, the Federal Circuit had affirmed the Board’s determination as to dates of conception and reduction to practice, but had remanded for determination of whether the engineer could claim that testing work conducted by the surgeon inured to the benefit of the engineer.⁵⁷¹ Here, the engineer claimed that he conceived the invention after he sent it to the surgeon for testing, but before the surgeon reduced it to practice at his request.⁵⁷² While the engineer had made an embodiment of the invention that met the limitations of the count, the engineer did not determine that the material would work and did not know the material met the fibril length limitation of the count.⁵⁷³ Accordingly, the engineer sought to rely on the inurement doctrine to obtain the benefit of the surgeon’s recognition that the material worked and that the fibril lengths were as described in the claim.⁵⁷⁴ Although the court held that the

564. See DURHAM, *supra* note 452, § 5.4, at 35-36 (discussing the procedure for handling interferences).

565. *Id.* § 5.4, at 36. There is a rebuttable presumption that the senior party was first to invent, which can be overcome by evidence provided by the junior party. *Id.*

566. 240 F.3d 1378, 57 U.S.P.Q.2d (BNA) 1990 (Fed. Cir. 2001).

567. *Id.* at 1380, 57 U.S.P.Q.2d (BNA) at 1991.

568. *Id.* at 1380-81, 57 U.S.P.Q.2d (BNA) at 1991-92.

569. *Id.* at 1381, 57 U.S.P.Q.2d (BNA) at 1991.

570. *Id.*, 57 U.S.P.Q.2d (BNA) at 1991-92.

571. *Cooper v. Goldfarb*, 154 F.3d 1321, 1323, 47 U.S.P.Q.2d (BNA) 1896, 1898 (Fed. Cir. 1998) (discussing *Genentech, Inc. v. Chiron Corp.*, 220 F.3d 1345, 1351, 55 U.S.P.Q.2d (BNA) 1636, 1641 (Fed. Cir. 2000)). Using the precedent of *Genentech*, the *Goldfarb* court concluded that inurement is a question of law that the court reviews de novo. *Id.*, 47 U.S.P.Q.2d (BNA) at 1904-05.

572. *Cooper v. Goldfarb*, 240 F.3d 1378, 1383, 57 U.S.P.Q.2d (BNA) 1990, 1993 (Fed. Cir. 2001).

573. *Id.* at 1384, 57 U.S.P.Q.2d (BNA) at 1994.

574. *Id.*, 57 U.S.P.Q.2d (BNA) at 1994. To take advantage of the surgeon’s reduction to practice, the engineer was required to establish three things: that he had conceived the invention; that he had an expectation that the tested embodiment

engineer could take advantage of the surgeon's recognition that the material was suitable for use as a vascular implant, since that was the purpose of the testing, there was no basis for finding that the engineer had any recognition of the fibril lengths of the material prior to the surgeon's reduction to practice.⁵⁷⁵

In *Hitzeman v. Rutter*,⁵⁷⁶ the Federal Circuit affirmed a decision of the Board of Patent Appeals and Interferences awarding priority to the senior applicant.⁵⁷⁷ The dispute related to an invention for using genetically modified yeast cells to produce a hepatitis B antigen in which the protein molecules of the antigen aggregated with lipids into spherical particles having diameters ranging from about 16 to 25nm.⁵⁷⁸ The court found that the particle size and sedimentation rate of the particles were material limitations of the invention.⁵⁷⁹ The priority dispute turned on whether the junior party had conceived not only the idea of producing hepatitis B antigen proteins in yeast, but also that they would aggregate into appropriate sized particles.⁵⁸⁰ Although the junior party claimed he had hoped that such particles would form, the court found that such a hope was insufficient to show conception.⁵⁸¹

Because the particle size and sedimentation rate were express limitations of the counts, they could not be ignored.⁵⁸² Although the

worked; and that he submitted the embodiment for testing with the intended purpose of the invention. *Id.*, 57 U.S.P.Q.2d (BNA) at 1994 (citing *Genentech Inc.*, 220 F.3d at 1354, 55 U.S.P.Q.2d (BNA) at 1643).

575. *Id.* at 1385, 57 U.S.P.Q.2d (BNA) at 1994 (adopting a "modified" version of the *Genentech* test, which would have required the engineer to have conceived of the fibril length limitation, to have had an expectation that his material had the required lengths and to have submitted the material for testing of the fibril lengths).

576. 243 F.3d 1345, 58 U.S.P.Q.2d (BNA) 1161 (Fed. Cir. 2001).

577. *Id.* at 1348, 58 U.S.P.Q.2d (BNA) at 1162.

578. *Id.* at 1349, 58 U.S.P.Q.2d (BNA) at 1162.

579. *Id.* at 1355, 58 U.S.P.Q.2d (BNA) at 1167.

580. *Id.* at 1357, 58 U.S.P.Q.2d (BNA) at 1169.

581. *Id.* at 1359, 58 U.S.P.Q.2d (BNA) at 1171. Priority, conception and reduction to practice are questions of law that are based on subsidiary factual findings. *Cooper v. Goldfarb*, 154 F.3d 1321, 1327, 47 U.S.P.Q.2d (BNA) 1896, 1900-01 (Fed. Cir. 1998). The factual findings of the Board are affirmed if they are supported by substantial evidence, i.e., "such relevant evidence as a reasonable mind might accept as adequate to support a conclusion." *In re Gartside*, 203 F.3d 1305, 1312, 53 U.S.P.Q.2d (BNA) 1769, 1774 (Fed. Cir. 2000) (citing *Consol. Edison Co. v. NLRB*, 305 U.S. 197, 229 (1938)). In particular, conception requires an idea that is definite and permanent. *Burroughs Wellcome Co. v. Barr Labs., Inc.*, 40 F.3d 1223, 1228, 32 U.S.P.Q.2d (BNA) 1915, 1919 (Fed. Cir. 1994). "An idea is definite and permanent when the inventor has a specific, settled idea, a particular solution to the problem at hand, not just a general goal or research plan he hopes to pursue." *Id.*, 32 U.S.P.Q.2d (BNA) at 1919.

582. *Hitzman*, 243 F.3d at 1354, 58 U.S.P.Q.2d (BNA) at 1167 ("[N]othing is better settled in patent law than that in interference cases express limitations in counts may not be ignored.") (quoting *McBride v. Teeple*, 109 F.3d 789, 799, 44 U.S.P.Q. (BNA) 523, 533 (1940)). An inherent property cannot be material to the patentability of

junior party's goal was to obtain particles of the appropriate size, his hope, general goal, or research plan was insufficient to show conception.⁵⁸³ Moreover, in this case, the junior party had asserted during prosecution that the result achieved in yeast cells was unexpected.⁵⁸⁴ His statement during prosecution, that "[o]ne skilled in the art at the time this application was filed would not have been able to reasonably predict" the formation of the antibody in particle form, demonstrated that he lacked complete conception.⁵⁸⁵ The Federal Circuit distinguished⁵⁸⁶ *Burroughs Wellcome Co. v. Barr Laboratories, Inc.*,⁵⁸⁷ which stated, "[a]n inventor's belief that his invention will work or his reasons for choosing a particular approach are irrelevant to conception."⁵⁸⁸ In *Burroughs*, however, the question was not "whether [the] inventor had a reasonable expectation of producing the claimed device or composition, but . . . whether the inventor had a reasonable expectation that the device or composition, once completed, would work for its intended purpose."⁵⁸⁹ Therefore, the court held the junior party did not have a reasonable expectation that he would actually produce the claimed invention.⁵⁹⁰

In *In re Roemer*,⁵⁹¹ the court reviewed another decision from the Board of Patent Appeals and Interferences. In the interference proceeding below, the Board had determined the claims of a reissue patent application to be unpatentable over prior art.⁵⁹² After the Board had defined the count, and concluded that the count was unpatentable over prior art, the parties agreed that any claim which corresponded to the count was also unpatentable.⁵⁹³ The sole issue on appeal was whether the Board correctly determined that the

the invention and must necessarily be present in the invention and so recognized by persons of ordinary skill. *Id.* at 1355, 58 U.S.P.Q.2d (BNA) at 1167. On rare occasions, commonplace properties of a claimed invention may be deemed inherent and, therefore, the court will not require specific conception of these properties. Such inherent properties represent rare exceptions to the rule that the putative inventor must show possession of every feature listed in the count. *Id.*, 58 U.S.P.Q.2d (BNA) at 1167.

583. *Id.* at 1356-57, 58 U.S.P.Q.2d (BNA) at 1169 (citing *Amgen, Inc. v. Chugai Pharm. Co.*, 927 F.2d 1200, 1206, 18 U.S.P.Q.2d (BNA) 1016, 1021 (Fed. Cir. 1991)).

584. *Id.* at 1357, 58 U.S.P.Q.2d (BNA) at 1169.

585. *Id.*, 58 U.S.P.Q.2d (BNA) at 1169.

586. *Id.* at 1357-58, 58 U.S.P.Q.2d (BNA) at 1170.

587. 40 F.3d 1223, 32 U.S.P.Q.2d (BNA) 1915 (Fed. Cir. 1994).

588. *Id.* at 1228, 32 U.S.P.Q.2d (BNA) at 1920 (citation omitted).

589. *Hitzeman*, 243 F.3d at 1358, 58 U.S.P.Q.2d (BNA) at 1170.

590. *Id.*, 58 U.S.P.Q.2d (BNA) at 1170.

591. 258 F.3d 1303, 59 U.S.P.Q.2d (BNA) 1527 (Fed. Cir. 2001).

592. *Id.* at 1304, 59 U.S.P.Q.2d (BNA) at 1527.

593. *Id.* at 1306-07, 59 U.S.P.Q.2d (BNA) at 1529.

claims of the application corresponded to the unpatentable count.⁵⁹⁴ The Federal Circuit held that the Board had not correctly construed the claims,⁵⁹⁵ which related to a set of shielded gradient coils for nuclear magnetic resonance imaging.⁵⁹⁶ The Federal Circuit concluded, when properly construed, the claims did not correspond to the count and were not obvious in view of the prior art.⁵⁹⁷

2. *Reissue*

When a patent is deemed wholly or partly invalid because the patentee or his attorney made an innocent error in the specification, drawing, or scope of the patent claim, the patentee may institute a reissue proceeding with the Patent and Trademark Office.⁵⁹⁸ Thus, reissue is a process by which patentees may correct errors in a patent.⁵⁹⁹

In *Shockley v. Arcan, Inc.*,⁶⁰⁰ the defendants challenged the validity of a reissued patent based upon the alleged failure of the reissue declarations to comply with a rule in effect at the time the reissue application was filed.⁶⁰¹ There was no dispute that the declarations would have complied with a revised rule adopted during the pendency of the application.⁶⁰² The Federal Circuit held that the new rule applied to all reissue applications pending on its effective date.⁶⁰³

The court also considered the question of intervening rights potentially arising from a reissued patent.⁶⁰⁴ According to the court's interpretation, the second paragraph of 35 U.S.C. § 252 provides for two kinds of intervening rights: absolute and equitable.⁶⁰⁵ Absolute

594. *Id.* at 1307, 59 U.S.P.Q.2d (BNA) at 1530.

595. *Id.* at 1310-11, 59 U.S.P.Q.2d (BNA) at 1531-32.

596. *Id.* at 1304, 59 U.S.P.Q.2d (BNA) at 1527.

597. *Id.* at 1309-10, 59 U.S.P.Q.2d (BNA) at 1531 (reasoning that the prior art gave only general guidance to the form of the claimed invention and therefore did not render the reissue claim obvious nor did it supply substantial evidence the claim corresponded to the count).

598. See HARMON, *supra* note 329, § 15.3(a).

599. See DURHAM, *supra* note 452, at 36.

600. 248 F.3d 1349, 58 U.S.P.Q.2d (BNA) 1692 (Fed. Cir. 2001).

601. *Id.* at 1358-59, 58 U.S.P.Q.2d (BNA) at 1697-98 (noting the former rule effective at the time the reissue application was filed required the patentee to detail the nature and origin of each error, while the rule that took effect on December 1, 1997 merely required the patentee to disclose only a single error and offer only a general statement about the patentee's lack of deceptive intent).

602. *Id.*, 58 U.S.P.Q.2d (BNA) at 1698.

603. *Id.* at 1359, 58 U.S.P.Q. (BNA) at 1697 ("Because the application which led to the . . . reissue patent was pending when the new rule took effect, the new rule applies in this case.")

604. *Id.*, 58 U.S.P.Q.2d (BNA) at 1698 (identifying "absolute" intervening rights and "equitable" intervening rights as two separate and distinct defenses to patent infringement under the statutory scheme).

605. *Id.*, 58 U.S.P.Q.2d (BNA) at 1698 (citing *BIC Leisure Prods. Inc. v.*

intervening rights attach to specific goods offered for sale prior to reissue.⁶⁰⁶ In comparison, equitable intervening rights may be granted to allow a defendant to continue manufacturing new alleged infringing products.⁶⁰⁷ While absolute intervening rights are granted for “the specific thing” offered for sale, the equitable intervening rights provision only attaches to “the thing” offered for sale.⁶⁰⁸ Relying, in part, on this distinction, the court held that only goods actually in existence at the reissue date qualify for absolute intervening rights.⁶⁰⁹ Whether to grant equitable intervening rights, however, is a decision committed to the discretion of the district court.⁶¹⁰ In this case, although the district court did not make findings as to whether the defendants had made substantial preparations before the reissue date,⁶¹¹ the Federal Circuit held that the record amply supported the district court’s denial of equitable intervening rights.⁶¹² Citing the jury’s conclusion that the defendant’s infringement of the reissued patent was willful, the Federal Circuit believed the district court was entitled to decline use of its equitable powers on the defendant’s behalf.⁶¹³

In *Pannu v. Storz Instruments, Inc.*,⁶¹⁴ the district court granted summary judgment holding a reissued patent invalid on the ground that it broadened the original claims and violated the “recapture” rule.⁶¹⁵ The patent at issue covered an intra-ocular lens with attached structures (also called ‘haptics’) designed to position and secure the

Windsurfing Int’l, Inc., 1 F.3d 1214, 1220, 27 U.S.P.Q.2d (BNA) 1671, 1675 (Fed. Cir. 1993)).

606. *Id.* at 1360, 58 U.S.P.Q.2d (BNA) at 1698.

607. *Id.*, 58 U.S.P.Q.2d (BNA) at 1698.

608. *Id.*, 58 U.S.P.Q.2d (BNA) at 1698 (noting section 252 of the code “continues to distinguish between ‘specific things’ and ‘things’”).

609. *Id.*, 58 U.S.P.Q.2d (BNA) at 1698 (citing *BIC Leisure Prods. Inc.*, 1 F.3d at 1221, 27 U.S.P.Q.2d (BNA) at 1676).

610. *Id.* at 1361, 58 U.S.P.Q.2d (BNA) at 1699.

611. *Id.*, 58 U.S.P.Q.2d (BNA) at 1699.

612. *Id.*, 58 U.S.P.Q.2d (BNA) at 1699.

613. *Id.*, 58 U.S.P.Q.2d (BNA) at 1699.

614. 258 F.3d 1366, 59 U.S.P.Q.2d (BNA) 1597 (Fed. Cir. 2001).

615. *Id.* at 1370, 59 U.S.P.Q.2d (BNA) at 1599. The recapture rule is designed to prevent a patentee from regaining “through reissue [proceedings] the subject matter that he surrendered in an effort to obtain allowance of the original claims.” *In re Clement*, 131 F.3d 1464, 1468, 45 U.S.P.Q.2d (BNA) 1161, 1164 (Fed. Cir. 1997) (citing *Mentor Corp. v. Coloplast, Inc.*, 998 F.2d 992, 995, 27 U.S.P.Q.2d (BNA) 1521, 1524 (Fed. Cir. 1993)). As described in *Clement*, the rule requires application of a three step process: first, “to determine whether and in what aspect the reissue claims are broader than the patent claims,” second, “to determine whether the broader aspects of the reissue claims relate to the surrendered subject matter,” and third, to determine whether the reissued claims were materially narrowed in other respects to avoid the recapture rule. *Id.* at 1468-70, 45 U.S.P.Q.2d (BNA) at 1164-65 (explaining if the scope of the reissue claim is the same or broader, then the patentee violates the recapture rule).

lens in the eye.⁶¹⁶ During prosecution, the applicant added limitations as to the shape of the haptics in order to obtain issuance of his claims.⁶¹⁷ On reissue, the patentee asserted that he had unnecessarily narrowed the claims by adding the shape limitations.⁶¹⁸ The subsequent reissue application removed the limitations on the shape of the haptics.⁶¹⁹ In affirming the district court's grant of summary judgment, the Federal Circuit found that the application added limitations that related to the dimensions and positioning of the haptics, but not their shape.⁶²⁰ Thus, the added limitations did not narrow the claims and prevent application of the recapture rule.⁶²¹

In *Dethmers Manufacturing Co. v. Automatic Equipment Manufacturing Co.*,⁶²² the Federal Circuit considered whether a reissued patent should be invalidated for failure of the reissue declaration to satisfy the requirements of Rule 1.75 of the Code of Federal Regulations as it was in effect prior to December 1, 1997.⁶²³ In examining the district court's grant of summary judgment in favor of the defendant, the Federal Circuit conducted a de novo review of the administrative record.⁶²⁴ The court raised, sua sponte, the issue of whether it should apply a more deferential standard,⁶²⁵ but held that to depart from the de novo standard of review set forth in prior Federal Circuit cases would require a decision of the court sitting en banc.⁶²⁶ The court examined without deference the determination of the Patent Office, and concluded that, while some of the reissued claims had adequate support in the reissue declaration, others did not.⁶²⁷ Therefore, the court only affirmed the district court's judgment with respect to the invalidity of reissue claims 4 through 7.⁶²⁸

616. *Pannu*, 258 F.3d at 1368, 59 U.S.P.Q.2d (BNA) at 1598.

617. *Id.* at 1369, 59 U.S.P.Q.2d (BNA) at 1598.

618. *Id.* at 1369-70, 59 U.S.P.Q.2d (BNA) at 1599.

619. *Id.* at 1370, 59 U.S.P.Q.2d (BNA) at 1599.

620. *Id.* at 1372, 59 U.S.P.Q.2d (BNA) at 1600-01.

621. *Id.*, 59 U.S.P.Q.2d (BNA) at 1600-01.

622. 272 F.3d 1365, 60 U.S.P.Q.2d (BNA) 1929 (Fed. Cir. 2001).

623. *Id.*, 60 U.S.P.Q.2d (BNA) at 1931 (interpreting Rule 1.75 as provided in 37 C.F.R. § 1.17(a) (1996)). At the time, Rule 1.75 required the patentee to detail precisely the nature and origin of all errors. *Id.*, 60 U.S.P.Q.2d (BNA) at 1931 (quoting 37 C.F.R. § 1.17(a)(2)-(5) (1996)). The court ruled in *Shockley v. Arcan, Inc.*, that the new, more liberal rule only became effective for all applications pending on December 1, 1997 or later. 248 F.3d 1349, 1358, 58 U.S.P.Q.2d (BNA) 1692, 1697 (Fed. Cir. 2001).

624. *Dethmers Mfg. Co.*, 272 F.3d at 1369, 60 U.S.P.Q.2d (BNA) at 1931.

625. *Id.* at 1370 n.2, 60 U.S.P.Q.2d (BNA) at 1932 n.2.

626. *Id.*, 60 U.S.P.Q.2d (BNA) at 1932 n.2.

627. *Id.* at 1377, 60 U.S.P.Q.2d (BNA) at 1937-38.

628. *Id.*, 60 U.S.P.Q.2d (BNA) at 1937-38.

3. *Certificates of correction*

35 U.S.C. § 255, entitled “Certificate of correction of applicant’s mistake,” authorizes the director of the Patent and Trademark Office to issue a certificate of correction when a good faith mistake of a clerical, typographical or otherwise minor character appears in a patent.⁶²⁹

In *Superior Fireplace Co. v. Majestic Products Co.*,⁶³⁰ the Federal Circuit conducted an extensive analysis of the powers of the Patent and Trademark Office and the courts in connection with certificates of correction under 35 U.S.C. § 255.⁶³¹ The district court determined that a certificate of correction relating to gas fireplace technology was invalid and that the uncorrected patent was not infringed.⁶³² In reviewing, the Federal Circuit first discussed the standard of proof that the district court should have applied to the certificate of correction.⁶³³ The court held that, since a certificate of correction becomes part of the patent and thereafter has the same effect and operation as if it originally had been issued in corrected form, the certificate is entitled to a presumption of validity and any challenge to the certificate of correction would have to be supported by clear and convincing evidence.⁶³⁴ The court noted that such a standard of proof was also consistent with the presumption that the Patent and Trademark Office does its job properly.⁶³⁵ In this case, the district court had not applied or discussed the clear and convincing evidence standard, believing that its review of the certificate of correction was governed by the Administrative Procedure Act.⁶³⁶ The parties had not briefed the issue, and the same ultimate conclusion would have been reached under either standard. Therefore, the Federal Circuit did not address the question of whether the Administrative Procedure Act standard of review supplanted the clear and convincing evidentiary standard.⁶³⁷

Next, the Federal Circuit confronted an issue of first impression, namely, whether § 255 allows the correction of mistakes when the

629. 35 U.S.C. § 255 (Supp. V 1999).

630. 270 F.3d 1358, 60 U.S.P.Q.2d (BNA) 1668 (Fed. Cir. 2001).

631. *Id.* at 1366-76, 60 U.S.P.Q.2d (BNA) at 1674-81.

632. *Id.* at 1364, 60 U.S.P.Q.2d (BNA) at 1072.

633. *Id.* at 1367, 60 U.S.P.Q.2d (BNA) at 1674 (stating the district court may have failed to apply the correct standard because it determined the Administrative Procedure Act applied).

634. *Id.*, 60 U.S.P.Q.2d (BNA) at 1674.

635. *Id.* at 1367 n.1, 60 U.S.P.Q.2d (BNA) at 1674 n.1.

636. *Id.* at 1367, 60 U.S.P.Q.2d (BNA) at 1674 (noting the APA, 5 U.S.C. § 706 (1994), provides for a variety of standards of review including *de novo*, “arbitrary and capricious,” “abuse of discretion,” and “unsupported by substantial evidence”).

637. *Id.* at 1367-68, 60 U.S.P.Q.2d (BNA) at 1675.

correction would broaden a claim, and if so, under what circumstances.⁶³⁸ Analyzing the language of § 255, the court noted that § 255 permits the correction of errors of a “clerical or typographical nature.”⁶³⁹ Since that term is not explicitly defined in the section,⁶⁴⁰ the court looked to the plain meaning of the phrase and concluded “clerical or typographical mistakes are generally understood to include simple mistakes such as obvious misspellings that are immediately apparent.”⁶⁴¹ The court found nothing in the plain language of the statute, however, which prohibited corrections of clerical or typographical mistakes that have the effect of broadening claims, and therefore interpreted § 255 “to allow broadening corrections of clerical or typographical mistakes.”⁶⁴²

In addition, the court addressed the disputed question of whether a clerical or typographical mistake must be evident from the public record before it can be corrected under § 255 so as to broaden a claim.⁶⁴³ The court examined the statutory scheme, including 35 U.S.C. § 251 through § 256 governing the amendment and correction of patents.⁶⁴⁴ The court noted that § 251 and § 252, which explicitly permit post-issuance amendments that may broaden claim scope, include specific protections for the public, such as a prohibition of new matter, a time limit on broadening claims, and a provision for intervening rights.⁶⁴⁵ This statutory scheme “reveals Congress’ concern for public notice and for protecting the public from the unanticipated broadening of a claim” after the grant of the patent by the PTO.⁶⁴⁶ Hence, the court found that under § 255, it would be inconsistent with the congressional objective to allow broadening corrections of errors that are not apparent from the public record.⁶⁴⁷

638. *Id.* at 1369, 60 U.S.P.Q.2d (BNA) at 1676.

639. *Id.*, 60 U.S.P.Q.2d (BNA) at 1676.

640. *Id.*, 60 U.S.P.Q.2d (BNA) at 1676.

641. *Id.* at 1369-70, 60 U.S.P.Q.2d (BNA) at 1676. In a later portion of its opinion, the court also addressed the meaning of the phrase “or of minor character” also contained in § 255. *Id.* at 1375-76, 60 U.S.P.Q.2d (BNA) at 1680-81. The court held, “[a] mistake that, if corrected, would broaden . . . a claim must . . . be viewed as highly important and thus cannot be a mistake of ‘minor character.’” *Id.* at 1375, 60 U.S.P.Q.2d (BNA) at 1681.

642. *Id.* at 1370, 60 U.S.P.Q.2d (BNA) at 1677 (“[T]he words of § 255 do not preclude broadening corrections.”).

643. *Id.*, 60 U.S.P.Q.2d (BNA) at 1677.

644. *Id.*, 60 U.S.P.Q.2d (BNA) at 1677.

645. *Id.* at 1370-71, 60 U.S.P.Q.2d (BNA) at 1677.

646. *Id.* at 1371, 60 U.S.P.Q.2d (BNA) at 1677.

647. *Id.*, 60 U.S.P.Q.2d (BNA) at 1678 (“Such a broadening claim would leave the public without effective notice, without the constraint of a two-year time bar, and without the hope of intervening rights.”).

Judge Dyk dissented, claiming the majority was wrong in reading into § 255 a requirement that “the error be apparent from the prosecution history, a requirement which is equally lacking an ‘express indication’ in the statute.”⁶⁴⁸ Judge Dyk argued that the public would be adequately protected by the rule adopted in *Southwest Software, Inc. v. Harlequin, Inc.*⁶⁴⁹ that the certificate of correction should be enforced only with respect to infringing acts occurring after the issuance of the certificate.⁶⁵⁰

III. INFRINGEMENT

A. Claim Construction

Infringement analysis requires a two-step process: first, the claims must be construed to determine their scope; second, the properly construed claims must be compared to the accused device.⁶⁵¹ Because the Federal Circuit regards claim construction as a matter of law and provides de novo review to claim construction determinations made by the district courts,⁶⁵² many of the Federal Circuit’s decisions contain extensive and detailed analysis of particular claim terms.⁶⁵³ Most of the decisions explain and illustrate useful principles of claim construction designed to provide guidance, predictability, and uniformity in the area of claim construction, and apply well-known claim construction methods to particular claim terms.⁶⁵⁴ Cases that turned, in large part, on claim construction issues, as well as a list of the claim terms construed, are contained in the appendix.⁶⁵⁵

While the district court is required to construe patent claims for validity and infringement,⁶⁵⁶ it need not follow any particular

648. *Id.* at 1378, 60 U.S.P.Q.2d (BNA) at 1683 (Dyk, J., dissenting).

649. 226 F.3d 1280, 1294, 56 U.S.P.Q.2d (BNA) 1161, 1172 (Fed. Cir. 2000).

650. *See Superior Fireplace Co.*, 270 F.3d at 1380, 60 U.S.P.Q.2d (BNA) at 1684-85. The majority responded, again relying on the statutory scheme, that this rule would not provide adequate protection. *Id.* at 1373, 60 U.S.P.Q.2d (BNA) at 1679. The majority pointed out that although reissue patents that broaden claims are also not retroactive, § 251 and § 252 nevertheless contain added protections—a two-year time limitation and intervening rights. *Id.*, 60 U.S.P.Q.2d (BNA) at 1679.

651. *Carroll Touch, Inc. v. Electro Mech. Sys., Inc.*, 15 F.3d 1573, 1576, 27 U.S.P.Q.2d (BNA) 1836, 1839 (Fed. Cir. 1993) (describing the two-step analysis as well-established).

652. *Id.* at 1577, 27 U.S.P.Q.2d (BNA) at 1839 (citations omitted).

653. *See, e.g., infra* appendix.

654. *See, e.g., id.*

655. *See, e.g., id.*

656. Although the claim construction process is discussed here under the infringement heading, the court must also construe claims to determine validity. The claim construction for validity must be consistent with that for infringement. *Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343, 1351, 57 U.S.P.Q.2d

procedure in doing so.⁶⁵⁷ Nor is the district court obliged to construe every term of the claims; it may construe only those claim terms necessary for a resolution of the infringement issues.⁶⁵⁸

In construing the claims, the court should follow the general sequence laid out in *Vitronics Corp. v. Conceptronic, Inc.*:⁶⁵⁹ “[T]he court should look first to the intrinsic evidence of record, i.e., the patent itself, including the claims, the specification and, if in evidence, the prosecution history.”⁶⁶⁰ In the rare instances where the claim terms remain unclear after consideration of the intrinsic evidence and the general rules of construction,⁶⁶¹ the court may consider extrinsic evidence, including “expert testimony, inventor testimony, dictionaries, and technical treatises and articles.”⁶⁶²

Dictionaries and technical treatises have a special role in claim construction. Although they are not “intrinsic” evidence, the court may consult them “at any time” to determine the ordinary meaning of technical claim terms.⁶⁶³ Likewise, the court may always consider extrinsic evidence for the purpose of coming to a better understanding of the technology involved in an invention.⁶⁶⁴

(BNA) 1747, 1752 (Fed. Cir. 2001) (“A claim must be construed before determining its validity just as it is first construed before deciding infringement.”) (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 996 n.7, 34 U.S.P.Q.2d (BNA) 1321, 1344 n.7 (Fed. Cir. 1995) (Mayer, J., concurring), *aff'd*, 517 U.S. 370 (1996)); *see also* *Sterner Lighting, Inc. v. Allied Elec. Supply, Inc.*, 431 F.2d 539, 544, 166 U.S.P.Q. (BNA) 454, 459 (5th Cir. 1970) (“A patent may not, like a ‘nose of wax,’ be twisted one way to avoid anticipation and another to find infringement.”).

657. *See* *Ballard Med. Prods. v. Allegiance Healthcare Corp.*, 268 F.3d 1352, 1358, 60 U.S.P.Q.2d (BNA) 1493, 1498 (Fed. Cir. 2001) (“District courts have wide latitude in how they conduct the proceedings before them, and there is nothing unique about claim construction that requires the court to proceed according to any particular protocol.”).

658. *Id.*, 60 U.S.P.Q.2d (BNA) at 1498.

659. 90 F.3d 1576, 39 U.S.P.Q.2d (BNA) 1573 (Fed. Cir. 1996).

660. *Id.* at 1582, 39 U.S.P.Q.2d (BNA) at 1576 (citing *Markman*, 52 F.3d at 979, 34 U.S.P.Q.2d (BNA) at 1330); *see also* *Dow Chem. Co. v. Sumitomo Chem. Co.*, 257 F.3d 1364, 1372, 59 U.S.P.Q.2d (BNA) 1609, 1614 (Fed. Cir. 2001); *Interactive Gift Express, Inc. v. Compuserve Inc.*, 256 F.3d 1323, 1331, 59 U.S.P.Q.2d (BNA) 1401, 1407 (Fed. Cir. 2001); *DeMarini Sports, Inc. v. Worth, Inc.*, 239 F.3d 1314, 1323, 57 U.S.P.Q.2d (BNA) 1889, 1893 (Fed. Cir. 2001).

661. *See* *Interactive Gift Express, Inc.*, 256 F.3d at 1332, 59 U.S.P.Q.2d (BNA) at 1407 (“Relying on extrinsic evidence to construe a claim is ‘proper only when the claim language remains genuinely ambiguous after consideration of the intrinsic evidence.’”) (quoting *Bell & Howell Document Mgmt. Prods. Co. v. Altek Sys.*, 132 F.3d 701, 706, 45 U.S.P.Q.2d (BNA) 1033, 1038 (Fed. Cir. 1997)).

662. *Advanced Cardiovascular Sys., Inc. v. Scimed Life Sys., Inc.*, 261 F.3d 1329, 1344, 59 U.S.P.Q.2d (BNA) 1801, 1812 (Fed. Cir. 2001) (quoting *Vitronics Corp.*, 90 F.3d at 1584, 39 U.S.P.Q.2d (BNA) at 1578).

663. *See* *Dow Chem. Co.*, 257 F.3d at 1373, 59 U.S.P.Q.2d (BNA) at 1614 (citing *Vitronics Corp.*, 90 F.3d at 1584 n.6, 39 U.S.P.Q.2d (BNA) at 1578 n.6).

664. *See, e.g., DeMarini Sports, Inc.*, 239 F.3d at 1323, 57 U.S.P.Q.2d (BNA) at 1893 (“Extrinsic evidence may . . . be accepted by the court to enhance its understanding of the technology.”); *Interactive Gift Express, Inc.*, 256 F.3d at 1332, 59 U.S.P.Q.2d

There is a “heavy presumption” that claim terms should be given their ordinary and customary import,⁶⁶⁵ as understood by a person of ordinary skill in the art.⁶⁶⁶ Thus, the court applies an objective test to construe disputed claim language.⁶⁶⁷ Although it is presumed that the patentee used the claim terms in their ordinary sense, the court must always consult the entire specification to determine the following: whether the patentee included an explicit definition which differs from the ordinary meaning, whether the patentee disclaimed subject matter that might otherwise be covered by the literal claim terms, or whether the patentee has limited the claims in some other way.⁶⁶⁸

If the patentee has chosen to be his own lexicographer, the specification must clearly state any special definition that the patentee wishes to apply to the claim terms.⁶⁶⁹ In addition, while the

(BNA) at 1408 (“Extrinsic evidence may always be consulted . . . to assist in understanding the underlying technology.”).

665. *Bell Atl. Network Serv., Inc. v. Covad Communications Group, Inc.*, 262 F.3d 1258, 1268, 59 U.S.P.Q.2d (BNA) 1865, 1870 (Fed. Cir. 2001) (citing *Johnson Worldwide Assocs. v. Zebco Corp.*, 175 F.3d 985, 989, 50 U.S.P.Q.2d (BNA) 1607, 1610 (Fed. Cir. 1999)).

666. *Id.*, 59 U.S.P.Q.2d (BNA) at 1610; *see also Dayco Prod., Inc. v. Total Containment, Inc.*, 258 F.3d 1317, 1324, 59 U.S.P.Q.2d (BNA) 1489, 1494-95 (Fed. Cir. 2001) (“[W]e must always be conscious that our objective is to interpret the claims from the perspective of one of ordinary skill in the art . . . not from the viewpoint of counsel or expert witnesses retained to offer creative arguments in infringement litigation.”) (citing *Haynes Int’l, Inc. v. Jessop Steel Co.*, 8 F.3d 1573, 1578 n.4, 28 U.S.P.Q.2d (BNA) 1652, 1656 n.4 (Fed. Cir. 1993)); *Interactive Gift Express, Inc.*, 256 F.3d at 1332, 59 U.S.P.Q.2d (BNA) at 1408 (“[I]t is important to bear in mind that the viewing glass through which the claims are construed is that of a person skilled in the art.”).

667. *See Kopykake Enter. v. Lucks Co.*, 264 F.3d 1377, 1383, 60 U.S.P.Q.2d (BNA) 1124, 1127 (Fed. Cir. 2001) (“[T]he focus in construing disputed terms in claim language is not the subjective intent of the parties . . . Rather the focus is on the objective test of what one of ordinary skill in the art at the time of the invention would have understood the term to mean.”) (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 968, 34 U.S.P.Q.2d (BNA) 1321, 1335 (Fed. Cir. 1995)).

668. *Day Int’l, Inc. v. Reeves Bros., Inc.*, 260 F.3d 1343, 1348, 59 U.S.P.Q.2d (BNA) 1790, 1793 (Fed. Cir. 2001); *see also Interactive Gift Express, Inc.*, 256 F.3d at 1331-32, 59 U.S.P.Q.2d (BNA) at 1407-08; *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1340-42, 58 U.S.P.Q.2d (BNA) 1059, 1062-64 (Fed. Cir. 2001); *Gart v. Logitech, Inc.*, 254 F.3d 1334, 1341, 59 U.S.P.Q.2d (BNA) 1290, 1294-95 (Fed. Cir. 2001). The court in *Gart* held,

[I]t is certainly correct that the specification and the prosecution history should be consulted to construe the language of the claims. However, we perform this consultation to determine if the patentee has chosen to be his or her own lexicographer . . . or when the language itself lacks sufficient clarity such that there is no means by which the scope of the claim may be ascertained from the language used . . . However, when the foregoing circumstances are not present, we follow the general rule that terms in the claim are to be given their ordinary and accustomed meaning.

Id., 59 U.S.P.Q.2d (BNA) at 1294-95 (citations omitted).

669. *See Bell Atl. Network Serv., Inc.*, 262 F.3d at 1268, 59 U.S.P.Q.2d (BNA) at 1870.

concept of “prosecution history estoppel” does not apply to literal infringement,⁶⁷⁰ the court must nevertheless determine whether the prosecution history provides a basis for limiting the literal claim scope.⁶⁷¹

The court must always read the claims in light of the specification.⁶⁷² It may not, however, import limitations from the specification or drawings into the claims where the claim language is unambiguous.⁶⁷³ The Federal Circuit has acknowledged the difficulty of distinguishing between a proper use and a forbidden use of the specification to narrow the claims.⁶⁷⁴

In *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*,⁶⁷⁵ the patent claims covered a balloon dilatation catheter construction having two passageways or lumens.⁶⁷⁶ The parties agreed that only two arrangements of the lumens were “known and practiced in the

[I]n redefining the meaning of particular claim terms away from the ordinary meaning, the intrinsic evidence must ‘clearly set forth’ or ‘clearly redefine’ a claim term so as to put one reasonably skilled in the art on notice that the patentee intended to so redefine the claim term [T]he specification must exhibit an ‘express intent to impart a novel meaning’ to claim terms However, a claim term may be clearly redefined without an explicit statement of redefinition.

Id., 59 U.S.P.Q.2d (BNA) 1870 (citations omitted).

670. *Ballard Med. Prod. v. Alligance Healthcare Corp.*, 268 F.3d 1352, 1358, 60 U.S.P.Q.2d (BNA) 1493, 1498 (Fed. Cir. 2001).

671. *See Interactive Gift Express, Inc.*, 256 F.3d at 1331, 59 U.S.P.Q.2d (BNA) at 1407 (“A deviation may also be necessary if a patentee has ‘relinquished [a] potential claim construction in an amendment to the claim or in an argument to overcome or distinguish a reference.’”) (quoting *Elkay Mfg. Co. v. Ebco Mfg. Co.*, 192 F.3d 973, 979, 52 U.S.P.Q.2d (BNA) 1109, 1113 (Fed. Cir. 1999)); *see also Biovail Corp. Int’l v. AndrX Pharm., Inc.*, 239 F.3d 1297, 1300-02, 57 U.S.P.Q.2d (BNA) 1813, 1816-17 (Fed. Cir. 2001) (finding that the prosecution history, including that of related patents, demonstrated that the “admixture” of the claims had to be homogeneous).

672. *See Network L.L.C. v. Cent. Corp.*, 242 F.3d 1347, 1352, 58 U.S.P.Q.2d (BNA) 1076, 1079 (Fed. Cir. 2001) (explaining that the specification describes the technological aspects of the invention, and the claim sets forth the subject matter of the patented invention).

673. *See, e.g., Gart*, 254 F.3d at 1341-42, 59 U.S.P.Q.2d (BNA) at 1296 (finding that the district court’s interpretation of the claim language was erroneous because it added a limitation appearing in the specification and not in the claim, despite the unambiguous language of the claim); *Network L.L.C.*, 242 F.3d at 1353, 58 U.S.P.Q.2d (BNA) at 1079-80 (holding that the district court properly interpreted the claim in light of the specification and did not use the specification to limit the scope of the claim); *SciMed Life Sys., Inc.*, 242 F.3d at 1340-42, 58 U.S.P.Q.2d (BNA) at 1062-63 (stating that if the specification unambiguously excludes a feature from the invention, it can properly be used to limit the scope of the claim in cases where the claim language is broad enough to include the feature in question).

674. *See Comark Communications, Inc. v. Harris Corp.*, 156 F.3d 1182, 1186, 48 U.S.P.Q.2d (BNA) 1001, 1005 (Fed. Cir. 1998) (“We recognize that there is sometimes a fine line between reading a claim in light of the specification, and reading a limitation into the claim from the specification.”).

675. 242 F.3d 1337, 58 U.S.P.Q.2d (BNA) 1059 (Fed. Cir. 2001).

676. *Id.* at 1339, 58 U.S.P.Q.2d (BNA) at 1061.

art”: the side-by-side configuration and the co-axial configuration.⁶⁷⁷ The district court interpreted the asserted claims to include only catheters with co-axial lumens.⁶⁷⁸ The Federal Circuit agreed, holding that the district court had not improperly read a limitation from the written description into the claims, but had properly followed the rule that claims must be read in light of the specification.⁶⁷⁹

Where the specification makes clear that the invention does not include a particular feature, that feature is deemed to be outside the reach of the claims of the patent, even though the language of the claims, read without reference to the specification, might be considered broad enough to encompass the feature in question.⁶⁸⁰

Here, the specification described the advantages of the co-axial structure and distinguished the prior art on the basis of using dual lumens.⁶⁸¹ The specification described the co-axial structure as the “present invention” and stated specifically that the co-axial structure “is the basic sleeve structure for all embodiments of the present invention contemplated and disclosed herein.”⁶⁸² The court found that this specific language, “defines SciMed’s invention in a way that excludes the dual, or side-by-side, lumen arrangement.”⁶⁸³ The court rejected SciMed’s argument that statements in the written description could restrict the scope of a claim only when the specification explicitly defined the claim term.⁶⁸⁴ Instead, the court determined “[t]he written description can provide guidance as to the meaning of the claims, thereby dictating the manner in which the claims are to be construed, even if the guidance is not provided in explicit definitional format.”⁶⁸⁵ The Federal Circuit concluded that the side-by-side lumen configuration was outside the literal scope of the claims and could not be saved by the doctrine of equivalents.⁶⁸⁶

Judge Dyk concurred in the result and joined in the opinion, but expressed his concern that the court’s decisions have done little to clarify the appropriate extent to which the specification can be used

677. *Id.*, 58 U.S.P.Q.2d (BNA) at 1061.

678. *Id.*, 58 U.S.P.Q.2d (BNA) at 1061-62.

679. *Id.* at 1340, 58 U.S.P.Q.2d (BNA) at 1065-66.

680. *Id.* at 1341, 58 U.S.P.Q.2d (BNA) at 1062-63.

681. *Id.* at 1342-43, 58 U.S.P.Q.2d (BNA) at 1064.

682. *Id.* at 1343, 58 U.S.P.Q.2d (BNA) at 1061.

683. *Id.*, 58 U.S.P.Q.2d (BNA) at 1065.

684. *Id.* at 1344, 58 U.S.P.Q.2d (BNA) at 1065.

685. *Id.*, 58 U.S.P.Q.2d (BNA) at 1065.

686. *Id.* at 1345, 58 U.S.P.Q.2d (BNA) at 1066 (“Having specifically identified, criticized and disclaimed the dual lumen configuration, the patentee cannot now invoke the doctrine of equivalents to ‘embrace a structure that was specifically excluded from the claims.’”) (quoting *Dolly, Inc. v. Spalding & Evenflo Cos.*, 16 F.3d 394, 400, 29 U.S.P.Q.2d (BNA) 1767, 1771 (Fed. Cir. 1994)).

to limit the claim.⁶⁸⁷

In *Pall Corp. v. PTI Tech., Inc.*,⁶⁸⁸ the claims related to technology used for filtering high-temperature corrosive chemicals.⁶⁸⁹ The Federal Circuit held that the district court had incorrectly construed the claims, and that the patentee had explicitly disclaimed certain subject matter during prosecution.⁶⁹⁰ The disclaimer was based on statements made to accompany an information disclosure statement to the Patent Office.⁶⁹¹ The Federal Circuit confirmed that, “[e]ven where the ordinary meaning of the claim is clear, it is well established that ‘[t]he prosecution history limits the interpretation of claim terms so as to exclude any interpretation that was disclaimed during prosecution.’”⁶⁹² The Federal Circuit remanded the action for determination of whether the disclaimed subject matter was the same or substantially the same as the accused device.⁶⁹³

In *Day International, Inc. v. Reeves Bros., Inc.*,⁶⁹⁴ the Federal Circuit confirmed that even where the claim terms appear to be clear, the court must nevertheless examine the specification and prosecution history to determine whether: the patentee has adopted an explicit definition different from the ordinary meaning of the term; has disclaimed subject matter; or has limited the scope of the claims in any other way.⁶⁹⁵ In this case, the patent related to a method for curing a compressible printing blanket.⁶⁹⁶ In the prosecution history, the patentee had explicitly distinguished and disclaimed the use of prior art temperatures in his curing process.⁶⁹⁷

In *Advanced Cardiovascular Systems, Inc. v. Medtronic, Inc.*,⁶⁹⁸ the Federal Circuit noted that the prosecution history of a related patent

687. *SciMed Life Sys., Inc.*, 242 F.3d at 1347, 58 U.S.P.Q.2d (BNA) at 1068 (Dyk, J., concurring) (“[O]ur decisions provide inadequate guidance as to when it is appropriate to look to the specification to narrow the claim by interpretation and when it is not appropriate to do so. Until we provide better guidance, I fear that the lower courts and litigants will remain confused.”).

688. 259 F.3d 1383, 59 U.S.P.Q.2d (BNA) 1763 (Fed. Cir. 2001).

689. *Id.* at 1385, 59 U.S.P.Q.2d (BNA) at 1764.

690. *Id.* at 1393, 59 U.S.P.Q.2d (BNA) at 1770.

691. *Id.* at 1391-92, 59 U.S.P.Q.2d (BNA) at 1769.

692. *Id.* at 1392, 59 U.S.P.Q.2d (BNA) at 1768 (quoting *Southwall Techs., Inc. v. Cardinal I.G. Co.*, 54 F.3d 1570, 1576, 34 U.S.P.Q.2d (BNA) 1673, 1676 (Fed. Cir. 1995)).

693. *Id.* at 1394, 59 U.S.P.Q.2d (BNA) at 1770.

694. 260 F.3d 1343, 59 U.S.P.Q.2d (BNA) 1790 (Fed. Cir. 2001).

695. *Id.* at 1348, 59 U.S.P.Q.2d (BNA) at 1769 (citations omitted); see also *Biodex Corp. v. Loredan Biomedical, Inc.*, 946 F.2d 850, 862-63, 20 U.S.P.Q.2d (BNA) 1252, 1262 (Fed. Cir. 1991).

696. *Day Int'l, Inc.*, 260 F.3d at 1343, 59 U.S.P.Q.2d (BNA) at 1791.

697. *Id.* at 1348, 59 U.S.P.Q.2d (BNA) at 1794.

698. 265 F.3d 1294, 60 U.S.P.Q.2d (BNA) 1161 (Fed. Cir. 2001).

may be relevant if the two patents have common claim limitations.⁶⁹⁹ In this case, however, there were no common claim terms in dispute.⁷⁰⁰ Instead, the patent claims related to balloon dilatation catheters, and the issue was whether the claims should be limited to coaxial designs or whether they should include a side-by-side design.⁷⁰¹ The claims did not contain any limitation to the coaxial design and, in fact, the written description of the patent in suit explicitly stated that “[a]lthough the present invention has been described principally in conjunction with catheters having coaxial lumens, it should be appreciated that the invention is as applicable, if not more applicable, to catheters having side-by-side lumens.”⁷⁰²

B. Means-Plus-Function Claims

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.⁷⁰³

The construction and application of means-plus-function claims raise additional issues. One particular issue, addressed in *Wenger Manufacturing, Inc. v. Coating Machine Systems, Inc.*,⁷⁰⁴ is whether a claim limitation falls under paragraph 6 of § 112. The Federal Circuit noted a presumption is created that paragraph 6 of § 112 applies whenever the word “means” is used in a claim.⁷⁰⁵ However, a limitation using the word “means” without reciting a function that corresponds to the means does not fall under paragraph 6.⁷⁰⁶

A second issue relates to the problem of identifying the structure corresponding to the means.⁷⁰⁷ In *Medtronic, Inc. v. Advanced*

699. *Id.* at 1305, 60 U.S.P.Q.2d (BNA) at 1168-69.

700. *Id.* at 1305-06, 60 U.S.P.Q.2d (BNA) at 1168.

701. *Id.* at 1303-04, 60 U.S.P.Q.2d (BNA) at 1167.

702. *Id.* at 1305, 60 U.S.P.Q.2d (BNA) at 1168.

703. 35 U.S.C. § 112, para. 6 (1994).

704. 239 F.3d 1225, 57 U.S.P.Q.2d (BNA) 1679 (Fed. Cir. 2001).

705. *Id.* at 1232, 57 U.S.P.Q.2d (BNA) at 1684 (citing *Personalized Media Communications, L.L.C. v. Int'l Trade Comm'n*, 161 F.3d 696, 703, 48 U.S.P.Q.2d (BNA) 1880, 1886 (Fed. Cir. 1998)).

706. *Id.*, 57 U.S.P.Q.2d (BNA) at 1679 (citing *Rodime PLC v. Seagate Tech., Inc.*, 174 F.3d 1294, 1302, 50 U.S.P.Q.2d (BNA) 1429, 1434 (Fed. Cir. 1999)). Moreover, paragraph 6 of § 112 is also not applicable if the claim itself describes sufficient structure to correspond to any claimed function. *Generation II Orthotics Inc. v. Med. Tech. Inc.*, 263 F.3d 1356, 1368-69, 59 U.S.P.Q.2d (BNA) 1919, 1929-30 (Fed. Cir. 2001).

707. *See Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc.*, 248 F.3d 1303, 1311, 58 U.S.P.Q.2d (BNA) 1607, 1614 (Fed. Cir. 2001) (“Structure disclosed in the

Cardiovascular Systems, Inc.,⁷⁰⁸ the court construed a means-plus-function claim relating to coronary stent technology.⁷⁰⁹ The language of the claims stated “means for connecting adjacent elements together.”⁷¹⁰ The only structure disclosed in the specification for connecting adjacent elements of the claimed device was a helically wound continuous wire.⁷¹¹ The Federal Circuit rejected the argument that the straight wire and hooks of certain figures in the patent also corresponded to the claimed function.⁷¹² Instead, the court found that the straight wire and hooks were a means to prevent longitudinal overstretch and were not associated in the specification with the function of connecting adjacent elements (and therefore not a corresponding structure).⁷¹³

A third means-plus-function issue relates to the scope of the limitations included within the language of the means-plus-function claim. The first step in construing a means-plus function-claim is to identify the claimed function.⁷¹⁴ The claimed function may not be narrowed or limited beyond the scope of the claim language.⁷¹⁵ “The function is properly identified as the language after the ‘means for’ clause and before the ‘whereby’ clause, because a whereby clause that merely states the result of the limitations in the claim adds nothing to the substance of the claim.”⁷¹⁶

Although the structure for performing the claimed function is not recited in the claim itself, it must be identified in the specification with sufficient particularity to satisfy the requirements of 35 U.S.C. § 112, paragraph 1.⁷¹⁷ If the specification fails to disclose an adequate

specification is ‘corresponding’ structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim.”) (quoting *B. Braun Med., Inc. v. Abbott Labs.*, 124 F.3d 1419, 1424, 43 U.S.P.Q.2d (BNA) 1896, 1900 (Fed. Cir. 1997)).

708. 248 F.3d 1303, 58 U.S.P.Q.2d (BNA) 1607 (Fed. Cir. 2001).

709. *Id.* at 1305, 58 U.S.P.Q.2d (BNA) at 1608.

710. *Id.* at 1308, 58 U.S.P.Q.2d (BNA) at 1611.

711. *Id.* at 1307, 58 U.S.P.Q.2d (BNA) at 1611.

712. *Id.* at 1311, 58 U.S.P.Q.2d (BNA) at 1616.

713. *Id.* at 1313, 58 U.S.P.Q.2d (BNA) at 1617 (“[O]ne skilled in the art would not perceive any clear link or association between these structures and the function of connecting adjacent elements together.”).

714. *Lockheed Martin Corp. v. Space Sys./Loral, Inc.*, 249 F.3d 1314, 1324, 58 U.S.P.Q.2d (BNA) 1671, 1678 (Fed. Cir. 2001).

715. *See id.*, 58 U.S.P.Q.2d (BNA) at 1678 (explaining that the claim language may not be used to expand the function either (citing *Micro Chem. Inc v. Great Plains Chem. Co.*, 194 F.3d 1250, 1258, 52 U.S.P.Q.2d (BNA) 1258, 1263 (Fed. Cir. 1999))).

716. *Id.*, 58 U.S.P.Q.2d (BNA) at 1678 (citing *Texas Instruments, Inc. v. United States Int’l Trade Comm’n*, 988 F.2d 1165, 1172, 41 U.S.P.Q.2d (BNA) 1018, 1023-24 (Fed. Cir. 1993)).

717. *Budde v. Harley-Davidson, Inc.*, 250 F.3d 1369, 1376, 58 U.S.P.Q.2d (BNA) 1801, 1806 (Fed. Cir. 2001).

structure, the claim may be held invalid as indefinite.⁷¹⁸ An indefiniteness challenge to a means-plus-function claim requires the challenger to show, by clear and convincing evidence, that a person skilled in the art would not find, in the specification, a structure adequate to perform the recited function.⁷¹⁹

In *Budde v. Harley-Davidson, Inc.*,⁷²⁰ the Federal Circuit found error in the district court's holding that the challenged patent failed to disclose structures for "electronic sensing means"⁷²¹ and structures corresponding to "a status sensing means for measuring a combination of air intake and engine temperature, and vacuum in the intake manifold and producing electronic signals therefrom."⁷²² In analyzing the electronic sensing means, the Federal Circuit found ample disclosure in the specification to identify a number of alternative sensors.⁷²³ With respect to the status sensing means, the only structure identified in the specification for measuring vacuum was a "commercially available" unit.⁷²⁴ Because the record reflected that vacuum sensors were well-known in the art, the court held that the language at issue would be understood by one skilled in the art as a structure capable of performing the function recited in the claim limitation.⁷²⁵

C. *Literal Infringement*

To find literal infringement, each limitation of the claim must be present in the accused device.⁷²⁶ Any deviation from the claim precludes such a finding.⁷²⁷

718. See 35 U.S.C. § 112(2) (2001) (requiring that "the specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter" of the invention); *Budde*, 250 F.3d at 1376, 58 U.S.P.Q.2d (BNA) at 1806 (citing *In re Dossel*, 115 F.3d 942, 945, 42 U.S.P.Q.2d (BNA) 1881, 1884 (Fed. Cir. 1997)).

719. See *Budde*, 250 F.3d at 1376-77, 58 U.S.P.Q.2d (BNA) at 1806.

720. 250 F.3d 1369, 58 U.S.P.Q.2d (BNA) 1801 (Fed. Cir. 2001).

721. *Id.* at 1377, 58 U.S.P.Q.2d (BNA) at 1806 (reciting that claim 1 of the '348 patent requires "an electronic sensing means for determining when the ignition system of the engine delivers an electronic pulse to fire each spark plug of the cylinders and producing an electronic signal in response thereto.").

722. *Id.* at 1380, 58 U.S.P.Q.2d (BNA) at 1809.

723. *Id.*, 58 U.S.P.Q.2d (BNA) at 1809 (listing four separate sensors disclosed in the '348 patent).

724. *Id.* at 1381, 58 U.S.P.Q.2d (BNA) at 1810 (noting that the specification stated that "vacuum sensors are commercially available units which produce analog signals for the control unit.").

725. *Id.* at 1382, 58 U.S.P.Q.2d (BNA) at 1810.

726. *Cole v. Kimberly-Clark Corp.*, 102 F.3d 524, 532, 41 U.S.P.Q.2d (BNA) 1001, 1007 (Fed. Cir. 1996).

727. *Id.*, 41 U.S.P.Q.2d (BNA) at 1007.

In *Telemac Cellular Corp. v. Topp Telecom, Inc.*,⁷²⁸ the patentee's claims described a mobile phone system which automatically debited the cost of calls to a prepaid credit account stored within the phone.⁷²⁹ The court construed the claims to require that the phone system calculate charges using call rates based upon local, long distance, international and roaming call categories.⁷³⁰ The accused device was a phone system that did not permit the user to make international calls.⁷³¹ The patentee claimed that the ability to bill for international calls was present in the phone's source code and that the system was, therefore, capable of being modified to charge for international calls.⁷³² The district court held and the Federal Circuit affirmed that this capability did not support a claim of literal infringement.⁷³³

In *Dow Chemical Co. v. Sumitomo Chemical Co.*,⁷³⁴ the patent at issue related to an improvement in a process for preparing certain types of "epoxy resins."⁷³⁵ The Federal Circuit ruled that the district court erred in finding that the accused processes did not literally infringe the claims because the accused processes consisted of two stages, one of which differed from the claimed processes.⁷³⁶ In particular, the district court had incorrectly relied on language from the Federal Circuit's decision in *Amstar Corp. v. Envirotech Corp.*,⁷³⁷ where the court stated that an accused product would not escape infringement if it contained additional modifications and "merely colorable variations" in addition to the claimed limitations.⁷³⁸ The Federal Circuit announced, however, that the language the district court relied on did not alter "the well-established principle that the 'mere addition of elements [in the accused product or process] cannot negate

728. 247 F.3d 1316, 58 U.S.P.Q.2d (BNA) 1545 (Fed. Cir. 2001).

729. *Id.* at 1319-20, 58 U.S.P.Q.2d (BNA) at 1546.

730. *Id.*, 58 U.S.P.Q.2d (BNA) at 1546.

731. *Id.* at 1320-21, 58 U.S.P.Q.2d (BNA) at 1547.

732. *Id.* at 1330, 58 U.S.P.Q.2d (BNA) at 1554.

733. *Id.*, 58 U.S.P.Q.2d (BNA) at 1554 (recognizing that under Federal Circuit precedent, the fact that "a device is capable of being modified to operate in an infringing manner is not sufficient, by itself, to support a finding of infringement" and that the allegations of literal infringement failed because a user of the accused device could not directly place international calls).

734. 257 F.3d 1364, 59 U.S.P.Q.2d (BNA) 1609 (Fed. Cir. 2001).

735. *Id.* at 1367, 59 U.S.P.Q.2d (BNA) at 1610.

736. *Id.* at 1380, 59 U.S.P.Q.2d (BNA) at 1620 (disagreeing with the district court's reasoning that the claimed processes should be compared with both of the accused processes because the patentee failed to show that the first stages of the accused processes were "merely colorable variations, unimportant and insubstantial changes and substitutions, or extraneous limitations" thereby precluding a finding of literal infringement).

737. 730 F.2d 1476, 1483, 221 U.S.P.Q. (BNA) 649, 654 (Fed. Cir. 1984).

738. *See Dow Chem. Co.*, 257 F.3d at 1380, 59 U.S.P.Q.2d (BNA) at 1620.

infringement.”⁷³⁹ In the case at bar, the preamble of the claim used the transitional phrase “which comprises.”⁷⁴⁰ The court held that the infringer cannot avoid literal infringement by adding steps to those explicitly recited in the claim.⁷⁴¹ The court also noted that, in addition to using the “which comprises” language, the claimed process was written in “‘Jepson format’,”⁷⁴² describ[ing] certain conditions as an improvement over a well-known process.”⁷⁴³ An accused process in a claim written in the ‘Jepson format’ cannot avoid infringement by adding additional steps.⁷⁴⁴

In *Kustom Signals, Inc. v. Applied Concepts, Inc.*,⁷⁴⁵ the patent at issue described a traffic radar device that permitted the operator to select an operating mode that would search for either the strongest or highest frequency signal (corresponding, respectively, to the largest target vehicle or the fastest target vehicle).⁷⁴⁶ The accused device searched for both the strongest and fastest signals simultaneously and permitted the operator to choose which one would be displayed.⁷⁴⁷ The court construed the claim and held that the ordinary meaning of “or” when used with two alternatives included one or the other but not both, although Boolean logic would allow “or” to include both alternatives.⁷⁴⁸ The patentee argued that the accused device literally infringed because it merely added a step to the operation performed by the claimed device.⁷⁴⁹ The Federal Circuit held, however, that the use of the term “or” excludes devices that search for both magnitude

739. *See id.*, 59 U.S.P.Q.2d (BNA) at 1620 (reasoning that the *Amstar* “merely colorable variation” language “simply recognized that the accused product in that case was ‘the same’ as the claimed invention and already contained the claimed limitations.”).

740. *Id.*, 59 U.S.P.Q.2d (BNA) at 1620.

741. *Id.* at 1380-81, 59 U.S.P.Q.2d (BNA) at 1620. “‘Comprising’ is a term of art used in claim language which means that the named elements are essential, but other elements may be added and still form a construct within the scope of the claim.” *Id.*, 59 U.S.P.Q.2d (BNA) at 1620 (quoting *Genentech, Inc. v. Chiron Corp.*, 112 F.3d 495, 501, 42 U.S.P.Q.2d (BNA) 1608, 1613 (Fed. Cir. 1997)).

742. Jepson format refers to a manner of writing a claim which “first describes the scope of the prior art and then claims an improvement over the prior art.” *Id.* at 1368, 59 U.S.P.Q.2d (BNA) at 1610.

743. *Id.* at 1381, 59 U.S.P.Q.2d (BNA) at 1620.

744. *See id.*, 59 U.S.P.Q.2d (BNA) at 1620 (noting that literal infringement cannot be avoided even if the extra steps are considered “extraneous” or mere “colorable variations”).

745. 264 F.3d 1326, 60 U.S.P.Q.2d (BNA) 1135 (Fed. Cir. 2001).

746. *Id.* at 1329, 60 U.S.P.Q.2d (BNA) at 1136.

747. *Id.*, 60 U.S.P.Q.2d (BNA) at 1137.

748. *See id.* at 1330-32, 60 U.S.P.Q.2d (BNA) at 1137-39 (upholding district court’s claim construction analysis that “or” was intended to be used for its ordinary meaning despite the presumption that technical terms are ordinarily used in patent documents).

749. *Id.* at 1332, 60 U.S.P.Q.2d (BNA) at 1139.

and frequency.⁷⁵⁰

In *Xerox Corp. v. 3Com Corp.*,⁷⁵¹ the Federal Circuit reversed a district court's holding, on summary judgment, that the accused system did not infringe.⁷⁵² The patent at issue described a system of symbols used for computer recognition of handwritten text.⁷⁵³ The Federal Circuit held that the district court had committed clear error in applying its own claim construction to the accused system.⁷⁵⁴

In *Novartis Corp. v. Ben Venue Laboratories, Inc.*,⁷⁵⁵ the district court found no literal infringement and granted summary judgment for the defendant.⁷⁵⁶ The patent in controversy described a crystalline form of pamidronate disodium.⁷⁵⁷ The defendant had submitted an Abbreviated New Drug Application ("ANDA") requesting approval for a liquid formulation in which the pamidronate disodium was dissolved in water.⁷⁵⁸ The parties agreed on claim construction and that none of the crystalline form of the pamidronate disodium compound was present at the beginning or end of the alleged infringer's process.⁷⁵⁹ The only issue was whether the crystalline form was present transiently at some time during the defendant's allegedly infringing process.⁷⁶⁰ In order to establish infringement, the patentee submitted, inter alia, an expert's affidavit based upon a computer model designed to simulate the defendant's process.⁷⁶¹ The district court held, however, that the computer model was fatally deficient and that the expert's affidavit amounted to no more than a

750. See *id.*, 60 U.S.P.Q.2d (BNA) at 1139 (recognizing that the use of the term "comprising" does not "free the claim from its own limitations" and that any device that searches for both the strongest and fastest target "is outside the literal scope of the claims").

751. 267 F.3d 1361, 60 U.S.P.Q.2d (BNA) 1526 (Fed. Cir. 2001).

752. *Id.* at 1369, 60 U.S.P.Q.2d (BNA) at 1531.

753. See *id.* at 1363-64, 60 U.S.P.Q.2d (BNA) at 1527 (discussing Xerox's claim that 3Com's handwriting recognition software in its "Palm Pilot" device infringed Xerox's patent).

754. See *id.* at 1367, 60 U.S.P.Q.2d (BNA) at 1530 (applying clear error standard of review for factual determinations of literal infringement and infringement under the doctrine of equivalents and finding that the district court had incorrectly applied the properly construed claims of Xerox to 3Com's handwriting recognition software).

755. 271 F.3d 1043, 60 U.S.P.Q.2d (BNA) 1836 (Fed. Cir. 2001).

756. *Id.* at 1046, 60 U.S.P.Q.2d (BNA) at 1838.

757. *Id.* at 1045, 60 U.S.P.Q.2d (BNA) at 1837. Pamidronate disodium is a "bone-resorption inhibitor used to treat disorders of bone metabolism, including bone metastases, cancer-associated hypercalcemia, and Paget's disease." *Id.*, 60 U.S.P.Q.2d (BNA) at 1837.

758. *Id.* at 1045, 60 U.S.P.Q.2d (BNA) at 1836.

759. *Id.* at 1047, 60 U.S.P.Q.2d (BNA) at 1838-39.

760. *Id.*, 60 U.S.P.Q.2d (BNA) at 1839.

761. *Id.* at 1059, 60 U.S.P.Q.2d (BNA) at 1840-41. The expert's computer program predicted the creation of an infringing precipitate during the defendant's accused process. *Id.*, 60 U.S.P.Q.2d (BNA) at 1840-41.

conclusory opinion by the expert.⁷⁶² The Federal Circuit stated that conclusory opinions by experts are not sufficient to raise material issues of fact and preclude summary judgment.⁷⁶³ The Federal Circuit was unable to discern the assumptions underlying the computer model, and therefore held the expert's computer model and affidavit insufficient to preclude summary judgment of non-infringement for the defendant.⁷⁶⁴

D. *Infringement under the Doctrine of Equivalents*

The Federal Circuit evaluates a claim of infringement under the doctrine of equivalents by seeking to determine whether the differences between the claim and the accused device are "insubstantial." The court frequently applies the "function-way-result" test to examine, with regard to each element not literally present, "whether the accused device performs substantially the same function, in substantially the same way, to achieve substantially the same result."⁷⁶⁵ The Federal Circuit discussed this standard of evaluation in a number of different contexts in 2001.

In *Telemac Cellular Corp. v. Topp Telecom, Inc.*,⁷⁶⁶ after finding that the accused cellular telephone system did not literally meet the claim limitation requiring the system to permit billing for international calls,⁷⁶⁷ the district court examined whether that limitation was

762. See *id.* at 1049-50, 60 U.S.P.Q.2d (BNA) at 1841 (questioning expert's use of a forty year old scholarly article and expert's failure to consider defendant's mixing equipment in determining that computer model did not accurately describe defendant's manufacturing process, and that opinions were so "empirically groundless" that they constituted nothing more than "self-serving conclusion[s]").

763. See *id.* at 1050-51, 60 U.S.P.Q.2d (BNA) at 1841-42 (recognizing that patentee may "run risk" of preemptory non-suit and summary judgment of non-infringement by merely submitting affidavit of expert who "opines that the accused device meets the claim limitations"). The Federal Circuit echoed its previous statement that when opposing a motion for summary judgment, an "expert must set forth the factual foundation for his opinion . . . in sufficient detail for the court to determine whether that factual foundation would support a finding of infringement under the claim construction adopted by the court, with all reasonable inferences drawn in favor of the non-movant." See *id.* at 1051, 60 U.S.P.Q.2d (BNA) at 1842 (quoting *Arthur A. Collins, Inc. v. N. Telecom Ltd.*, 216 F.3d 1042, 1047-48, 55 U.S.P.Q.2d (BNA) 1143, 1147 (Fed. Cir. 2000)).

764. *Id.* at 1054, 60 U.S.P.Q.2d (BNA) at 1894 ("[E]very simulation of a physical process embodies at least some simplifying assumptions, and requires both a solid theoretical foundation and realistic input parameters to yield meaningful results. Without knowing these foundations, a court cannot evaluate whether the simulation is probative . . .").

765. *Unidynamics Corp. v. Automatic Prods. Int'l, Ltd.*, 157 F.3d 1311, 1322, 48 U.S.P.Q.2d (BNA) 1099, 1106 (Fed. Cir. 1998).

766. 247 F.3d 1316, 58 U.S.P.Q.2d (BNA) 1545 (Fed. Cir. 2001).

767. See *supra* notes 729-32 and accompanying text (discussing *Telemac Cellular Corp. v. Topp Telecom, Inc.*, 247 F.3d 1316, U.S.P.Q.2d (BNA) 1545 (Fed. Cir.

present under the doctrine of equivalents.⁷⁶⁸ The court held that the limitation was not present because the accused system blocked international calls, which could be made only by using the services of an outside international carrier.⁷⁶⁹ Such calls would then be billed as local or roaming calls.⁷⁷⁰ The Federal Circuit agreed with the district court finding that no reasonable jury could consider this feature an equivalent to the missing international rate calculation limitation of the claim as construed.⁷⁷¹

In *Viskase Corp. v. American National Can Co.*,⁷⁷² the Federal Circuit reversed the district court's decision granting summary judgment on the issue of infringement.⁷⁷³ The Federal Circuit found ample evidence presented by each side to create a genuine dispute of material fact over whether the copolymers used in making one form of shrink wrap material were equivalent to linear copolymers used in the patentee's shrink wrap material.⁷⁷⁴ Therefore, the court held that a reasonable jury could have found that the accused products were not equivalent.⁷⁷⁵

In *Kustom Signals, Inc. v. Applied Concepts, Inc.*,⁷⁷⁶ the court also considered the application of the doctrine of equivalents.⁷⁷⁷ The patent claim, describing a traffic radar system, denoted that the system searched for and processed either magnitude or frequency.⁷⁷⁸ The district court held that applying the claims to a device that searched for both magnitude or frequency would eliminate the "or" element of the claims and violate the all-elements rule.⁷⁷⁹ In this case,

2001)).

768. See *Telemac Cellular Corp.*, 247 F.3d at 1332, 58 U.S.P.Q.2d (BNA) at 1556.

769. *Id.* at 1330-31, 58 U.S.P.Q.2d (BNA) at 1554-55.

770. *Id.*, 58 U.S.P.Q.2d (BNA) at 1555.

771. See *id.* at 1331, 58 U.S.P.Q.2d (BNA) at 1555 ("Where no equivalent element can be identified in the accused device, the district court is not at liberty to altogether ignore limitations of a claim."). The Federal Circuit also repeated the Supreme Court's admonition that, "if a theory of equivalence would entirely vitiate a particular claim element, partial or complete judgment should be rendered by the court, as there would be no further material issue for the jury to resolve." *Id.*, 58 U.S.P.Q.2d (BNA) at 1555 (quoting *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 39 n.8 (1997)).

772. 261 F.3d 1316, 59 U.S.P.Q.2d (BNA) 1823 (Fed. Cir. 2001).

773. *Id.* at 1325, 59 U.S.P.Q.2d (BNA) at 1829.

774. *Id.*, 59 U.S.P.Q.2d (BNA) at 1829.

775. See *id.* at 1324, 59 U.S.P.Q.2d (BNA) at 1829 ("[T]he factual question of equivalency requires determination of whether the accused composition is only insubstantially changed from what is claimed, applying appropriate criteria to the determination of insubstantial change.") (citing *Warner-Jenkinson*, 520 U.S. at 25).

776. 264 F.3d 1326, 60 U.S.P.Q.2d (BNA) 1135 (Fed. Cir. 2001).

777. *Id.* at 1333, 60 U.S.P.Q.2d (BNA) at 1139-40.

778. *Id.* at 1329, 60 U.S.P.Q.2d (BNA) at 1136-37.

779. *Id.* at 1333, 60 U.S.P.Q.2d (BNA) at 1139-40. "The all-elements rule is that an accused device must contain every claimed element of the invention or the

the Federal Circuit held that the word “or” is not an element.⁷⁸⁰ However, prosecution history estoppel precluded the application of the claims to a device that searched for both magnitude and frequency signals and therefore prevented the application of the doctrine of equivalents.⁷⁸¹

In *Toro Co. v. White Consolidated Industries*,⁷⁸² the district court granted summary judgment holding that the defendant’s vacuum-blower did not infringe the plaintiff’s patent under the doctrine of equivalents.⁷⁸³ The patent disclosed a design in which the vacuum-blower had a removable cover with an attached restriction ring.⁷⁸⁴ The accused device had a two-piece ring and cover.⁷⁸⁵ The Federal Circuit reversed, holding that the record raised material issues of fact as to whether the accused device could be found equivalent to the claims.⁷⁸⁶ The court discussed both the insubstantial differences test⁷⁸⁷ and the function-way-result test.⁷⁸⁸ The district court had relied on the latter test and had determined that there could be no infringement because the two-piece system did not automatically perform the function of placing the restriction ring.⁷⁸⁹ The Federal Circuit held that, since the claims were described solely in structural terms, it was inappropriate to import into them a functional limitation.⁷⁹⁰

In *Schoell v. Regal Marine Industries*,⁷⁹¹ the invention related to hulls used on powerboats.⁷⁹² The Federal Circuit found, however, that

equivalent of every claimed element.” *Id.*, 60 U.S.P.Q.2d (BNA) at 1139-40 (citing *Warner-Jenkinson*, 520 U.S. at 29).

780. *Id.* at 1333, 60 U.S.P.Q.2d (BNA) at 1140.

781. *See id.*, 60 U.S.P.Q.2d (BNA) at 1140 (noting that Kustom had previously argued in a prosecution in response to a rejection for obviousness that the claim “was directed to operator-selected alternative search modes for magnitude or frequency”).

782. 266 F.3d 1367, 60 U.S.P.Q.2d (BNA) 1437 (Fed. Cir. 2001).

783. *Id.* at 1369, 60 U.S.P.Q.2d (BNA) at 1437-38.

784. *Id.* at 1368-69, 60 U.S.P.Q.2d (BNA) at 1437-38.

785. *Id.*, 60 U.S.P.Q.2d (BNA) at 1437-38.

786. *Id.* at 1369-70, 60 U.S.P.Q.2d (BNA) at 1438-39.

787. *Id.*, 60 U.S.P.Q.2d (BNA) at 1438-39. This test prevents a copyist from making “unimportant and insubstantial changes and substitutions in [a] patent which, though adding nothing, would be enough to take the copied matter outside the claim, and hence outside the reach of the law.” *Id.* at 1370, 60 U.S.P.Q.2d (BNA) at 1438-39.

788. *Id.*, 60 U.S.P.Q.2d (BNA) at 1969. The function-way-result test asks the factfinder to determine “whether the element in the accused device ‘does substantially the same thing in substantially the same way to get substantially the same result.’” *Id.*, 60 U.S.P.Q.2d (BNA) at 1969.

789. *Id.* at 1370-71, 60 U.S.P.Q.2d (BNA) at 1439.

790. *See id.* at 1371, 60 U.S.P.Q.2d (BNA) at 1439 (reasoning that the restriction ring structure at issue could not become part of the claimed structure unless specifically claimed).

791. 247 F.3d 1202, 58 U.S.P.Q.2d (BNA) 1450 (Fed. Cir. 2001).

792. *Id.* at 1204, 58 U.S.P.Q.2d (BNA) at 1451.

there was insufficient evidence to create an issue of fact as to whether the defendant's v-shaped aft keel was insubstantially different from the claimed "generally flat" aft keel.⁷⁹³

E. Prosecution History Estoppel

Prosecution history estoppel can restrict the availability of the doctrine of equivalents.⁷⁹⁴ Prosecution history estoppel arises not only from the express disclaimer or abandonment of subject matter,⁷⁹⁵ but also from claim-narrowing amendments made for any reasons related to patentability, as well as from amendments which cancel broad claims and replace them with narrower claims.⁷⁹⁶

In *Pioneer Magnetics, Inc. v. Micro Linear Corp.*,⁷⁹⁷ the Federal Circuit held that prosecution history estoppel arose from a narrowing amendment, even though the amendment was voluntary.⁷⁹⁸ The court noted that many factors must be examined to establish whether prosecution history estoppel applies. First, the court must decide which of the claim limitations are alleged to be infringed because of the doctrine of equivalents and whether an amendment narrows the literal scope of the claim.⁷⁹⁹ Next, the court must determine the reason for the amendment.⁸⁰⁰ The burden lies with the patent holder to show that the amendment was not made for a reason related to patentability.⁸⁰¹ If the amendment was made for a reason related to patentability, then no range of equivalents is available as to the

793. See *id.* at 1210, 58 U.S.P.Q.2d (BNA) at 1456 (rejecting evidence of similar performance results between two boat hulls to show that the patented item performs the same function in the same way as insufficient to create material issue of fact for trial).

794. See *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 608-09 (1950) (noting that the doctrine of equivalents requires only that an article or process be substantially the same, or perform in substantially the same way and provide substantially the same function and result, for infringement to occur).

795. See *Pharmacia & Upjohn Co. v. Mylan Pharms., Inc.*, 170 F.3d 1373, 1376, 50 U.S.P.Q.2d (BNA) 1033, 1036 (Fed. Cir. 1999) (stating that prosecution history estoppel prevents a patentee from gaining coverage under the doctrine of equivalents when the patentee has relinquished the subject matter in question during prosecution).

796. See *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 30-34 (1997) (describing estoppel by amendment).

797. 238 F.3d 1341, 57 U.S.P.Q.2d (BNA) 1553 (Fed. Cir. 2001).

798. *Id.* at 1346, 57 U.S.P.Q.2d (BNA) at 1556 (noting that voluntary claim amendments are to be treated in the same manner as other amendments and that "a voluntary amendment that narrows the scope of a claim for reasons related to the statutory requirements for a patent will give rise to prosecution history estoppel as to the amended claim element") (quoting *Festo Corp. v. Shokeetsu Kinzoku Kogyo Kabashiki Co.*, 234 F.3d 558, 568, 56 U.S.P.Q.2d (BNA) 1865, 1871 (Fed. Cir. 2000)).

799. *Id.* at 1344, 57 U.S.P.Q.2d (BNA) at 1555.

800. *Id.*, 57 U.S.P.Q.2d (BNA) at 1555.

801. *Id.*, 57 U.S.P.Q.2d (BNA) at 1555.

subject matter of the amendment.⁸⁰² If the court determines that the amendment was not made for a reason related to patentability, then the court must still consider whether estoppel will apply.⁸⁰³

In *Pioneer Magnetics*, the claims related to a circuit designed to receive input voltage at varying levels and to emit output voltage at a constant level.⁸⁰⁴ The claim amendments, made in response to prior art-based rejections, added a limitation for a “switching analog multiplier circuit” to the elements previously included in the unamended claims.⁸⁰⁵ The Federal Circuit, based on its de novo examination of the prosecution history,⁸⁰⁶ concluded that the amendment was made to avoid prior art, and therefore prosecution history estoppel applied.⁸⁰⁷

In *Lockheed Martin Corp. v. Space Systems/Loral, Inc.*,⁸⁰⁸ the Federal Circuit rejected the patentee’s effort to persuade the court to apply a “flexible bar” approach to determine the proper scope of equivalents.⁸⁰⁹ Instead, the court reaffirmed its comprehensive and explicit rejection of a “flexible bar” approach to the scope of equivalents.⁸¹⁰ Because the flexible bar approach was rejected, prosecution history estoppel did not apply.⁸¹¹

In *Dow Chemical Co. v. Sumitomo Chemical Co.*,⁸¹² the Federal Circuit held that statements made during reexamination proceedings did

802. *Id.* at 1345, 57 U.S.P.Q.2d (BNA) at 1555 (citing *Warner-Jenkinson*, 520 U.S. at 32-33).

803. *Id.*, 57 U.S.P.Q.2d (BNA) at 1555 (citing *Warner-Jenkinson*, 520 U.S. at 40-41).

804. *Id.* at 1343, 57 U.S.P.Q.2d (BNA) at 1554.

805. *See id.*, 57 U.S.P.Q.2d (BNA) at 1554 (noting that the applicant’s original application contained the terms “circuit means” and “multiplier,” which were amended to read “circuit means including a pulse-width modulator” and “switching analog multiplier circuit,” respectively).

806. *See id.* at 1344, 56 U.S.P.Q.2d (BNA) at 1555 (declaring that the Federal Circuit reviews the issue of prosecution history estoppel de novo because it regards the issue as a legal question) (citing *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1459-60, 46 U.S.P.Q.2d (BNA) 1169, 1177-78 (Fed. Cir. 1998) (*en banc*)).

807. *See id.* at 1346, 57 U.S.P.Q.2d (BNA) at 1556 (noting that avoidance of prior art is “the classic basis for the application of prosecution history estoppel”).

808. 249 F.3d 1314, 58 U.S.P.Q.2d (BNA) 1671 (Fed. Cir. 2001).

809. *Id.* at 1326-27, 58 U.S.P.Q.2d (BNA) at 1680. The flexible bar approach provided that prosecution history estoppel would force the patentee to give up only the “exact subject matter” that the patentee had in fact surrendered. *See Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 234 F.3d 558, 574, 56 U.S.P.Q.2d (BNA) 1865, 1876.

810. *See Lockheed Martin Corp.*, 249 F.3d at 1327, 58 U.S.P.Q.2d (BNA) at 1677 (stating that the Federal Circuit has rejected the flexible bar approach because of the critical importance of providing notice through the patent claims process of exactly what is protected by a patent) (citing *Festo Corp.*, 234 F.3d at 574-78, 56 U.S.P.Q.2d (BNA) at 1877-80).

811. *Id.* at 1314, 58 U.S.P.Q.2d (BNA) at 1680.

812. 257 F.3d 1364, 59 U.S.P.Q.2d (BNA) 1609 (Fed. Cir. 2001).

not give rise to argument-based prosecution history estoppel.⁸¹³ The Federal Circuit disagreed with the district court's interpretation that statements made during reexamination proceedings evidenced that Dow's process could not be infringed by defendant's two-stage process.⁸¹⁴ The Federal Circuit found the reexamination proceeding statements to be in contrast with Dow's statements during prosecution, which attempted to clarify possible misconceptions based on the examiner's statements and made clear that its invention was not limited to a one-step process.⁸¹⁵ Thus, the court held Dow's reexamination statements did not prove the surrender of subject matter needed to invoke argument-based prosecution history estoppel.⁸¹⁶

In *Mycogen Plant Science, Inc. v. Monsanto Co.*,⁸¹⁷ the court denied the patentee's petition for rehearing, reaffirming its holding that prosecution history estoppel precluded the application of the doctrine of equivalents to the patentee's claims for synthetic genes.⁸¹⁸ During prosecution, the claims had been rejected on the ground that the specification enabled only one embodiment.⁸¹⁹ The issue on the petition for rehearing was whether the complete bar rule of *Festo* would apply in a situation where a claim had been cancelled and replaced with another.⁸²⁰ The Federal Circuit confirmed that the scope of the independent claim "was clearly limited when it was replaced by a claim the language of which was drawn from a prior dependent claim."⁸²¹

F. Inducement of Infringement

35 U.S.C. § 271(b) provides that, "Whoever actively induces infringement of a patent shall be liable as an infringer." In 2001, the

813. *Id.* at 1382, 59 U.S.P.Q.2d (BNA) at 1621.

814. *See id.*, 59 U.S.P.Q.2d (BNA) at 1621 (finding that the district court incorrectly compared Dow's claimed process to both stages of the two-staged process of the defendant, whereas the defendant's second stage alone could have been found to infringe, and that Dow, in response to examiner's statements, had made clear during reexamination that their claim was not limited to a one-stage process).

815. *See id.*, 59 U.S.P.Q.2d (BNA) at 1621.

816. *See id.* at 1382, 59 U.S.P.Q.2d (BNA) at 1621-22 (noting that a surrender of subject matter necessary to invoke prosecution history estoppel must be "clear and unmistakable").

817. 261 F.3d 1345, 59 U.S.P.Q.2d (BNA) 1852 (Fed. Cir. 2001).

818. *Id.* at 1350, 59 U.S.P.Q.2d (BNA) at 1856.

819. *Id.* at 1346, 59 U.S.P.Q.2d (BNA) at 1853 (noting that the specification was enabling for only one specific sequence of DNA).

820. *See id.* at 1349, 59 U.S.P.Q.2d (BNA) at 1885 (stating that the complete bar rule prevents the application of the doctrine of equivalents where a claim has been replaced with a claim that added a limitation to the original claim).

821. *Id.* at 1350, 59 U.S.P.Q.2d (BNA) at 1856.

Federal Circuit decided one case which turned on the question of whether a corporation could be liable for inducing infringement by its affiliates.

In *Tegal Corp. v. Tokyo Electron Co.*,⁸²² the defendant was accused of having violated an injunction that prohibited acts constituting contributory infringement or inducement of infringement.⁸²³ Although there was no evidence that the defendant itself had sold or serviced infringing devices after the injunction was entered, the plaintiff alleged that the defendant had an affirmative obligation to prevent its corporate affiliates from selling or servicing infringing devices.⁸²⁴ The Federal Circuit said, however, that “in the absence of a showing of control over another party, merely permitting that party to commit infringing acts does not constitute infringement, and it likewise cannot constitute ‘facilitating infringing acts.’”⁸²⁵ Moreover, in the absence of a showing “that a parent company was either an alter ego of its subsidiary or controlled the conduct of the subsidiary,” the parent’s failure to stop infringement by a subsidiary could not constitute either direct infringement or active inducement.⁸²⁶ The Federal Circuit held that because there was no evidence that the defendant controlled the conduct of its affiliates and subsidiaries, the defendant did not violate the portion of the injunction regarding inducement of infringement.⁸²⁷

G. *Infringement under § 271(f)*

35 U.S.C. § 271(f) (2) provides that:

[w]hoever without authority supplies or causes to be supplied in or from the United States any component of a patented invention that is especially made or especially adapted for use in the invention and not a staple article or commodity of commerce suitable for substantial non-infringing use, where such component is uncombined in whole or in part, knowing that such component is so made or adapted and intending that such component will be combined outside of the United States in a manner that would

822. 248 F.3d 1376, 58 U.S.P.Q.2d (BNA) 1791 (Fed. Cir. 2001).

823. *Id.* at 1377, 58 U.S.P.Q.2d (BNA) at 1791-92.

824. *Id.* at 1378, 58 U.S.P.Q.2d (BNA) at 1792.

825. *Id.*, 58 U.S.P.Q.2d (BNA) at 1792 (citations omitted). The term “facilitate” requires some affirmative act. *Id.*, 58 U.S.P.Q.2d (BNA) at 1792-93; *see also* 35 U.S.C. § 271(b) (1994) (noting the statutory provision that prohibits active inducement of infringement also requires some affirmative act).

826. *See Tegal Corp.*, 248 F.3d at 1379, 58 U.S.P.Q.2d (BNA) at 1793 (citing *A. Stucki Co. v. Worthington Indus.*, 849 F.2d 593, 7 U.S.P.Q.2d (BNA) 1066 (Fed. Cir. 1988)).

827. *Id.* at 1380, 58 U.S.P.Q.2d (BNA) at 1794.

infringe the patent if such combination occurred within the United States, shall be liable as an infringer.⁸²⁸

In *Waymark Corp. v. Porta Systems Corp.*,⁸²⁹ the district court held that the defendant could not be liable for infringement under 35 U.S.C. § 271(f)(2).⁸³⁰ The defendant had shipped components of a battery scanning system to Mexico for assembly.⁸³¹ The components were never assembled and were returned to the United States.⁸³² The district court held that, because no infringing combination of components was ever assembled, there could be no infringement under § 271(f)(2).⁸³³ The Federal Circuit disagreed, holding that § 271(f)(2) does not require the actual combination or assembly of shipped components.⁸³⁴ It requires only that the components be shipped with the intention that they be combined outside the United States in an infringing manner.⁸³⁵

H. Infringement under § 271(g)

35 U.S.C. § 271(g) provides:

[w]hoever without authority imports into the United States or offers to sell, sells, or uses within the United States a product which is made by a process patented in the United States shall be liable as an infringer, if the importation, offer to sell, sale, or use of the product occurs during the term of such process patent.⁸³⁶

In *Mycogen Plant Science, Inc. v. Monsanto Co.*,⁸³⁷ the court determined whether 35 U.S.C. § 271(g) applies to render illegal the sale in the United States of products made outside the United States prior to the issuance of a U.S. patent.⁸³⁸ The court determined that a “process patented in the United States” must mean a process that was patented at the time the product was manufactured overseas.⁸³⁹ Because the genes at issue in the patent in this case had been manufactured prior to the issuance of the patent in the United States, even though the genes were sold by the defendant in the United States later, the sale in the United States did not infringe.⁸⁴⁰

828. 35 U.S.C. § 271(f)(2) (1994).

829. 245 F.3d 1364, 58 U.S.P.Q.2d (BNA) 1456 (Fed. Cir. 2001).

830. *Id.* at 1365, 58 U.S.P.Q.2d (BNA) at 1457.

831. *Id.*, 58 U.S.P.Q.2d (BNA) at 1456.

832. *Id.*, 58 U.S.P.Q.2d (BNA) at 1458.

833. *Id.* at 1366, 58 U.S.P.Q.2d (BNA) at 1458.

834. *Id.* at 1367-68, 58 U.S.P.Q.2d (BNA) at 1459-60.

835. *Id.*, 58 U.S.P.Q.2d (BNA) at 1549.

836. 35 U.S.C. § 271(g) (1994).

837. 252 F.3d 1306, 58 U.S.P.Q.2d (BNA) 1891 (Fed. Cir. 2001).

838. *Id.* at 1308, 58 U.S.P.Q.2d (BNA) at 1893.

839. *Id.* at 1318-19, 58 U.S.P.Q.2d (BNA) at 1900-01.

840. *Id.*, 58 U.S.P.Q.2d (BNA) at 1900. A similar conclusion would apply if the

I. Repair and Reconstruction

Purchasers of patented items are allowed to make repairs to the item, including the replacement of non-patented parts, without infringing the patents of the manufacturer.⁸⁴¹ However, purchasers are not allowed to reconstruct the articles so as to make an essentially different or recreated item for resale.⁸⁴² In 2001, the Federal Circuit examined the scope and application of repair and reconstruction in two separate cases.

In *Jazz Photo Corp. v. International Trade Commission*,⁸⁴³ the alleged infringer defendant claimed that, under the repair defense, he was entitled to refurbish “single-use” cameras, (also called “lens-fitted film packages”) by replacing the film and batteries and resetting the counters.⁸⁴⁴ First, the court discussed the burdens of proof applicable to the repair issue.⁸⁴⁵ The court noted that the doctrine of repair was an affirmative defense and therefore the defendant had the burden of establishing the defense by a preponderance of the evidence.⁸⁴⁶ In determining whether the defendant in this case met his burden, the court distinguished “repair” from “reconstruction,” which is not a defense to infringement.⁸⁴⁷ According to the court, reconstruction occurs when a “new article” is made after the patented article, “viewed as a whole, has become spent.”⁸⁴⁸ The court held that the

products had been made in the United States prior to the issuance of the process patent, since a process patent is not infringed if the process is used prior to the “beginning of the patent term, even if the products of the process are sold during the term of the patent.” *Id.* at 1318, 58 U.S.P.Q.2d (BNA) at 1900.

841. *See* *Argo Mfg. Co. v. Convertible Top Replacement Co.*, 365 U.S. 336, 342-46 (1961) (defining and contrasting permissible repair and impermissible reconstruction).

842. *See id.* at 345 (noting that for a patent to be infringed by impermissible reconstruction, there must be a “second creation” of the patented item).

843. 264 F.3d 1094, 59 U.S.P.Q.2d (BNA) 1907 (Fed. Cir. 2001).

844. *Id.* at 1101, 59 U.S.P.Q.2d (BNA) at 1911.

845. *Id.* at 1101-02, 59 U.S.P.Q.2d (BNA) at 1911-12.

846. *See id.*, 59 U.S.P.Q.2d (BNA) at 1911-12 (noting that the defendant carries this burden only after the patentee has presented evidence that one of his patent claims is infringed).

847. *See id.* at 1105-07, 59 U.S.P.Q.2d (BNA) at 1914-16 (holding that the precedent on point make “the acts of inserting new film and film container, resetting the film counter, and resealing the broken case—the principle steps performed by the remanufacturers—as more akin to repair” than to prohibited reconstruction). The court noted in its statement of applicable law that a “purchaser of a patented article has the rights of any owner of personal property, including the right to use it, repair it, modify it, discard it, or resell it, subject only to overriding conditions of the sale.” *Id.* at 1101, 59 U.S.P.Q.2d (BNA) at 1912. However, the purchaser does not have the right to “construct an essentially new article on the template of the original.” *Id.*, 59 U.S.P.Q.2d (BNA) at 1912.

848. *Id.* at 1102-05, 59 U.S.P.Q.2d (BNA) at 1912-14 (quoting *Sandvik Aktiebolag v. E.J. Co.*, 121 F.3d 669, 673, 43 U.S.P.Q.2d (BNA) 1620, 1623 (Fed. Cir. 1997)).

replacement of film and batteries in the lens-fitted film packages, the related resetting of indicators, and replacement of covers constituted repair rather than reconstruction.⁸⁴⁹

In *Surfco Hawaii v. Fin Control Systems Pty, Ltd.*,⁸⁵⁰ the district court granted summary judgment for the patentee.⁸⁵¹ The patent at issue related to a surfboard with replaceable fins.⁸⁵² The declaratory judgment plaintiff made fins⁸⁵³ and defended the product under the doctrine of repair.⁸⁵⁴ The district court held that the repair right included only the right to replace worn or broken parts.⁸⁵⁵ The Federal Circuit held, however, that ownership includes the right to replace parts that are neither broken nor worn.⁸⁵⁶ Therefore, the alleged infringer was not liable because the doctrine of repair applied.⁸⁵⁷

IV. INEQUITABLE CONDUCT AND OTHER DEFENSES

A. *Inequitable Conduct*

A patent may be held unenforceable for inequitable conduct if the applicant has withheld material information from the examiner or has made false statements to the examiner with the intent to deceive or mislead the examiner into granting a patent.⁸⁵⁸ A determination of inequitable conduct requires a two-stage inquiry.⁸⁵⁹ First, the court must determine whether the challenger has made a threshold showing that the information withheld or inaccurately represented was material and that the non-disclosure or misrepresentation was

849. *See id.* at 1105-07, 59 U.S.P.Q.2d (BNA) at 1416 (finding that the “common thread” in all of the pertinent cases is that the purchaser of an item has the right to take steps to prolong the useful life of the article, which is precisely what the defendants in the current case attempted to accomplish with their process).

850. 264 F.3d 1062, 60 U.S.P.Q.2d (BNA) 1056 (Fed. Cir. 2001).

851. *Id.* at 1064, 60 U.S.P.Q.2d (BNA) at 1057.

852. *Id.*, 60 U.S.P.Q.2d (BNA) at 1057.

853. *Id.*, 60 U.S.P.Q.2d (BNA) at 1057.

854. *Id.*, 60 U.S.P.Q.2d (BNA) at 1057.

855. *Id.* at 1065, 60 U.S.P.Q.2d (BNA) at 1058.

856. *See id.* at 1066, 60 U.S.P.Q.2d (BNA) at 1058-59 (noting that the reason for the replacement is not determinative, rather, it is the extent of the replacement that controls).

857. *Id.*, 60 U.S.P.Q.2d (BNA) at 1059.

858. *See Molins PLC v. Textron, Inc.*, 48 F.3d 1172, 1178, 33 U.S.P.Q.2d (BNA) 1823, 1826 (Fed. Cir. 1996) (requiring a showing of “affirmative misrepresentation of material fact, failure to disclose material information, or submission of false, material information, coupled with an intent to deceive” in order to prove inequitable conduct).

859. *See Monon Corp. v. Stoughton Trailers, Inc.*, 239 F.3d 1253, 1261, 57 U.S.P.Q.2d (BNA) 1699, 1706 (Fed. Cir. 2001) (describing the two step process).

carried out with intent to deceive.⁸⁶⁰ Second, if the threshold requirements of materiality and intent are established, then the court must weigh its factual findings on these issues to make an equitable determination whether to deny enforcement of the patent.⁸⁶¹

The district court has considerable latitude in determining inequitable conduct.⁸⁶² The Federal Circuit will overturn a finding of inequitable conduct only when the district court commits a serious error of judgment, determines inequitable conduct based on clearly erroneous factual findings, or misapplies or misinterprets the applicable law.⁸⁶³ Moreover, where the district court has made findings of fact based on the credibility of witnesses, such determinations “can virtually never be clear error.”⁸⁶⁴ The district court’s discretion in determining inequitable conduct generally results in the Federal Circuit upholding most district court decisions on the issue of inequitable conduct. The majority of the cases the Federal Circuit decided in 2001 on this issue were not exceptions.⁸⁶⁵

In a few instances, however, the Federal Circuit disagreed with the district courts over the issue of inequitable conduct. For example, in *Mentor H/S, Inc. v. Medical Device Alliance, Inc.*,⁸⁶⁶ the Federal Circuit reversed the district court’s grant of a new trial on the issue of inequitable conduct⁸⁶⁷ and found error in the district court’s ruling

860. *See id.*, 57 U.S.P.Q.2d (BNA) at 1705 (noting that the challenger must make the threshold showing by clear and convincing evidence).

861. *See id.*, 57 U.S.P.Q.2d (BNA) at 1705-06 (explaining that the balancing test employs a sliding scale such that if information is highly material then inequitable conduct can be established with a comparatively lower level of intent).

862. *Manville Sales Corp. v. Paramount Sys., Inc.*, 917 F.2d 544, 551, 16 U.S.P.Q.2d (BNA) 1587, 1592-93 (Fed. Cir. 1990).

863. *Id.*, 16 U.S.P.Q. 2d (BNA) at 1596.

864. *See Monon Corp.*, 239 F.3d at 1263-64, 57 U.S.P.Q.2d (BNA) at 1707.

When a trial judge’s finding is based on his decision to credit the testimony of two or more witnesses, each of whom has told a coherent and facially plausible story that is not contradicted by extrinsic evidence, that finding, if not internally inconsistent, can virtually never be clear error.

Id., 57 U.S.P.Q.2d (BNA) at 1707 (citing *First Interstate Bank of Billings v. United States*, 61 F.3d 876, 882 (Fed. Cir. 1995) (quoting *Anderson v. City of Bessemer*, 470 U.S. 564, 595 (1985))).

865. *See, e.g.*, *Union Pac. Res. Co. v. Chesapeake Energy Corp.*, 236 F.3d 684, 57 U.S.P.Q.2d (BNA) 1293 (Fed. Cir. 2001) (affirming the district court’s refusal to find inequitable conduct); *Monon Corp.*, 239 F.3d at 1253, 57 U.S.P.Q.2d (BNA) at 1699; *Tegal Corp. v. Tokyo Electron Am., Inc.*, 257 F.3d 1331, 59 U.S.P.Q.2d (BNA) 1385 (Fed. Cir. 2001); *Winbond Elecs. Corp. v. Int’l Trade Comm’n*, 262 F.3d 1363, 60 U.S.P.Q.2d (BNA) 1029 (Fed. Cir. 2001); *Advanced Cardiovascular Sys., Inc. v. Medtronic, Inc.*, 265 F.3d 1294, 60 U.S.P.Q.2d (BNA) 1161 (Fed. Cir. 2001); *GFI, Inc. v. Franklin Corp.*, 265 F.3d 1268, 60 U.S.P.Q.2d (BNA) 1141 (Fed. Cir. 2001) (affirming the district court’s finding of inequitable conduct); *Brasseler, U.S.A. I.L.P. v. Stryker Sales Corp.*, 267 F.3d 1370, 60 U.S.P.Q.2d (BNA) 1482 (Fed. Cir. 2001).

866. 244 F.3d 1365, 58 U.S.P.Q.2d (BNA) 1321 (Fed. Cir. 2001).

867. *Id.* at 1380-81, 58 U.S.P.Q.2d (BNA) at 1331.

of inequitable conduct by the patent applicant.⁸⁶⁸ First, the district court should not have inferred deceptive intent from the inventor's intentional non-disclosure of a reference.⁸⁶⁹ Second, the district court erred in finding materiality in the inventor's failure to disclose opinions and knowledge regarding a prior art device when references concerning that device were already before the examiner.⁸⁷⁰

The Federal Circuit also addressed a number of other issues regarding inequitable conduct including the scope of materiality and effect of an applicant's failure to make an inquiry. In *GFI, Inc. v. Franklin Corp.*,⁸⁷¹ the Federal Circuit affirmed the district court's finding of inequitable conduct.⁸⁷² Here, the patent involved claims for a sectional sofa in which controls for operating the reclining seats were located in a center console.⁸⁷³ The patentee claimed that certain references, called the "Durling references,"⁸⁷⁴ were not prior art and therefore not material for purposes of inequitable conduct.⁸⁷⁵ The court held, however, that material information is not exclusively limited to prior art.⁸⁷⁶ The court declared that the examiner would have considered the Durling references important and therefore material because they disclosed a significant combination of elements not present in any of the references before the examiner.⁸⁷⁷

868. *Id.* at 1378, 58 U.S.P.Q.2d (BNA) at 1329.

869. *See id.*, 58 U.S.P.Q.2d (BNA) at 1328 (recognizing the undisclosed reference was cumulative in nature).

870. *See id.* at 1377-78, 58 U.S.P.Q.2d (BNA) at 1329 ("An inventor's opinions regarding a prior art device known to the examiner are not within the domain of material that must be submitted to the PTO.").

871. 265 F.3d 1268, 60 U.S.P.Q.2d (BNA) 1141 (Fed. Cir. 2001).

872. *Id.* at 1273, 60 U.S.P.Q.2d (BNA) at 1144.

873. *Id.* at 1272, 60 U.S.P.Q.2d (BNA) at 1141.

874. *See id.*, 60 U.S.P.Q.2d (BNA) at 1143 (noting that the Durling references included a similar design to the applicant's on which Durling had filed a patent application two months earlier).

875. *See id.* at 1274, 60 U.S.P.Q.2d (BNA) 1144 (declining to make a finding that Durling was not material because "a reasonable examiner would have been substantially likely to find 'important' the distinction between the conflicting patent applications").

876. *Id.*, 60 U.S.P.Q.2d (BNA) at 1143.

877. *Id.* at 1275, 60 U.S.P.Q.2d (BNA) at 1144-45. The Durling references were considered important because the patentee was aware of Durling, had a copy of the Durling application, and had seen a model of the Durling invention with center-mounted controls before filing the subject application. *Id.*, 60 U.S.P.Q.2d (BNA) at 1144-45. Moreover, the patentee had been in active negotiations with Durling to obtain priority information so it could assess the patentability of its own application and its potential need for a license. *Id.*, 60 U.S.P.Q.2d (BNA) at 1144. Furthermore, the applicant also distinguished other, disclosed references on the ground that they did not include center-mounted controls, although the inventor knew that Durling had built a model with center-mounted controls before the filing of the subject application. *Id.*, 60 U.S.P.Q.2d (BNA) at 1144.

In *Brasseler, U.S.A. I L.P. v. Stryker Sales Corp.*,⁸⁷⁸ the Federal Circuit addressed the question of when inequitable conduct can be based on a failure to make inquiries.⁸⁷⁹ The court agreed with the district court's findings that the patentee had committed inequitable conduct by failing to disclose facts to the PTO relating to a potential on-sale bar.⁸⁸⁰ The court further relied on the district court's opinion in upholding its inequitable conduct decision stating that although a finding of intent to deceive may not be based solely on gross negligence, "one should not be able to cultivate ignorance, or disregard numerous warnings that material information or prior art may exist, merely to avoid actual knowledge of that information or prior art."⁸⁸¹

Despite the applicant's argument that the inequitable conduct doctrine should not be applied in this case because of the special circumstances involved,⁸⁸² the Federal Circuit upheld the district court's decision in full.⁸⁸³

In *Aptix Corp. v. Quickturn Design Systems, Inc.*,⁸⁸⁴ the Federal Circuit upheld a district court dismissal of the plaintiff's patent infringement and the award of attorney's fees to the defendant.⁸⁸⁵ On the other claim, the Federal Circuit disagreed with part of the district court's reasoning and vacated the district court's determination that the plaintiff's patent-in-suit was rendered permanently unenforceable by reason of litigation misconduct.⁸⁸⁶ The Federal Circuit distinguished litigation misconduct, which justifies the denial of relief to a particular party, from inequitable conduct, which affects the property

878. 267 F.3d 1370, 60 U.S.P.Q.2d (BNA) 1482 (Fed. Cir. 2001).

879. *Id.* at 1380, 60 U.S.P.Q.2d (BNA) at 1488.

880. *Id.* at 1386, 60 U.S.P.Q.2d (BNA) at 1492. The district court further noted that the attorneys who filed and prosecuted the patent application were aware of a potentially barring event, but made no inquiry or investigation into the facts. *Id.*, 60 U.S.P.Q.2d (BNA) at 1491.

881. *Id.* at 1383, 60 U.S.P.Q.2d (BNA) at 1278 (quoting *FMC Corp. v. Hennessy Indus.*, 836 F.2d 521, 526 n.6, 5 U.S.P.Q.2d (BNA) 1272, 1275 n.6 (Fed. Cir. 1987)). The Federal Circuit also accepted the district court's opinion that the inventors themselves were guilty of inequitable conduct. *Id.*, 60 U.S.P.Q.2d (BNA) at 1491-92 (noting inventors knew that the sale which gave rise to the on-sale bar had taken place).

882. *See id.* at 1379, 60 U.S.P.Q.2d (BNA) at 1487 (discussing the applicant's argument that this case is unique because the applicant did not understand that he had a duty to disclose the potential on-sale bar information to the PTO).

883. *Id.* at 1380, 60 U.S.P.Q.2d (BNA) 1488.

884. 269 F.3d 1369, 60 U.S.P.Q.2d (BNA) 1705 (Fed. Cir. 2001).

885. *Id.* at 1382, 60 U.S.P.Q.2d (BNA) at 1711.

886. *See id.* at 1375, 60 U.S.P.Q.2d (BNA) at 1709-10 (noting that the alleged litigation misconduct consisted of fabricating inventor's notebooks and destroying evidence).

right that is the patent.⁸⁸⁷ The court found that the conduct at issue in the present case was not inequitable conduct.⁸⁸⁸

B. Estoppels

1. Interference estoppel

The Federal Circuit decided one interference estoppel case in 2001. In *Exxon Corp. v. Phillips Petroleum Co.*,⁸⁸⁹ the court strongly supported the district court's position that the patentee's alleged failure to follow proper interference procedure was not a recognized ground of patent invalidity.⁸⁹⁰ The Federal Circuit reasoned that, "[a]bsent proof of inequitable conduct, the examiner's or the applicant's absolute compliance with the internal rules of patent examination becomes irrelevant after the patent has issued."⁸⁹¹ Therefore, the defendant could not assert that the patentee was estopped from asserting the validity of its patent.⁸⁹²

2. Licensee estoppel

The Supreme Court rejected the doctrine of licensee estoppel in *Lear, Inc. v. Adkins*.⁸⁹³ Subsequent decisions by the Federal Circuit have distinguished this doctrine from other forms of estoppel. In 2001, the court distinguished licensee estoppel in one case.

In *Flex-Foot, Inc. v. CRP, Inc.*,⁸⁹⁴ the Federal Circuit distinguished contractual estoppel, which arose out of a settlement agreement in which the alleged infringer expressly waived validity defenses, from licensee estoppel.⁸⁹⁵ In *Lear, Inc. v. Adkins*,⁸⁹⁶ the Supreme Court simply held that it was against public policy to preclude a licensee from challenging patent validity.⁸⁹⁷ In *Lear*, however, the licensee had

887. See *id.* at 1376, 60 U.S.P.Q.2d (BNA) at 1709 (explaining the importance of the litigation/inequitable distinction by stating "[T]he remedies for litigation misconduct differ from the remedies for misconduct in acquisition of a property right. While inequitable conduct before the PTO renders the patent unenforceable by any party, the unclean hands doctrine bars only the offending party.") (quoting *Keystone Driller Co. v. Gen. Excavator Co.*, 290 U.S. 240, 244-45 (1933)).

888. *Id.*, 60 U.S.P.Q.2d (BNA) at 1709.

889. 265 F.3d 1249, 60 U.S.P.Q.2d (BNA) 1368 (Fed. Cir. 2001).

890. *Id.* at 1254, 60 U.S.P.Q.2d (BNA) at 1371 (recognizing that interference estoppel, caused by a procedural lapse in the interference proceeding, does not affect the validity of patent claims).

891. *Id.*, 60 U.S.P.Q.2d (BNA) at 1372 (quoting *Magnivision, Inc. v. Bonneau Co.*, 115 F.3d 956, 960, 42 U.S.P.Q.2d (BNA) 1925, 1929 (Fed. Cir. 1997)).

892. *Id.*, 60 U.S.P.Q.2d (BNA) at 1372.

893. 395 U.S. 653 (1969).

894. 238 F.3d 1362, 57 U.S.P.Q.2d (BNA) 1635 (Fed. Cir. 2001).

895. *Id.* at 1368-69, 57 U.S.P.Q.2d (BNA) at 1640-41.

896. 395 U.S. 653 (1969).

897. *Id.* at 673-74.

not expressly agreed to waive validity defenses.⁸⁹⁸ Moreover, the agreement in *Lear* was not entered into as part of a settlement of litigation.⁸⁹⁹

3. *Equitable estoppel and laches*

In *A.C. Aukerman Co. v. R.L. Chaides Construction Co.*,⁹⁰⁰ the Federal Circuit held that the defense of laches may bar an applicant's claim for damages.⁹⁰¹ Successful assertion of the laches defense requires that delay in bringing suit be both unreasonable and inexcusable and that material prejudice result from the delay.⁹⁰² Laches is presumed when there is a delay of six or more years between the date when the holder of the patent knew or should have known about the infringement and the commencement of the suit.⁹⁰³ This presumption shifts the burden of going forward, but not the burden of persuasion.⁹⁰⁴

In *Winbond Electronics Corp. v. International Trade Commission*,⁹⁰⁵ the Federal Circuit affirmed a finding of the International Trade Commission that the alleged infringer did not have an implied license to use the patented technology.⁹⁰⁶ The court stated that there could be no implied license by reason of equitable estoppel unless the patentee, through statements or conduct, gave an affirmative grant of consent or permission to the alleged infringer to use the patented technology.⁹⁰⁷ In the case at bar, the alleged infringer admitted he was unaware of the patent-in-suit before the patentee sought to persuade him to accept a license.⁹⁰⁸ The alleged infringer argued that the patentee had proposed to an industry association committee that it would provide any manufacturer royalty-free licenses for a one-time fee if its technology were adopted as an industry standard.⁹⁰⁹ The court ruled that the technology was not

898. *See id.* at 657 (detailing Adkin's contractual arrangement with Lear prior to litigation).

899. *See id.* (explaining that the agreement was created "[a]t the very beginning of the parties' relationship"); *Flex-Foot, Inc.*, 238 F.3d at 1368, 57 U.S.P.Q.2d (BNA) at 1640-41.

900. 960 F.2d 1020, 22 U.S.P.Q.2d (BNA) 1321 (Fed. Cir. 1992).

901. *See* HARMON, *supra* note 329, § 9.2.

902. *Id.* § 9.3.

903. *Id.*

904. *Id.*

905. 262 F.3d 1363, 60 U.S.P.Q.2d (BNA) 1029 (Fed. Cir. 2001).

906. *See id.* at 1374, 60 U.S.P.Q.2d (BNA) at 1036 ("An implied license may arise by equitable estoppel, acquiescence, conduct, or legal estoppel.").

907. *Id.*, 60 U.S.P.Q.2d (BNA) at 1036 (citing *Wang Labs. Inc. v. Mitsubishi Elecs. Inc.*, 103 F.3d 1571, 1581, 41 U.S.P.Q.2d (BNA) 1263, 1271 (Fed. Cir. 1997)).

908. *Id.* at 1375, 60 U.S.P.Q.2d (BNA) at 1036-37.

909. *Id.* at 1372, 60 U.S.P.Q.2d (BNA) at 1037.

adopted as an industry standard and the alleged infringers were unaware of the patentee's offer to provide single payment licenses. Therefore, the conditions of the offer had not been accepted and did not give rise to an implied license by reason of equitable estoppel.⁹¹⁰

In *Ecolab, Inc. v. Envirochem, Inc.*,⁹¹¹ the Federal Circuit affirmed a district court ruling that granted summary judgment to the patentee, dismissing the alleged infringer's defenses of equitable estoppel and laches.⁹¹² The defendant developed a new line of products it believed to be non-infringing,⁹¹³ and asserted that it had sent the patentee a sample of the new products for testing in September 1993.⁹¹⁴ The patentee did not communicate with the alleged infringer until the summer of 1995, and brought suit in December 1995.⁹¹⁵ The defendant contended that these facts gave rise to equitable estoppel and laches.⁹¹⁶ Upholding summary judgment, the Federal Circuit agreed with the district court's determination that the defendant failed to present evidence demonstrating economic or defense prejudice, a required element in a laches or equitable estoppel defense.⁹¹⁷

V. REMEDIES

A. Preliminary Injunction

A preliminary injunction may be granted to prevent infringement pending trial.⁹¹⁸ This injunctive remedy requires consideration of the following four factors: "(1) the relative rights and hardships of the parties; (2) the likelihood of ultimate success on the merits; (3) the possibility of irreparable harm; and (4) the public interest."⁹¹⁹

910. *Id.* at 1375, 60 U.S.P.Q.2d (BNA) at 1036-37.

911. 264 F.3d 1358, 60 U.S.P.Q.2d (BNA) 1173 (Fed. Cir. 2001).

912. *Id.* at 1371-72, 60 U.S.P.Q.2d (BNA) at 1183-84 (finding no abuse of discretion on the part of the district court).

913. *See id.* at 1362, 60 U.S.P.Q.2d (BNA) at 1175 (basing belief on prior litigation between the parties in the form of a consent judgment entered on January 5, 1993).

914. *Id.*, 60 U.S.P.Q.2d at 1175.

915. *Id.* at 1362-63, 60 U.S.P.Q.2d (BNA) at 1175-76.

916. *See id.* at 1371, 60 U.S.P.Q.2d (BNA) 1183 (arguing that a two year period with no communication constitutes unreasonable delay).

917. *See id.* at 1371-72, 60 U.S.P.Q.2d (BNA) at 1183 (explaining that succeeding on a defense of equitable estoppel or laches requires proof of prejudice arising from the infringer's reliance on the patentee's conduct (equitable estoppel) or resulting from the patentee's unreasonable and inexcusable delay in filing suit (laches)). Moreover, the court found that the defendant had acted primarily in reliance on its belief that its products were not infringing, rather than in reliance on any statements or conduct by the patentee. *Id.*, 60 U.S.P.Q.2d at 1183.

918. *See HARMON, supra* note 329, § 13.2.

919. *Id.*

In *Globetrotter Software, Inc. v. Elan Computer Group, Inc.*,⁹²⁰ the Federal Circuit affirmed the district court's denial of the patentee's motion for a preliminary injunction.⁹²¹ The patentee alleged that the district court had denied the injunction by reason of an error of law in construing the claims.⁹²² The Federal Circuit held that the district court had properly construed the claims because it had used a "means-plus-function" limitation analysis in making its decision to grant summary judgment.⁹²³

In *Purdue Pharma L.P. v. Boehringer Ingelheim GmbH*,⁹²⁴ the Federal Circuit affirmed the district court's grant of a preliminary injunction against the defendant, which enjoined it from further infringement of three of the plaintiff's patents.⁹²⁵ The court reviewed the four-factor test used in patent cases to evaluate preliminary injunction motions⁹²⁶ and analyzed the district court's decision for an abuse of discretion.⁹²⁷ The court found no clear error and that the moving party had met the burden of the four-factor test,⁹²⁸ but noted that findings of fact and conclusions of law made at the preliminary injunction stage are "subject to change upon the ultimate [full] trial on the merits."⁹²⁹

In *Amazon.com, Inc. v. Barnesandnoble.com, Inc.*,⁹³⁰ the Federal Circuit found that the district court, in granting a preliminary injunction,

920. 236 F.3d 1363, 57 U.S.P.Q.2d (BNA) 1542 (Fed. Cir. 2001).

921. *See id.* at 1367, 57 U.S.P.Q.2d (BNA) 1544-45 (reviewing the decision to determine whether the court had abused its discretion, committed an error of law or seriously misjudged the evidence) (citing *Hybritech Inc. v. Abbott Labs.*, 849 F.2d 1446, 1449, 7 U.S.P.Q.2d (BNA) 1191, 1194 (Fed. Cir. 1988)).

922. *Id.* at 1364, 57 U.S.P.Q.2d (BNA) at 1542.

923. *Id.* at 1367, 57 U.S.P.Q.2d (BNA) at 1545.

924. 237 F.3d 1359, 57 U.S.P.Q.2d (BNA) 1647 (Fed. Cir. 2001).

925. *Id.* at 1362, 57 U.S.P.Q.2d (BNA) at 1648.

926. *See id.* at 1363, 57 U.S.P.Q.2d (BNA) at 1649 (stating that the test requires the moving party to show "(1) a reasonable likelihood of success on the merits; (2) irreparable harm if the injunction were not granted; (3) the balance of the hardships and (4) the impact of the injunction on the public interest.") (quoting *Polymer Techs. v. Bridwell*, 103 F.3d 970, 973, 41 U.S.P.Q.2d (BNA) 1185, 1188 (Fed. Cir. 1996)).

927. *See id.*, 57 U.S.P.Q.2d (BNA) at 1649 (relying heavily on 35 U.S.C. § 283 (1994), which provides that "[t]he several courts having jurisdiction of cases under this title may grant injunctions in accordance with the principles of equity to prevent the violation of any right secured by a patent, on such terms as the court deems reasonable").

928. *See id.*, 57 U.S.P.Q.2d (BNA) at 1649 (noting that the appellants only contest the first two factors of the four part test, but stating that these factors had been satisfied). The court continued by saying that "there appears to be no real dispute that Roxane's accused product infringes under the . . . claim construction" and that based on the plaintiff's expert testimony that "price erosion and loss of market position" was foreseeable; irreparable harm had been shown. *Id.* at 1365-68, 57 U.S.P.Q.2d (BNA) at 1650-53.

929. *Id.* at 1363, 57 U.S.P.Q.2d (BNA) at 1649.

930. 239 F.3d 1343, 57 U.S.P.Q.2d (BNA) 1747 (Fed. Cir. 2001).

had “committed clear error by misreading the factual content of the prior art references . . . and by failing to recognize that [the defendant] had raised a substantial question of invalidity . . . in view of prior art references.”⁹³¹ The Federal Circuit observed that the challenger bears a lower burden of proof at the preliminary injunction stage than at trial.⁹³² Thus, the court found that the challenger raised a substantial question of invalidity based on this lower standard.⁹³³

In *Glaxo Group Ltd. v. Ranbaxy Pharmaceuticals, Inc.*,⁹³⁴ the Federal Circuit held that the district court had incorrectly construed the claims of the patent, and that, under a proper construction, the patentee was unlikely to succeed on its claim of infringement and therefore should not have been granted a preliminary injunction.⁹³⁵ The patent at issue related to an antibiotic product, and infringement was alleged under 35 U.S.C. § 271(e)(2).⁹³⁶ To determine infringement, the court compared the construed claims of the plaintiff with the product that the defendant was likely to market if its Abbreviated New Drug Application was approved.⁹³⁷ In this case, the court construed the plaintiff’s claims to require a product containing less than 10% crystalline material.⁹³⁸ The product described by the defendant’s ANDA was proposed to contain about 10 to 15% crystalline material.⁹³⁹ Not only did the court hold that the plaintiff’s literal infringement claim was unlikely to succeed because

931. *Id.* at 1358, 57 U.S.P.Q.2d (BNA) at 1757. The court explained that the district court had failed to recognize differences such as the location of the site, log-in steps, and the number of actions that needed to be taken in order to make an online purchase. *Id.* at 1361-63, 57 U.S.P.Q.2d (BNA) at 1760-61.

932. *See id.* at 1359, 57 U.S.P.Q.2d (BNA) at 1758 (discussing the lower burden and stating that “vulnerability is the issue at the preliminary injunction stage, while validity is the issue at trial”).

933. *See id.* at 1358, 57 U.S.P.Q.2d (BNA) at 1757 (noting that invalidity can be shown at the preliminary injunction stage “on evidence that would not suffice to support a judgment of invalidity at trial.”) (citing *Helifix Ltd. v. Blok-Lok, Ltd.*, 208 F.3d 1339, 1352, 54 U.S.P.Q.2d (BNA) 1299, 1308 (Fed. Cir. 2000)).

934. 262 F.3d 1333, 59 U.S.P.Q.2d (BNA) 1950 (Fed. Cir. 2001).

935. *Id.* at 1334, 59 U.S.P.Q.2d (BNA) at 1951.

936. *See id.* at 1337-38, 59 U.S.P.Q.2d (BNA) at 1953 (stating that section 271(e)(2) makes it an act of infringement to file an Abbreviated New Drug Application with the Food and Drug Administration for a drug claimed in an existing patent or the use of which is claimed in an existing patent).

937. *See id.* at 1336-37, 59 U.S.P.Q.2d (BNA) at 1952-53 (comparing not only the amounts of crystalline material in each product, but also the differing language used to describe the contents of the products).

938. *Id.* at 1337, 59 U.S.P.Q.2d (BNA) at 1953.

939. *See id.* at 1338, 59 U.S.P.Q.2d (BNA) at 1953-54 (stating that “[b]ecause the product for which Ranbaxy seeks FDA approval contains a higher content of crystalline cefuroxime axetil than permitted by claim 1, Glaxo is unlikely to succeed in showing that Ranbaxy’s product literally infringes the ‘181 patent”).

of the higher crystalline content in the defendant's ANDA, but it also held that the patentee could not assert any scope of equivalents for its claim limitation that the product be "essentially free from crystalline material" because this limitation was added through amendment during prosecution.⁹⁴⁰ Thus, Glaxo was unlikely to succeed on its infringement claim because it could not show either literal infringement or assert any scope of equivalents and should not have been granted a preliminary injunction.⁹⁴¹

B. Damages

1. Notice and marking

Title 35 U.S.C. § 287 allows patentees to "give notice to the public that [a product]" is patented by marking the property with the words "patent" or "pat." accompanied by the patent number. If a patentee fails to mark a product, he or she may recover no damages for infringement prior to the time when the accused infringer had notice of the infringement.⁹⁴²

In *Lans v. Digital Equipment Corp.*,⁹⁴³ the Federal Circuit upheld the district court's dismissal of an action by the patent inventor's assignee for lack of proper notice to the alleged infringer.⁹⁴⁴ The inventor had assigned his patent to a corporation of which he was the sole shareholder, but he sent notice letters to alleged infringers in his own name, identifying himself as the patentee.⁹⁴⁵ After sending notice letters to the alleged infringers, the inventor brought suit against the alleged infringers in his own name.⁹⁴⁶ The district court granted

940. See *id.* at 1336, 59 U.S.P.Q.2d (BNA) at 1952 (noting that the originally filed claims, which described the products as in "highly pure, substantially amorphous form," were rejected as indefinite). Subsequently, Glaxo amended the claims by adding the narrowing limitation, "essentially free from crystalline material," which the court construed to require material having less than ten percent of the crystalline form. *Id.* at 1336-37, 59 U.S.P.Q.2d (BNA) at 1953.

941. See *id.* at 1339, 59 U.S.P.Q.2d (BNA) at 1955 (vacating the lower court's decision to grant a preliminary injunction). Although not required to address other issues in the case because it did not find a likelihood of success on the merits by the plaintiff, the Federal Circuit noted that the district court also erred in finding that the patentee would suffer irreparable harm if the injunction were denied. *Id.*, 59 U.S.P.Q.2d (BNA) at 1954. The Federal Circuit felt the plaintiff's alleged irreparable harm claim, based on the defendant's alleged inability to pay damages, failed because patent damages are not measured by the total amount of lost sales, but by lost profits or reasonable royalties, of which the record contained no proof. *Id.*, U.S.P.Q.2d (BNA) at 1954-55.

942. 35 U.S.C. § 287 (1954).

943. 252 F.3d 1320, 59 U.S.P.Q.2d (BNA) 1057 (Fed. Cir. 2001).

944. *Id.* at 1328, 59 U.S.P.Q.2d (BNA) at 1061-62.

945. *Id.* at 1324-25, 59 U.S.P.Q.2d (BNA) at 1059.

946. *Id.* at 1325, 59 U.S.P.Q.2d (BNA) at 1059.

summary judgment dismissing his action for lack of standing.⁹⁴⁷ Subsequently, the assignee corporation brought suit. The case was dismissed on grounds that the patent had expired during the time between suits and, more importantly, because the assignee had never given notice to the alleged infringers.⁹⁴⁸ Therefore, the district court concluded it could not grant relief to the assignee for prior infringements.⁹⁴⁹ The Federal Circuit agreed with the district court's conclusion based on Supreme Court precedent in *Dunlap v. Schofield*,⁹⁵⁰ which determined that the notice requirement of 35 U.S.C. § 287(a)⁹⁵¹ could be fulfilled only by some "affirmative act" by the patentee.⁹⁵² Thus, the notice requirement could not be satisfied by the infringer's knowledge gained from some other source, such as notice from the inventor.⁹⁵³ Although acknowledging the unique and unprecedented nature of the case, the Federal Circuit refused to accept the argument that the notice element of section 287(a) is met if the notice came from someone closely associated with the patentee.⁹⁵⁴

In *Gart v. Logitech, Inc.*,⁹⁵⁵ the Federal Circuit held that the district court erred in finding that the patentee, despite having sent two notice letters to the alleged infringers, had failed to comply with section 287(a).⁹⁵⁶ Although the first letter did not specifically use the

947. *See id.* at 1325-26, 59 U.S.P.Q.2d (BNA) at 1059 (recognizing the plaintiff had no standing because he was not the owner of the patent).

948. *Id.* at 1326, 59 U.S.P.Q.2d (BNA) at 1060-61.

949. *Id.*, 59 U.S.P.Q.2d (BNA) at 1060.

950. 152 U.S. 244 (1894).

951. *See* 35 U.S.C. § 287(a) (1994) (providing that when there is a "failure so 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 infringement occurring after such notice" and that the "filing an action for infringement shall constitute such notice").

952. *See Lans*, 252 F.3d at 1327, 59 U.S.P.Q.2d (BNA) at 1060 (citing *Dunlap*, 152 U.S. at 248); *see also* *Amsted Indus. v. Buckeye Steel Co.*, 24 F.3d 178, 187, 30 U.S.P.Q.2d (BNA) 1462, 1469 (Fed. Cir. 1994) (stating that "Dunlap thus established that notice must be an affirmative [act] on the part of the patentee which informs the defendant of his infringement"). The *Lans* court further explained that the "purpose of the actual notice requirement is met when the recipient is notified with sufficient specificity, that the patent holder believes that the recipient of the notice may be an infringer." *Lans*, 252 F.3d at 1327, 59 U.S.P.Q.2d (BNA) at 1061 (citing *SRI Int'l, Inc. v. Advanced Tech. Labs, Inc.*, 127 F.3d 1462, 1470, 44 U.S.P.Q.2d (BNA) 1422, 1428 (Fed. Cir. 1997)).

953. *See Lans*, 252 F.3d at 1327, 59 U.S.P.Q.2d (BNA) at 1061 (distinguishing the patentee's acts and the infringer's knowledge).

954. *See id.* at 1327, 59 U.S.P.Q.2d (BNA) at 1061 (stating that notice from "someone closely associated with the patentee" does not "meet the statutory requirements" because "only the patentee has authority to grant licenses or accept design changes to facilitate the purposes of the notification requirement").

955. 254 F.3d 1334, 59 U.S.P.Q.2d (BNA) 1290 (Fed. Cir. 2001).

956. *See id.* at 1345-46, 59 U.S.P.Q.2d (BNA) at 1298-99.

word “infringement,” it suggested that the recipient might have its patent counsel examine the patent “to determine whether a non-exclusive license under the patent is needed.”⁹⁵⁷ The court held that the language of the letters constituted a sufficient charge of infringement to satisfy the notice provision.⁹⁵⁸ Moreover, the court concluded that, although the second letter merely suggested the recipient might find the patent “particularly interesting” relative to two of its products, this in combination with the prior letter, had given the defendant reasonable notice of the patentee’s belief that the second product infringed as well.⁹⁵⁹

2. *Lost profits*

The patent damages statute, 35 U.S.C. § 284, provides that the patent holder should receive damages “adequate to compensate for the infringement.” When the patent holder sells a product in direct competition with the infringing product, the patentee is entitled to prove that, absent the infringement, the patentee would have made additional sales of its own product, and to claim as damages the profits he would have made on those additional sales.⁹⁶⁰ This “but for” the infringement test requires the patentee to show a “reasonable probability” that it would have made such additional sales if there had been no infringing product on the market.⁹⁶¹

In a two supplier market, the courts generally apply the test set out in *Panduit Corp. v. Stahl Bros. Fibre Works*,⁹⁶² requiring the patentee to establish (1) a demand for the patented product; (2) absence of acceptable non-infringing substitutes, (3) the patentee’s manufacturing and marketing capacity to make and sell the additional products and (4) the amount of profits the patentee would have made.⁹⁶³ The *Panduit* test is not the exclusive test, however,⁹⁶⁴ and the patentee may recover lost profits on a “market share” theory

957. *See id.* at 1346, 59 U.S.P.Q.2d (BNA) at 1292 (noting that the letter also made specific reference to particular claims of the patent, specific reference to the products being sold).

958. *Id.*, 59 U.S.P.Q.2d (BNA) at 1299.

959. *See id.* at 1344-47, 59 U.S.P.Q.2d (BNA) at 1297-99 (discussing the product in question, a computer mouse, and whether the “claim language” limited the design to a “controller with an angular medial ledge”).

960. *See Rite-Hite Corp. v. Kelley Co., Inc.*, 56 F.3d 1538, 35 U.S.P.Q.2d (BNA) 1065 (Fed. Cir. 1995) (en banc) (permitting recovery of lost profits on a device for locking a vehicle to a loading dock).

961. *Id.* at 1545, 35 U.S.P.Q.2d (BNA) at 1072.

962. 575 F.2d 1152, 197 U.S.P.Q. (BNA) 726 (6th Cir. 1978).

963. *Id.* at 1156, 197 U.S.P.Q. (BNA) at 730.

964. *See State Indus., Inc. v. Mor-Flo Indus., Inc.* 883 F.2d 1573, 1578, 12 U.S.P.Q.2d (BNA) 1026, 1031 (Fed. Cir. 1989) (holding that the district court did not err in awarding the patentee lost profits on its market share of the infringing sales).

by showing that, even where there were other suppliers in the market, the patentee would have made a portion of the infringer's sales, corresponding to the patentee's established market share.⁹⁶⁵

In *Crystal Semiconductor Corp. v. Tritech Microelectronics International, Inc.*,⁹⁶⁶ the Federal Circuit held that there was adequate evidence to support an award of lost profits under a market share theory.⁹⁶⁷ Thus, the Federal Circuit reversed the district court's judgment as a matter of law.⁹⁶⁸ The district court set aside the jury verdict on lost profits and refused to increase the reasonable royalty damages to take account of the sales on which the jury had previously awarded lost profits.⁹⁶⁹ The Federal Circuit repeated the statutory requirement that damages should be awarded for "no less than a 'reasonable royalty' for every infringing sale."⁹⁷⁰ Therefore, a patentee should receive a reasonable royalty "for any of the infringer's sales not included in the lost profit calculation."⁹⁷¹ The Federal Circuit held, however, that there was insufficient evidence to support an award of damages for price erosion.⁹⁷² In seeking to establish price erosion damages, the plaintiff's expert had used an inappropriate benchmark and had failed to take into consideration the decrease in sales (and consequently the decrease in lost profits) that would have resulted from higher prices.⁹⁷³ Therefore, no price erosion damages were awarded.⁹⁷⁴

In *Schaefer Fan Co. v. J&D Manufacturing*,⁹⁷⁵ the Federal Circuit upheld a district court decision finding the defendant in contempt for violating a settlement agreement and awarding the patentee damages⁹⁷⁶ related to the patentee's invention of safety guards on industrial-sized fans.⁹⁷⁷

965. *Id.* at 1580, 12 U.S.P.Q.2d at 1034.

966. 246 F.3d 1336, 57 U.S.P.Q.2d (BNA) 1953 (Fed. Cir. 2001).

967. *See id.* at 1353-57, 57 U.S.P.Q.2d (BNA) at 1962-65 (noting that even the defendant's experts supported a lost profits award).

968. *Id.* at 1362, 57 U.S.P.Q.2d (BNA) at 1969.

969. *See id.* at 1355, 57 U.S.P.Q.2d (BNA) at 1964. (finding that "the district court's actions left Crystal with no recovery for approximately 42% of the infringing sales").

970. *Id.*, 57 U.S.P.Q.2d (BNA) at 1964 (citing 25 U.S.C. § 284 (1994)).

971. *Id.* at 1354, 57 U.S.P.Q.2d (BNA) at 1962 (citing *Minco Inc. v. Combustion Eng'g Inc.*, 95 F.3d 1109, 1119, 40 U.S.P.Q.2d (BNA) 1001, 1008 (Fed. Cir. 1966) and *State Indus. v. Mor-Flo Indus.*, 883 F.2d 1573, 1577, 12 U.S.P.Q.2d (BNA) 1026, 1028 (Fed. Cir. 1989)).

972. *Id.* at 1357-61, 57 U.S.P.Q.2d (BNA) at 1965-68.

973. *See id.* at 1360-61, 57 U.S.P.Q.2d (BNA) at 1967-68 (noting that lost sales and damages through price erosion are closely related).

974. *Id.* at 1362, 57 U.S.P.Q.2d (BNA) at 1969.

975. 265 F.3d 1282, 60 U.S.P.Q.2d (BNA) 1194 (Fed. Cir. 2001).

976. *Id.* at 1289-90, 60 U.S.P.Q.2d (BNA) at 1199-2000.

977. *Id.* at 1286, 60 U.S.P.Q.2d (BNA) at 1197.

First, the court addressed the contempt issue finding the district court did not abuse its discretion.⁹⁷⁸ The Federal Circuit relied mainly on the finding that the defendant willfully breached the settlement agreement.⁹⁷⁹ In addition, the court noted that the defendant failed to obtain the opinion of counsel on whether its design would breach the agreement.⁹⁸⁰

Second, the Federal Circuit addressed the damages issue. Again, it found that the district court did not abuse its discretion when it assessed damages in the amount of the defendant's total profits from its sales of the allegedly infringing fans plus attorney fees.⁹⁸¹ Moreover, even if the court had awarded damages solely on the breach of the settlement agreement and not factored in the willful contempt, damages could have been awarded based on the entire market value.⁹⁸² In the case at hand, however, the contempt damages were intended to be punitive and "beyond mere compensation."⁹⁸³

3. *Enhanced damages and willfulness*

When either the jury or the court awards a claimant damages, the court may "increase the damages up to three times the amount found or assessed."⁹⁸⁴ This provision is intended to deter willful patent infringement.⁹⁸⁵

In *Crystal Semiconductor Corp. v. TriTech Microelectronics International*,⁹⁸⁶ the Federal Circuit upheld a jury verdict and district court ruling finding infringement on the part of the defendant, but it

978. *Id.* at 1289, 60 U.S.P.Q.2d (BNA) at 1199-2000.

979. *See id.* at 1285-89, 60 U.S.P.Q.2d (BNA) at 1196-99 (recognizing the defendant was aware of the agreement and of the Special Master's interpretation of it, which it did not dispute).

980. *Id.* at 1289, 60 U.S.P.Q.2d (BNA) at 1199.

981. *Id.* at 1285-86, 60 U.S.P.Q.2d (BNA) at 1196-97. The Federal Circuit noted the district court was correct in defining "entire profits" as the profits the defendant earned on its sales of the completed fan units and not limiting the profits to the patented fan guard alone. *Id.* at 1290, 60 U.S.P.Q.2d (BNA) at 1200.

982. *See Fonar Corp. v. Gen. Elec. Co.*, 107 F.3d 1543, 1552, 41 U.S.P.Q.2d (BNA) 1801, 1808 (Fed. Cir. 1997) (applying the entire market value rule to permit an award of reasonable royalties based on the total price of the infringing devices). In contrast to *Fonar*, the court in *Schaefer* awarded damages consisting of the defendant's profits, not the patentee's lost profits. *Compare id.* at 1552-53, 41 U.S.P.Q.2d (BNA) at 1808 (upholding district court award based on lost profits for sales not made by Fonar due to infringement), *with Schaefer*, 265 F.3d at 1290, 60 U.S.P.Q.2d (BNA) at 1200 (upholding district court's award based on sale of fans by the infringer).

983. *Schaefer Fan Co.*, 265 F.3d at 1290, 60 U.S.P.Q.2d (BNA) at 1200.

984. 35 U.S.C. § 284 (1994).

985. *See HARMON*, *supra* note 329, § 14.1 (contending that increased damages usually occur when there is a finding of willful infringement, but noting that there is no requirement for showing that the infringement was committed with bad faith).

986. 246 F.3d 1336, 57 U.S.P.Q.2d (BNA) 1953 (Fed. Cir. 2001).

modified the damage award.⁹⁸⁷ The patentee sued a manufacturer and a seller for allegedly infringing upon its audio chip patents.⁹⁸⁸ The jury found the manufacturer liable for willfully infringing on the claims and apportioned liability for sixty percent of the damages to the manufacturer.⁹⁸⁹ The district court doubled the jury award because the jury found that TriTech willfully infringed the patent.⁹⁹⁰ The manufacturer appealed, asserting inter alia, that the district court should have doubled only the sixty percent portion of the actual damages awarded against the manufacturer.⁹⁹¹ The Federal Circuit noted that the manufacturer was liable “for willful inducement of all of the infringing sales.”⁹⁹² Thus, the Federal Circuit assessed punitive damages against the manufacturer for an amount equal to one-hundred percent of the combined reasonable royalty and lost profits damages, and assessed compensatory damages for sixty percent of the same amount.⁹⁹³

In *Mentor H/S Inc. v. Medical Device Alliance, Inc.*,⁹⁹⁴ the Federal Circuit upheld the district court’s refusal to award enhanced damages and attorney’s fees, despite the jury’s finding that the infringement had been willful.⁹⁹⁵ In this case, the district court found that the question of willfulness was a close determination, and the Federal Circuit held that the district court did not abuse its discretion in refusing to award enhanced damages.⁹⁹⁶

Similarly, in *Electro Scientific Industries v. General Scanning Inc.*,⁹⁹⁷ the district court refused to award enhanced damages despite a jury

987. *Id.* at 1362, 57 U.S.P.Q.2d (BNA) at 1969.

988. *Id.* at 1343-44, 57 U.S.P.Q.2d (BNA) at 1955-56.

989. *Id.* at 1361, 57 U.S.P.Q.2d (BNA) at 1968.

990. *Id.*, 57 U.S.P.Q.2d (BNA) at 1968.

991. *Id.*, 57 U.S.P.Q.2d (BNA) at 1968.

992. *Id.*, 57 U.S.P.Q.2d (BNA) at 1968 (explaining that when a party did not willfully infringe a patent, the party cannot be held jointly and severally liable for willfulness damages. Therefore, OPT’s damages could not be increased as a result of TriTech’s willful infringement).

993. *Id.*, 57 U.S.P.Q.2d (BNA) at 1968.

994. 244 F.3d 1365, 58 U.S.P.Q.2d (BNA) 1321 (Fed. Cir. 2001).

995. *See id.* at 1380, 58 U.S.P.Q.2d (BNA) at 1331 (agreeing with the district court that enhanced damages were inappropriate in this case because the evidence in support of willfulness was not strong enough to impose enhanced damages under the totality of circumstances).

996. *Id.* at 1380, 58 U.S.P.Q.2d (BNA) at 1331 (describing the process the Federal Circuit uses in reviewing willfulness as “a two-step process”) (citations omitted). “First, the fact-finder must determine if an accused infringer is guilty of conduct, such as willfulness, upon which increased damages may be based. If so, the court then exercises its discretion to determine if the damages should be increased given the totality of the circumstances.” *Id.*, 58 U.S.P.Q.2d (BNA) at 1331 (citations omitted).

997. 247 F.3d 1341, 58 U.S.P.Q.2d (BNA) 1498 (Fed. Cir. 2001).

verdict of willfulness.⁹⁹⁸ Again, the district court found that the willfulness determination was close, and that there was evidence to support the defendant's belief in the invalidity of the patents.⁹⁹⁹ The Federal Circuit upheld the district court's refusal to award enhanced damages. Based on the totality of evidence, the district court properly applied its discretion to deny enhanced damages when the defendant acted upon a good faith belief that the patent was invalid.¹⁰⁰⁰

4. Attorney fees

Under 35 U.S.C. § 285, the district court may award reasonable attorney fees in "exceptional" cases.¹⁰⁰¹ Courts have discretionary power to impose attorney fees, but even in exceptional cases, the court is not required to impose attorney fees.¹⁰⁰²

In *Union Pacific Resources Co. v. Chesapeake Energy Corp.*,¹⁰⁰³ the Federal Circuit upheld the district court's refusal to grant attorney's fees sought by the defendant¹⁰⁰⁴ because of the plaintiff's alleged inequitable conduct and litigation misconduct.¹⁰⁰⁵ The Federal Circuit found that the defendant failed to make a convincing showing that the district court committed clear error when it held that the case was not exceptional and there was no inequitable conduct, despite the finding of patent invalidity.¹⁰⁰⁶

In *Electro Scientific Industries v. General Scanning Inc.*,¹⁰⁰⁷ the Federal

998. See *id.* at 1353, 58 U.S.P.Q.2d (BNA) at 1506 (explaining that a finding of willfulness does not require that the court enhance the damages; rather a court has discretion to enhance damages) (citing *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1461, 46 U.S.P.Q.2d (BNA) 1169, 1179 (Fed. Cir. 1998) (en banc)).

999. *Id.* at 1353-54, 58 U.S.P.Q.2d (BNA) at 1506-07. The alleged infringing patent in this case involved a new method and system that increased the operating speed in connection or links between components of a memory device. *Id.* at 1345, 58 U.S.P.Q.2d (BNA) at 1500.

1000. See *id.* at 1353-54, 58 U.S.P.Q.2d (BNA) at 1506-07 (noting that the infringing party obtained an oral and written opinion from counsel stating that the patent was invalid).

1001. 35 U.S.C. § 285 (1994).

1002. See HARMON, *supra* note 329, § 12.2(a) (stating that the court has discretionary power to impose attorney fees as compensatory damages, but not punitive damages).

1003. 236 F.3d 684, 57 U.S.P.Q.2d (BNA) 1293 (Fed. Cir. 2001).

1004. *Id.* at 694, 57 U.S.P.Q.2d (BNA) at 1299.

1005. *Id.*, 57 U.S.P.Q.2d (BNA) at 1299.

1006. See *id.*, 57 U.S.P.Q.2d (BNA) at 1299 (describing the standard of review regarding a district court's awarding of attorney's fees as follows: "[t]he district court must first determine whether the case is exceptional, a factual determination that we review for clear error; if the case is found to be exceptional, the court must then determine whether attorney fees should be awarded, a determination that we review for abuse of discretion.") (quoting *Enzo Biochem, Inc. v. Calgene, Inc.*, 188 F.3d 1362, 1370, 52 U.S.P.Q.2d (BNA) 1129, 1134-35 (Fed. Cir. 1999)).

1007. 247 F.3d 1341, 58 U.S.P.Q.2d (BNA) 1498 (Fed. Cir. 2001).

Circuit held that the district court had the discretion to refuse to award attorney's fees, even in a case where the jury had found willfulness.¹⁰⁰⁸ As the court stated, "a finding of willful infringement does not require a finding that a case is exceptional."¹⁰⁰⁹

In *Brasseler, U.S.A. I L.P. v. Stryker Sales Corp.*,¹⁰¹⁰ the Federal Circuit affirmed a district court decision that the patentee was guilty of inequitable conduct for failing to disclose the facts relating to a potential on-sale bar and also upheld the district court's award of attorney's fees.¹⁰¹¹ In discussing the district court's award of attorney fees, the Federal Circuit concluded that the district court was not required to limit its award of attorney fees to those incurred in presenting the on-sale bar defense.¹⁰¹² The court reasoned the defendant would not have incurred fees if the patentee had not committed inequitable conduct.¹⁰¹³

5. *Prejudgment interest*

A district court may require that interest be paid on any monetary judgments in a civil case.¹⁰¹⁴ In *General Motors Corp. v. Devex Corp.*,¹⁰¹⁵ the court held that, unless some justification exists to deny the interest award,¹⁰¹⁶ prejudgment interest should be awarded to place the patentee in the original position it would have been in had the infringement not occurred.¹⁰¹⁷

In *Crystal Semiconductor Corp. v. Tritech Microelectronics International*,¹⁰¹⁸ the Federal Circuit upheld the district court's refusal to award prejudgment interest on damages.¹⁰¹⁹ The court reasoned against awarding prejudgment interest because the plaintiff's two-year

1008. *Id.* at 1353, 58 U.S.P.Q.2d (BNA) at 1506.

1009. *Id.*, 58 U.S.P.Q.2d (BNA) at 1506 (quoting *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1461, 46 U.S.P.Q.2d (BNA) 1169 (Fed. Cir. 1998) (en banc)).

1010. 267 F.3d 1370, 60 U.S.P.Q.2d (BNA) 1482 (Fed. Cir. 2001).

1011. *See id.* at 1375-78, 60 U.S.P.Q.2d (BNA) at 1483-86 (noting that the district court's opinion was a result of a remand from the Federal Circuit where the Federal Circuit held the patent at issue invalid by reason of 35 U.S.C. § 102(b) (1994)).

1012. *Id.* at 1386, 60 U.S.P.Q.2d (BNA) at 1492.

1013. *See id.*, 60 U.S.P.Q.2d (BNA) at 1492 (noting that attorney fees would not have been necessary if the plaintiff had not brought a "frivolous" lawsuit for infringement of a patent that it knew had been improperly obtained).

1014. 28 U.S.C. § 1961 (1994).

1015. 461 U.S. 648 (1982).

1016. *Id.* at 657 (finding that prejudgment interest should be awarded where the defendant infringed a lubricating process for car parts).

1017. *See HARMON, supra* note 329, § 12.2(a) (declaring that a court abuses its discretion if it denies prejudgment interest without providing reasons, but explaining that this award does not apply to punitive damages).

1018. 246 F.3d 1336, 57 U.S.P.Q.2d (BNA) 1953 (Fed. Cir. 2001).

1019. *See id.* at 1362, 57 U.S.P.Q.2d (BNA) at 1968-69 (reversing the district court's damages ruling on other aspects).

delay in initiating suit escalated the damages owed by the defendants, “was self-serving, and resulted in prejudice to the defendant.”¹⁰²⁰

C. Arbitration

The enforcement provisions of the Federal Arbitration Act¹⁰²¹ became applicable to patent contracts in 1982.¹⁰²² Under the Arbitration Act, an award may be set aside only when: it was “procured by corruption, fraud, or undue means”; the arbitrator acted in a corrupt or partial manner; gross misconduct by the arbitrator caused prejudice against any party; or when the arbitrator used excessive powers or failed to render a “mutual, final, and definite” decision.¹⁰²³ In addition, courts have recognized that an award also may be vacated for “manifest disregard” of the law.¹⁰²⁴

In *Flex-Foot, Inc. v. CRP, Inc.*,¹⁰²⁵ the parties arbitrated patent infringement claims pursuant to a settlement agreement, which had terminated a prior litigation.¹⁰²⁶ The district court upheld the arbitration award.¹⁰²⁷ The Federal Circuit noted that the arbitration agreement required the arbitrators to write a formal written opinion.¹⁰²⁸ The arbitrators’ decision set forth their reasoning, and therefore, it had adequately satisfied the requirements of the contract.¹⁰²⁹ The arbitrators were not required to set forth a “claim construction such as would be undertaken by a [district] court.”¹⁰³⁰

1020. *Id.*, 57 U.S.P.Q.2d (BNA) at 1669. Prejudgment interest is “the rule, not the exception.” *Id.* at 1361, 57 U.S.P.Q.2d (BNA) at 1668 (citing *Gen. Motors v. Devex Corp.*, 461 U.S. 648, 655 (1983)). “[T]he discretion of the district court in denying prejudgment interest is limited to specific circumstances.” *Id.* at 1346, 57 U.S.P.Q.2d (BNA) at 1957-58 (citing *Gen. Motors.*, 461 U.S. at 657).

1021. 9 U.S.C. §§ 1-207 (1994).

1022. 35 U.S.C. § 294 (1994); *see also* *Flex-Foot, Inc. v. CRP, Inc.*, 238 F.3d 1362, 1365, 57 U.S.P.Q.2d (BNA) 1635, 1637 (Fed. Cir. 2001).

1023. 9 U.S.C. § 10 (1994); *see also* *Flex-Foot Inc.*, 238 F.3d at 1365, 57 U.S.P.Q.2d (BNA) at 1637.

1024. *Flex-Foot, Inc.*, 238 F.3d at 1365, 57 U.S.P.Q.2d (BNA) at 1637 (citing *Wilko v. Swan*, 326 U.S. 427, 436-37 (1953), *overruled on other grounds* by *Rodriguez de Quayas v. Shearson/Am. Express, Inc.*, 490 U.S. 477 (1989)).

1025. 238 F.3d at 1362, 57 U.S.P.Q.2d (BNA) at 1635.

1026. *Id.* at 1363-64, 57 U.S.P.Q.2d (BNA) at 1636-37.

1027. *See id.* at 1364, 57 U.S.P.Q.2d (BNA) at 1637. In reviewing an arbitration award, the court decides which regional circuit law applies on an issue by issue basis. *See id.* at 1365, 57 U.S.P.Q.2d (BNA) at 1637. Here, the court applies Federal Circuit law to the issue of whether the arbitrators were required to set forth a complete claim construction in their decision, and to the issue of whether the public policy against licensee estoppel permitted a party to waive challenges to validity in a settlement agreement. *Id.*, 57 U.S.P.Q.2d (BNA) at 1637-38. The court stated that these issues are “intimately related with the substance of enforcement of a patent right.” *Id.*, 57 U.S.P.Q.2d (BNA) at 1638.

1028. *Id.* at 1366, 57 U.S.P.Q.2d (BNA) at 1638.

1029. *Id.* at 1367, 57 U.S.P.Q.2d (BNA) at 1639.

1030. *Id.* at 1366, 57 U.S.P.Q.2d (BNA) at 1638.

The Federal Circuit also held that the arbitrators had been correct in refusing to hear validity defenses that had been waived by the prior settlement agreement.¹⁰³¹

CONCLUSION

Although the Federal Circuit's 2001 opinions did not include any sweeping new interpretations or applications of patent law, the court addressed some significant issues of first impression, particularly regarding certificates of correction¹⁰³² and notice under 35 U.S.C. § 287.¹⁰³³ The Federal Circuit also clarified the law on burdens of proof,¹⁰³⁴ the on-sale bar,¹⁰³⁵ the application of the complete bar rule adopted in *Festo*,¹⁰³⁶ and the right to a jury trial in an infringement action that seeks only an injunction and no damages.¹⁰³⁷ Overall, the court's decisions emphasized the public notice function of patent claims, and revealed an effort on the court's part to make the scope

1031. *Id.* at 1367, 57 U.S.P.Q.2d (BNA) at 1638.

1032. *See* Superior Fireplace Co. v. Majestic Prods. Co., 270 F.3d 1358, 1373, 60 U.S.P.Q.2d (BNA) 1668, 1679 (Fed. Cir. 2001) (concluding that a correction to a typographical or clerical error, which broadens a claim, is only permitted when the "specification, drawings, and prosecution history" clearly indicate "how the error should appropriately be corrected"); *see also supra* notes 629-50 and accompanying text (reviewing the court's analysis regarding a certificate of correction that would broaden the claim).

1033. *See* Lans v. Digital Equip. Corp., 252 F.3d 1320, 1327-28, 59 U.S.P.Q.2d (BNA) 1057, 1060-61 (Fed. Cir. 2001) (finding that the notice requirement includes both actual notice of the infringement and of the patentee's identity, and that notice by a person "closely associated" with the patentee fails to satisfy the notice requirement).

1034. *See* Apotex USA, Inc. v. Merck & Co., 254 F.3d 1031, 1037, 59 U.S.P.Q.2d (BNA) 1139, 1143 (Fed. Cir. 2001) (explaining that "under § 102(g) interference law involving co-pending applications, once the first party to invent has established priority of invention, the second party to conceive and reduce the invention to practice has the burden of proving that the first party suppressed or concealed the invention"); *see also supra* notes 355-67 and accompanying text (discussing whether an invention was concealed when it was kept from the public for almost five years).

1035. *See, e.g.,* Group One, Ltd. v. Hallmark Cards, Inc., 254 F.3d 1041, 1047, 59 U.S.P.Q.2d (BNA) 1121, 1126 (Fed. Cir. 2001) (holding that the on sale bar requires an "offer for sale" to be analyzed under "generally understood" contract law because this question is an issue of Federal Circuit law); *see also supra* notes 382-450 and accompanying text (reviewing recent cases addressing on-sale bar).

1036. *See, e.g.,* Pioneer Magnetics, Inc. v. Micro Linear Co., 238 F.3d 1341, 1345-46, 57 U.S.P.Q.2d (BNA) 1553, 1556 (Fed. Cir. 2001) (clarifying that voluntary amendments can still give rise to prosecution history estoppel because they are treated like other amendments); *see also supra* notes 797-807 and accompanying text (discussing the Federal Circuit's opinion in *Pioneer Magnetics*).

1037. *See* Tegal Corp. v. Tokyo Electron Am., Inc., 257 F.3d 1331, 1341, 59 U.S.P.Q.2d (BNA) 1385, 1392 (Fed. Cir. 2001) (finding that defendant is not entitled to a jury trial when the patentee only seeks an injunction and no damages, and defendant asserts no counterclaims, but only affirmative defenses); *see also supra* notes 822-27 and accompanying text (discussing the alleged injunction violation that would constitute a patent infringement).

of patent claims certain and predictable. By conducting its own de novo analysis of patent claim terms in so many cases,¹⁰³⁸ however, the Federal Circuit may have encouraged parties to await the court's claim construction before resolving disputes. It remains to be seen whether the court has provided patent applicants and litigants with sufficient guidance so that they can confidently predict, in advance of appeal, how the court will interpret a patent claim in a particular case.

APPENDIX

CLAIM TERMS ANALYZED AND CONSTRUED BY THE FEDERAL CIRCUIT IN
2001

Case Name and Citation	Claim Term
<i>Acromed Corporation v. Sofamor Danek Group, Inc.</i> , 253 F.3d 1371, 59 U.S.P.Q.2d (BNA) 1130.	"means for engaging a portion of the surface defining the opening in the bone . . . to restrict movement . . . and to block effluence . . ."
<i>Advanced Cardiovascular Systems, Inc. v. Scimed Life Systems, Inc.</i> , 261 F.3d 1329, 59 U.S.P.Q.2d (BNA) 1801.	"connecting elements" "generally parallel connecting elements"
<i>AFG Industries, Inc. v. Cardinal IG Company, Inc.</i> , 239 F.3d 1239, 57 U.S.P.Q.2d (BNA) 1776.	"product comprising a transparent substrate and a 5-layered transparent coating composed of [five specific layers]."
<i>Amazon.com, Inc. v. Barnesandnoble.com, Inc.</i> , 239 F.3d 1343, 57 U.S.P.Q.2d (BNA) 1747.	"single-action ordering component" "shopping cart ordering model"
<i>Asyst Technologies, Inc. v. Empak, Inc.</i> , 268 F.3d 1364, 60 U.S.P.Q.2d (BNA) 1567.	"microcomputer means for receiving and processing digital information" "workstation data processing means . . . for receiving data . . . and transporting data" "means for controlling . . . and for transmitting information"
<i>Ballard Medical Products v. Allegiance Healthcare Corp.</i> , 268 F.3d 1352, 60 U.S.P.Q.2d (BNA) 1493.	"valve means"

1038. See *supra* Part I.G (discussing the standard of review that the Federal Circuit applies to various issues).

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Case Name and Citation	Claim Term
<i>Bell Atlantic Network Services, Inc. v. Covad Communications Group, Inc.</i> , 262 F.3d 1258, 59 U.S.P.Q.2d (BNA) 1865.	"plurality of different modes" "ADSL/ADR transceiver" "first channel" "second channel" "selectively changing the transmission rates"
<i>Biotec Biologische Naturverpackungen v. Biocorp, Inc.</i> , 249 F.3d 1341, 58 U.S.P.Q.2d (BNA) 1737.	"substantially water free" "homogeneous mixture having a crystalline content of less than 5% of starch"
<i>Biovail Corporation International v. Andrx Pharmaceuticals, Inc.</i> , 239 F.3d 1297, 57 U.S.P.Q.2d (BNA) 1813.	"Diltiazem salts and an effective amount of a wetting agent in admixture with . . . Diltiazem salts to maintain the solubility of the Diltiazem in each bead . . ."
<i>Bristol-Myers Squibb Company v. Ben Venue Laboratories, Inc.</i> , 246 F.3d 1368, 58 U.S.P.Q.2d (BNA) 1508.	"a method for reducing hematologic toxicity" "to effect regression of a taxol-sensitive tumor, said method being associated with reduced hematologic toxicity" "an antineoplastically effective amount"
<i>Brown v. 3M</i> , 265 F.3d 1349, 60 U.S.P.Q.2d (BNA) 1375.	"or"
<i>Budde v. Harley-Davidson, Inc.</i> , 250 F.3d 1369, 58 U.S.P.Q.2d (BNA) 1801.	"electronic sensing means for determining when the ignition system . . . delivers an electronic pulse" "status sensing means for measuring a combination of air intake and engine temperature and vacuum in the intake manifold"
<i>Crystal Semiconductor Corporation v. Trittech Microelectronics International, Inc.</i> , 246 F.3d 1336, 57 U.S.P.Q.2d (BNA) 1953.	"capacitor having: a first conductive layer disposed over a portion of the first face of said semiconductor substrate . . ., a second . . . conductive layer disposed over a portion of said first conductive layer" "a method for reducing deleterious effects of . . . electrical noise . . . said method comprising a. providing a first clock signal . . . c. generating a second clock signal . . ."

Case Name and Citation	Claim Term
<i>Day International, Inc. v. Reeves Brothers, Inc.</i> , 260 F.3d 1343, 59 U.S.P.Q.2d (BNA) 1790.	"melting point of said microcapsules"
<i>Dayco Products, Inc. v. Total Containment, Inc.</i> , 258 F.3d 1317, 59 U.S.P.Q.2d (BNA) 1489.	"projections of said insert means being respectively received in said recesses of said inner hose"
<i>DeMarini Sports, Inc. v. Worth, Inc.</i> , 239 F.3d 1314, 57 U.S.P.Q.2d (BNA) 1889.	"a [softball] bat comprising: a . . . frame . . . and an insert positioned within the frame . . ."
<i>Dow Chemical Company v. Sumitomo Chemical Company, Ltd.</i> , 257 F.3d 1364, 59 U.S.P.Q.2d (BNA) 1609.	"conducting the reaction in the presence of an organic solvent which codistills with water and said epihalohydrin at a boiling point below the boiling point of the lowest boiling compound among the components in the reaction mixture" "continuous or intermittent manner" "continuously removing water"
<i>Durel Corporation v. Osram Sylvania Inc.</i> , 256 F.3d 1298, 59 U.S.P.Q.2d (BNA) 1238.	"oxide coating"

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<i>Ecolab, Inc. v. Envirochem, Inc.</i> , 264 F.3d 1358, 60 U.S.P.Q.2d (BNA) 1173.	"substantially uniform"
<i>Exxon Research and Engineering Company v. United States</i> , 265 F.3d 1371, 60 U.S.P.Q.2d (BNA) 1272.	"a period sufficient to increase substantially the initial catalyst activity" "substantial absence of slug flow"
<i>Fin Control Systems Pty, Ltd. v. Oam, Inc.</i> , 265 F.3d 1311, 60 U.S.P.Q.2d (BNA) 1203.	"releasable means laterally engaging said formation . . . applying lateral force" "side wall of said cavity"
<i>Gart v. Logitech, Inc.</i> , 254 F.3d 1334, 59 U.S.P.Q.2d (BNA) 1290.	"an angular medial surface for supporting the three remaining ulnar fingers in a wrapped configuration"
<i>Generation II Orthotics Inc. v. Medical Technology Inc.</i> , 263 F.3d 1356, 59 U.S.P.Q.2d (BNA) 1919.	"joint means . . . for allowing controlled medial and lateral inclination of each rigid arm relative to the pivotable joint"
<i>Glaxo Group Limited v. Ranbaxy Pharmaceuticals, Inc.</i> , 262 F.3d 1333, 59 U.S.P.Q.2d (BNA) 1950.	"essentially free from crystalline material"
<i>Globetrotter Software, Inc. v. Elan Computer Group, Inc.</i> , 236 F.3d 1363, 57 U.S.P.Q.2d (BNA) 1542.	"license file means . . . for storing . . . said licenses"
<i>Hilgraeve Corporation v. Symantec Corporation</i> , 265 F.3d 1336, 60 U.S.P.Q.2d (BNA) 1291.	"prior to storage on the destination storage medium"
<i>Innovad Inc. v. Microsoft Corporation</i> , 260 F.3d 1326, 59 U.S.P.Q.2d (BNA) 1676.	"telephone dialer system" "a case . . . enclosing a small volume" "a single, bi state switch" "means for releasably electrically coupling said reprogrammable memory means and said programming means"
<i>Interactive Gift Express, Inc. v. Compuserve Incorporated</i> , 256 F.3d 1323, 59 U.S.P.Q.2d (BNA) 1401.	"point of sale location" "material object" "information manufacturing machine" "authorization code"
<i>Karsten Manufacturing Corporation v. Cleveland Golf Company</i> , 242 F.3d 1376, 58 U.S.P.Q.2d (BNA) 1286.	"correlated set of iron-type golf clubs" "back surface adjacent said indented trailing edge . . . sloping upwardly and inwardly"
<i>Kopykake Enterprises, Inc. v. The Lucks Company</i> , 264 F.3d 1377, 60 U.S.P.Q.2d (BNA) 1124.	"screen printing"
<i>Kustom Signals, Inc. v. Applied Concepts, Inc.</i> , 264 F.3d 1326, 60 U.S.P.Q.2d (BNA) 1135.	"magnitude or frequency"
<i>Lockheed Martin Corporation v. Space Systems/Loral, Inc.</i> , 249 F.3d 1314, 58 U.S.P.Q.2d (BNA) 1671.	"means for rotating said wheel in accordance with a predetermined rate schedule which varies sinusoidally"
<i>Medronic, Inc. v. Advanced Cardiovascular Systems, Inc.</i> , 248 F.3d 1303, 58 U.S.P.Q.2d (BNA) 1607.	"means for connecting adjacent elements together"

<i>MSM Investments Company, LLC v. Carolwood Corporation</i> , 259 F.3d 1335, 59 U.S.P.Q.2d (BNA) 1856.	"feeding . . . a beneficial amount of methsulfonyl "methane" "increasing the amount of metabolizable sulfur"
<i>Mycogen Plant Science, Inc. v. Monsanto Company</i> , 243 F.3d 1316, 58 U.S.P.Q.2d (BNA) 1030.	"codons preferred by the intended plant host"
<i>Netword, LLC v. Centraal Corporation</i> , 242 F.3d 1347, 58 U.S.P.Q.2d (BNA) 1076.	"local server computer"
<i>Oak Technology, Incorporated v. International Trade Commission</i> , 248 F.3d 1316, 58 U.S.P.Q.2d (BNA) 1748.	"assembled data" "after correction of said data" "cyclic redundancy checker"
<i>Purdue Pharma L.P. v. Boehringer Ingelheim GmbH</i> , 237 F.3d 1359, 57 U.S.P.Q.2d 1647.	"mean minimum plasma concentration of oxycodone"
<i>Rexnord Corporation v. Laitram Corporation</i> , 278 F.3d 1336, 60 U.S.P.Q.2d (BNA) 1851.	"portion"
<i>Schaefer Fan Co., Inc. v. J & D Manufacturing</i> , 265 F.3d 1282, 60 U.S.P.Q.2d (BNA) 1194.	"concentric rings"
<i>Schoell v. Regal Marine Industries, Inc.</i> , 247 F.3d 1202, 58 U.S.P.Q.2d (BNA) 1450.	"v-shaped keel" "generally flat aft keel"
<i>Scimed Life Systems, Inc. v. Advanced Cardiovascular Systems, Inc.</i> , 242 F.3d 1337; 58 U.S.P.Q.2d (BNA) 1059.	"dilatation catheter including an inflatable balloon and an inflatable lumen extending through the catheter separate from the guide wire lumen"
<i>Tellmac Cellular Corporation v. Topp Telecom, Inc.</i> , 247 F.3d 1316, 58 U.S.P.Q.2d (BNA) 1545.	"communication means for selectively establishing a communication link with each mobile phone unit" "complex billing algorithm . . . for internally calculating call charges"
<i>Turbocare Division of Demag Delaval Turbomachinery Corporation v. General Electric Company</i> , 264 F.3d 1111, 60 U.S.P.Q.2d (BNA) 1017.	"radial positioning means comprising a compressed spring means . . . [and] working fluid" "large clearance position" "small clearance position"
<i>Viskase Corporation v. American National Can Company</i> , 261 F.3d 1316, 59 U.S.P.Q.2d (BNA) 1823.	"density not greater than about 0.915 grams per cubic centimeter"
<i>Wenger Manufacturing, Inc. v. Coating Machinery Systems, Inc.</i> ; 239 F.3d 1225, 57 U.S.P.Q.2d (BNA) 1679.	"air circulation means;" "means defining . . . separate product coating zones"
<i>Xerox Corporation v. 3Com Corporation</i> , 267 F.3d 1361, 60 U.S.P.Q.2d (BNA) 1526.	"unistroke symbols" "without reference to and totally independent of their spatial relationship with respect to each other"