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# 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 1982 promised that the Court of Appeals for the Federal Circuit would have a “rich docket,” composed of “unusually complex and technical” cases. 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.

I. PROCEDURAL ASPECTS

A. Subject Matter Jurisdiction

Federal courts are courts of limited jurisdiction. 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. 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. 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. The Federal Circuit also has jurisdiction of appeals from final determinations of the International Trade Commission made under 19 U.S.C. § 1337 and from interlocutory decisions in such cases.

In Crater Corp. v. Lucent Technologies, Inc., the plaintiff (“Crater”) alleged that the defendants (“Lucent”) had infringed Crater’s patent for an underwater coupling device. 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. Under 28 U.S.C. § 1498, the patentee’s exclusive remedy for infringement by the United States Government or its contractors is an action in the Court of Federal Claims. The Federal Circuit held that § 1498 is to be applied “as a codification of a

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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).
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) (“The 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,"\(^\text{14}\) and that the district court should have treated the motion to dismiss for lack of jurisdiction as a motion for summary judgment.\(^\text{15}\) 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.\(^\text{16}\) 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.\(^\text{17}\)

In *Schaefer Fan Co. v. J & D Manufacturing*,\(^\text{18}\) 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.\(^\text{19}\) 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,\(^\text{20}\) 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.\(^\text{21}\) 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.\(^\text{22}\) 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.\(^\text{23}\)

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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.
19. Id. at 1286, 60 U.S.P.Q.2d (BNA) at 1197.
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*, the federal courts do not have automatic continuing jurisdiction over actions to enforce settlement agreements arising out of federal lawsuits. 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. 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.

**B. Personal Jurisdiction**

Courts must also have personal jurisdiction over the parties of a case in order to properly hear their claims. Federal courts may exercise their powers over a defendant in an appropriate case if the defendant is present in the forum state. 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.”

In *Inamed Corp. v. Kuzmak*, a former licensee and corporate resident in California brought suit in California against the patentee, a resident of New Jersey. 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. Determining that California’s long-arm statute is co-extensive with the limits of due process, the court focused solely upon the second inquiry.

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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* *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)).
29. *Id.* at 316 (internal quotations omitted).
30. *Id.* at 316 (internal quotations omitted).
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. 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. 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,” 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. The litigation also met the second due process requirement since the claim arose out of the act of sending the infringement letter.

In an attempt to avoid jurisdiction, the defendant relied on his illness and inability to travel. 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. 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."

In Piezenik v. Dyax Corp., 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. The Federal Circuit held that because New York’s long-arm statute did not exhaust the limits of due process, it needed to consider only whether New York law would permit the assertion of jurisdiction over a defendant based on the conduct alleged. The court found the two alleged grounds for jurisdiction insufficient under New York law. 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. 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.

C. Standing

Article III of the Constitution permits the federal courts to decide only actual cases or controversies. 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. 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).
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. Failure to meet standing requirements will bar a party from bringing a claim into the federal courts.

In Mentor H/S, Inc. v. Medical Device Alliance, Inc., 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. 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.” Thus, a licensee can qualify as a patentee if it holds all substantial rights in the patent and is, in effect, an assignee. 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. 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. The exclusive licensee was authorized to sue only in the event that the owner failed to do so.

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.

In Intellectual Property Development, Inc. v. TCI Cablevision of California, Inc., 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. 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).
55. Id. at 1017, 57 U.S.P.Q.2d (BNA) at 1820.
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.
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)).
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. 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.

In *Viskase Corp. v. American National Can Co.*, 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. The action had been brought by the assignee of the patents. 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.

In *Intellectual Property Development, Inc. v. TCI Cablevision of California Inc.*, 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. 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. 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.

### D. Vacatur and Remand

In *Tronzo v. Biomet, Inc.*, the Federal Circuit held that the district
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.\cite{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.\cite{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.\cite{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.\cite{91}

In *Litton Systems, Inc. v. Honeywell Inc.*,\cite{92} the Federal Circuit upheld summary judgment of non-infringement.\cite{93} On a prior appeal, in light of its decision in *Warner Jenkinson Co. v. Hilton Davis Chemical Co.*,\cite{94} the Supreme Court remanded the case for reconsideration.\cite{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.\cite{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 Kabushiki Co.*\cite{97} having been decided in the

\begin{enumerate}
\item[88.] Id. at 1347-48, 57 U.S.P.Q.2d (BNA) at 1389.
\item[89.] Id. at 1349, 57 U.S.P.Q.2d (BNA) at 1388-89.
\item[90.] Id., 57 U.S.P.Q.2d (BNA) at 1389.
\item[91.] Id. at 1352, 57 U.S.P.Q.2d (BNA) at 1391.
\item[92.] 238 F.3d 1376, 57 U.S.P.Q.2d (BNA) 1653 (Fed. Cir. 2001).
\item[93.] Id. at 1380, 57 U.S.P.Q.2d (BNA) at 1656.
\item[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).
\item[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).
\item[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).
\item[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 Circuits decision, *Festo Corp v. Shoketsu Kinzoku Kabushiki Co.*, 122 S. Ct. 1831 (May 28, 2002) (No. 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. 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. In *Aquar Marine Supply v. AIM Machining, Inc.*, 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. The district court denied the motion to vacate and the patentee appealed from the declaratory judgment of invalidity. 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.

In *Durel Corp. v. Osram Sylvania Inc.*, the district court granted summary judgment, holding the patents infringed and not invalid. 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. 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. The court vacated the district court’s grant of partial summary judgment holding the patents not invalid.

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. 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 at 1216, 58 U.S.P.Q.2d (BNA) at 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 at 1208, 59 U.S.P.Q.2d (BNA) at 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.\(^\text{109}\) Even where a federal statute does not contain an express provision preempts state law, state law may nevertheless be preempts if Congress intends the federal law to “occupy the field” or where the state law would interfere with the accomplishment of the congressional purpose.\(^\text{110}\)

In *Kroll v. Finnerty*,\(^\text{111}\) 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 misconduct\(^\text{112}\) 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.\(^\text{113}\) The Federal Circuit held that the allegation of preemption was “so attenuated and unsubstantial as to be absolutely devoid of merit,”\(^\text{114}\) such that the district court lacked jurisdiction to proceed to the merits of the complaint.\(^\text{115}\) The case was remanded to the district court for the purpose of dismissing the complaint for lack of subject matter jurisdiction.\(^\text{116}\)

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.


\(^{111}\) 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 . . . .”).


\(^{114}\) Id. at 1366, 58 U.S.P.Q.2d (BNA) at 1099 (quoting Hagans 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.
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. The actual controversy "must be extant at all stages of the review, not merely at the time the complaint is filed."

Thus, in *Intellectual Property Development, Inc. v. TCI Cablevision of California, Inc.*, 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.

The statement of non-liability removed any reasonable apprehension by the defendant that it would face an infringement suit.

### G. Standard of Review and Applicable Law

The Federal Circuit has characterized the issue of claim construction as a question of law, and it reviews the district court’s claim construction de novo. Similarly, the Federal Circuit reviews decisions granting summary judgment de novo. The Federal Circuit also regards prosecution history estoppel as a question of law and has reviewed decisions on prosecution history estoppel de novo. Thus,
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 jurisdiction\(^{130}\) and personal jurisdiction.\(^{151}\)

The Federal Circuit reviews findings of fact for clear error.\(^{152}\) 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.\(^{156}\) 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

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\(^{130}\) 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).


\(^{134}\) 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.


\(^{140}\) See, e.g., Shockley v. Arcan, Inc., 248 F.3d 1349, 1358, 58 U.S.P.Q.2d (BNA)
intervening rights,\footnote{141} denying a motion to amend pleadings\footnote{142} and decisions on the equitable defense of laches.\footnote{143}

In reviewing decisions by the district court on motions for judgment as a matter of law, the Federal Circuit reappplies 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.\footnote{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.\footnote{145}

\textbf{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.\footnote{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.”\footnote{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.\footnote{148} In conjunction with attorney-client privilege, the doctrine of work product protects materials prepared in

\begin{itemize}
\item \textbf{1602, 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.}
\item \textbf{141. See, e.g., Shockley, 248 F.3d at 1358, 58 U.S.P.Q.2d (BNA) at 1696.}
\item \textbf{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).}
\item \textbf{143. 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).}
\item \textbf{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).}
\item \textbf{145. See, e.g., Shockley, 248 F.3d at 1357, 58 U.S.P.Q.2d (BNA) at 1696.}
\item \textbf{146. See Radiant Burners, Inc. v. Am. Gas Assoc., 320 F.2d 314, 318 (7th Cir. 1963) (discussing Wigmore’s Treatise on Evidence).}
\item \textbf{147. 8 J. WIGMORE, EVIDENCE AT TRIALS IN COMMON LAW 2290, at 542 (J. McNaughton Rev. 1961).}
\item \textbf{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 . . . .”).}
\end{itemize}
anticipation of litigation or for trial.\textsuperscript{149}

In \textit{In re Pioneer Hi-Bred International, Inc.},\textsuperscript{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.\textsuperscript{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,”\textsuperscript{152} it may also be used to prevent privileged communications from being improperly exposed.\textsuperscript{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.\textsuperscript{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.\textsuperscript{155} The advice related to the tax consequences of a merger.\textsuperscript{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.\textsuperscript{157}

The Federal Circuit held that the district court had overstated the scope of the waiver.\textsuperscript{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.\textsuperscript{159} In this case, the only advice of counsel

\begin{itemize}
  \item \textsuperscript{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.”).
  \item \textsuperscript{150} 258 F.3d 1370, 57 U.S.P.Q.2d (BNA) 1658 (Fed. Cir. 2001).
  \item \textsuperscript{151} Id. at 1372-73, 57 U.S.P.Q.2d (BNA) at 1659.
  \item \textsuperscript{152} Id. at 1373, 57 U.S.P.Q.2d (BNA) at 1660.
  \item \textsuperscript{153} Id. at 1374, 57 U.S.P.Q.2d (BNA) at 1660.
  \item \textsuperscript{154} Id., 57 U.S.P.Q.2d (BNA) at 1660.
  \item \textsuperscript{155} Id. at 1375, 57 U.S.P.Q.2d (BNA) at 1659.
  \item \textsuperscript{156} Id., 57 U.S.P.Q.2d (BNA) at 1659.
  \item \textsuperscript{157} Id., 57 U.S.P.Q.2d (BNA) at 1659.
  \item \textsuperscript{158} Id. at 1376, 57 U.S.P.Q.2d (BNA) at 1662.
  \item \textsuperscript{159} Id. at 1374, 57 U.S.P.Q.2d (BNA) at 1660.
\end{itemize}
disclosed or relied upon related to the tax consequences of the merger. Thus, privilege with respect to that subject was waived. 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.

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. 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.

In *GFI, Inc. v. Franklin Corp.*, 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. The patentee claimed that the district court had improperly forced it to disclose privileged information. The Federal Circuit again applied the law of the regional circuit to review the district court’s ruling on waiver of attorney-client privilege. 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.

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

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. 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. Unlike claim preclusion, however, issue preclusion does not prevent parties from relitigating issues never raised in the prior suit.

In *Flex-Foot, Inc. v. CRP, Inc.* the parties arbitrated an infringement dispute relating to a patent for a prosthetic foot device. 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. The defendant sought, however, to vacate the arbitrators’ award and to persuade the district court to consider its invalidity defense. The district court affirmed the arbitrators’ award.

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.” 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* declared void as against public policy. 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.

170. 18 JAMES WILLIAM MOORE ET AL., MOORE’S FEDERAL PRACTICE § 132.01 (3d ed. 1997).
171. *Id.*
172. *Id.*
174. *Id.* at 1364, 57 U.S.P.Q.2d (BNA) at 1637.
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.
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. 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.

In *Aqua Marine Supply v. AIM Machining, Inc.*, 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. 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. The district court, however, refused to vacate its judgment and the Federal Circuit dismissed the appeal from that decision as moot.

In *Hallco Manufacturing Co. v. Foster*, 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. 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. Pursuant to the settlement, the alleged infringer accepted a non-exclusive, royalty-bearing license. 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).
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 1295, 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.\footnote{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.\footnote{195} 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.\footnote{194}

In \textit{Innovad Inc. v. Microsoft Corp.},\footnote{195} the patentee sued a number of defendants for alleged infringement of patents relating to an automatic telephone dialer system.\footnote{196} On appeal, the patentee challenged the district court’s claim construction, which had resulted in summary judgment of non-infringement.\footnote{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.\footnote{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.\footnote{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.\footnote{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.\footnote{201} A “full and fair opportunity to litigate,” the Federal

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\footnote{192. \textit{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.”).}
\footnote{194. \textit{Id.} at 1298, 59 U.S.P.Q.2d (BNA) at 1352.}
\footnote{195. 260 F.3d 1326, 59 U.S.P.Q.2d (BNA) 1676 (Fed. Cir. 2001).}
\footnote{196. \textit{Id.} at 1330, 59 U.S.P.Q.2d (BNA) at 1678.}
\footnote{197. \textit{Id.}, 59 U.S.P.Q.2d (BNA) at 1678.}
\footnote{198. \textit{Id.} at 1334, 59 U.S.P.Q.2d (BNA) at 1681.}
\footnote{199. \textit{Id.}, 59 U.S.P.Q.2d (BNA) at 1681.}
\footnote{200. \textit{Id.}, 59 U.S.P.Q.2d (BNA) at 1681.}
\footnote{201. \textit{Id.}, 59 U.S.P.Q.2d (BNA) at 1681 (finding that no action before the court
Circuit held, includes the right to appeal.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{205} This means that a single prior source must contain all of the essential elements of the invention.\textsuperscript{206} Anticipation cannot be shown simply by combining the elements from more than one reference.\textsuperscript{207}

In \textit{Karsten Manufacturing Corp. v. Cleveland Golf Co.},\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{212} The

\begin{footnotesize}
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\item Id., \textit{59 U.S.P.Q.2d (BNA)} at 1681.
\item Id., \textit{59 U.S.P.Q.2d (BNA)} at 1681-82.
\item Id., \textit{59 U.S.P.Q.2d (BNA)} at 1681-82.
\item \textit{Donald S. Chisum, Chisum on Patents} § 3.02 (1998).
\item Id.
\item Id.
\item 242 F.3d 1376, \textit{58 U.S.P.Q.2d (BNA)} 1286 (Fed. Cir. 2001).
\item Id. at 1383, \textit{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)).
\item Id., \textit{58 U.S.P.Q.2d (BNA)} at 1291-92.
\item Id. at 1384, \textit{58 U.S.P.Q.2d (BNA)} at 1292.
\item Id., \textit{58 U.S.P.Q.2d (BNA)} at 1292.
\end{enumerate}
\end{footnotesize}
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.”

In *Electro Scientific Industries v. General Scanning, Inc.*, 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. 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. 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. 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. 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.

In *Bristol-Myers Squibb Co. v. Ben Venue Laboratories, Inc.*, 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. Responding to the patentee’s argument that “new uses of old processes are patentable,” the Federal Circuit held that,

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

In Telemac Cellular Corp. v. Topp Telecom, Inc., 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. The district court granted summary judgment because certain claims were anticipated by prior art. 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. In this case, the claim required the use of a “complex billing algorithm.”

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, 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.


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

229. Id. at 1331-39, 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. 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. 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. Inherency is a question of fact, which the court may decide by recourse to extrinsic evidence. 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.” The Federal Circuit reviewed the evidence and, finding no genuine issue of material fact, affirmed the partial summary judgment of invalidity due to anticipation.

In Acromed Corp. v. Sofamor Danek Group, Inc., the court did not find that a missing element was inherent in a prior art reference for purposes of anticipation. The patent in this case related to a bone screw for attaching plates to a spine, connecting broken bones or connecting prostheses to bones.
In *Rapoport v. Dement*, 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. 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. After applying the substantial evidence test, the Federal Circuit affirmed the Board’s decision.

In *Brown v. 3M*, the patent claimed a system for resetting computer clocks to avoid Y2K problems that the Federal Circuit found was anticipated by prior art. 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. The court stated “[t]hat which infringes, if later, anticipates, if earlier,” 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.

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). Thus, he concluded that a system capable of resetting only 2-digit dates would not infringe.

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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).
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.”).
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, 1257, 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)).\(^{264}\)


\(^{257}\) 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 Helix 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.\footnote{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.} In Karsten Manufacturing Corp. v. Cleveland Golf Co.,\footnote{242 F.3d 1376, 58 U.S.P.Q.2d (BNA) 1286 (Fed. Cir. 2001).} the Federal Circuit reversed a district court holding of invalidity based on obviousness.\footnote{Id. at 1384, 58 U.S.P.Q.2d (BNA) at 1299.} 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,\footnote{Id. at 1385, 58 U.S.P.Q.2d (BNA) at 1293.} 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.\footnote{Id. at 1385, 58 U.S.P.Q.2d (BNA) at 1293.} 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.”\footnote{Id. at 1389, 58 U.S.P.Q.2d (BNA) at 1293.} 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.\footnote{Id., 58 U.S.P.Q.2d (BNA) at 1293.} The court reversed as a matter of law and remanded the claims for determination of the question of infringement.\footnote{Id. at 1385-86, 58 U.S.P.Q.2d (BNA) at 1293.}

In re Haruna\footnote{249 F.3d 1327, 58 U.S.P.Q.2d (BNA) 1517 (Fed. Cir. 2001).} involved a design patent for an ornamental design for a prerecorded optical disk.\footnote{Id., 58 U.S.P.Q.2d (BNA) at 1518 (discussing design differences).} 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.\footnote{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).} 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.\footnote{Id., 58 U.S.P.Q.2d (BNA) at 1522.}
In *Electro Scientific Industries, Inc. v. General Scanning, Inc.*, 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. 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. In addition, the patentee had failed to introduce any objective secondary evidence of non-obviousness.

The Federal Circuit addressed obviousness-type double patenting in *Eli Lilly & Co. v. Barr Laboratories, Inc.* 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. 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. 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. 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. 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.

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.
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. 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.

In In re Zurko, 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. 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. The Board had held that communication through such trusted paths was “basic knowledge.” The Federal Circuit held that the Board’s decision was not supported by substantial evidence because the Board’s “assessment of basic knowledge and common sense was not based on any evidence in the record.”

In Okajima v. Bourdeau, 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. The claims related to a snowboard boot. 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. 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).
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.
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. 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. 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.

In *Sandt Technology, Ltd. v. Resco Metal & Plastics Corp.*, 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. The district judge, however, held all claims in the patent invalid, including the dependent claims, without a specific discussion of his reasoning. With respect to the obviousness determination, the Federal Circuit summarized the *Graham* factors 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. 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. The Federal Circuit remanded, however, for consideration of whether claims other than claims 1, 3 and 19 were invalid. 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. Since all claims are presumed valid independently of the other claims, the district court could not hold the dependent claims invalid simply because independent

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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).


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 judgment 318 and the parties’ burdens of proof. 319 In this case, the patentee did not argue


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

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., 60 U.S.P.Q.2d (BNA) at 1365.
322. Id., 60 U.S.P.Q.2d (BNA) at 1365.
323. Id. at 1363-64, 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 1365-64, 60 U.S.P.Q.2d (BNA) at 1365.
326. Id. at 1365, 60 U.S.P.Q.2d (BNA) at 1366.
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. 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. Where an invention has been intentionally concealed or suppressed, however, the party may forfeit all rights to the invention.

In *Purdue Pharma L.P. v. Boehringer Ingelheim GmbH*, 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. 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. 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. The district court relied on the testimony of one of the inventors, as corroborated by documentary evidence, to find conception and reduction to practice. Under the rule of reason, the district court did not err in holding the proof adequate.

In *Mycogen Plant Science, Inc. v. Monsanto Co.*, 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...
for designing a synthetic Bacillus thuringiensis ("Bt") gene so that it would be expressed more efficiently in plants.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{343} While prior cases have held that accidental, unappreciated results should not be regarded as anticipatory,\textsuperscript{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.\textsuperscript{345} Therefore, the court held that Monsanto’s prior invention of genes causing increased Bt expression in plants cannot be regarded as accidental.\textsuperscript{346}

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

\textsuperscript{339} \textit{Id.} at 1324-26, 58 U.S.P.Q.2d (BNA) at 1036-38.
\textsuperscript{340} \textit{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).
\textsuperscript{341} \textit{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) 1051, 1053 (Fed. Cir. 1993)).
\textsuperscript{342} \textit{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. \textit{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).
\textsuperscript{343} \textit{Id.}, 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. \textit{Id.}, 58 U.S.P.Q.2d (BNA) at 1044-45.
\textsuperscript{344} \textit{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).
\textsuperscript{345} \textit{Mycogen Plant Sci. Inc.}, 243 F.3d at 1335, 58 U.S.P.Q.2d (BNA) at 1044-45.
\textsuperscript{346} \textit{Id.} at 1336, 58 U.S.P.Q.2d (BNA) at 1046.
\textsuperscript{347} 252 F.3d 1306, 58 U.S.P.Q.2d (BNA) 1891 (Fed. Cir. 2001).
\textsuperscript{348} \textit{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{354}

In \textit{Apotex USA Inc. v. Merck \& Co.},\textsuperscript{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.\textsuperscript{356} It was undisputed that Merck had invented the patented process in the United States well before the date of conception by the

\begin{footnotes}
\footnote{349. Id., 58 U.S.P.Q.2d (BNA) at 1893.} \\
\footnote{350. Id. at 1312, 58 U.S.P.Q.2d (BNA) at 1896.} \\
\footnote{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.”). 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. \textit{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, 1328-32, 40 U.S.P.Q.2d (BNA) 1524, 1524-27 (Fed. Cir. 1996) (defining issue and claim preclusion).} \\
\footnote{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. \textit{Id.}, 58 U.S.P.Q.2d (BNA) at 1894.} \\
\footnote{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).} \\
\footnote{354. Id. at 1335, 58 U.S.P.Q.2d (BNA) at 1046.} \\
\footnote{355. 254 F.3d 1031, 59 U.S.P.Q.2d (BNA) 1139 (Fed. Cir. 2001).} \\
\footnote{356. Id. at 1039-40, 59 U.S.P.Q.2d (BNA) at 1144-46.}
\end{footnotes}
plaintiff’s assignor. The sole issue was whether Merck had suppressed or concealed the process. 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. 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). 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. 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. 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.

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. 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. 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.\textsuperscript{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.\textsuperscript{367}

In *Dow Chemical Co. v. Astro-Valcour, Inc.*,\textsuperscript{368} the Federal Circuit affirmed the district court's summary judgment holding a patent invalid under 35 U.S.C. § 102(g).\textsuperscript{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.\textsuperscript{370} Here, the challenger made a plastic foam by following the teachings of a prior art patent, but used isobutane as a blowing agent.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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

\begin{itemize}
  \item have been considered public upon commercialization and no presumption of concealment would have arisen).\textsuperscript{366}
  \item *Id.* at 1037-38, 59 U.S.P.Q.2d (BNA) at 1144-45.
  \item *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).
  \item 267 F.3d 1334, 60 U.S.P.Q.2d (BNA) 1519 (Fed. Cir. 2001).
  \item *Id.* at 1336, 60 U.S.P.Q.2d (BNA) at 1520-21.
  \item *Id.*, 60 U.S.P.Q.2d (BNA) at 1520-21.
  \item *Id.* at 1336-37, 60 U.S.P.Q.2d (BNA) at 1520-21.
  \item *Id.* at 1341, 60 U.S.P.Q.2d (BNA) at 1523-24.
  \item *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 595, 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).
  \item *Dow Chem. Co.*, 267 F.3d at 1342-44, 60 U.S.P.Q.2d (BNA) at 1524-25.
\end{itemize}
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: "First, the product must be the subject of a commercial [sale or] offer for sale. . . . Second, the invention must be ready for patenting."\(^{383}\) 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.*,\(^{384}\) 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 1325 (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.*


\(^{383}\) *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. In this case, the patentee relied upon an argument that the use or sale of its patented device was primarily experimental. 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. 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. 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. Finally, the court noted that the fact of payment is important, but not dispositive. 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. Thus, the court found that genuine issues of material fact precluded the award of summary judgment, and remanded the case for further proceedings.

In Crystal Semiconductor Corp. v. Tritech Microelectronics International, Inc., the Federal Circuit again found material issues of fact as to whether an alleged sale was experimental or commercial. 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). 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 1702-04. 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, 57 U.S.P.Q.2d (BNA) at 1705.
393. Id. at 1264, 57 U.S.P.Q.2d (BNA) at 1707-08.
396. Id. at 1342, 57 U.S.P.Q.2d (BNA) at 1955.
engineering samples to a customer site for confidential testing. 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.

In *Robotic Vision Systems, Inc. v. View Engineering, Inc.*, 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). 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.

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. 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. 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. 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. 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. 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.

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

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

In *Group One Ltd. v. Hallmark Cards, Inc.*, the invention related to a machine and method for producing curled and shredded ribbons for decorative packaging. 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.

In finding an on-sale bar, the district court had relied on language from *RCA Corp. v. Data General Corp.*, 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.” 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.” 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.” 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.”

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. The parties did not dispute the district court’s conclusion that there had been no commercial offer to sell. Thus, the Federal Circuit reversed the district court’s decision that

407. *Id. at 1313, 58 U.S.P.Q.2d (BNA) at 1728.
409. *Id. at 1045, 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)).
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

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418. *Id.* at 1048-49, 59 U.S.P.Q.2d (BNA) at 1128-27.
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.
429. *Id.,* 60 U.S.P.Q.2d (BNA) at 1694.
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.\footnote{Id. at 1355, 60 U.S.P.Q.2d (BNA) at 1539.}
The patentee argued, however, that the on-sale bar had never
expressly been applied to sales by a supplier to the inventor.\footnote{Id., 60 U.S.P.Q.2d (BNA) at 1539.}
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.\footnote{Id. at 1355-58, 60 U.S.P.Q.2d (BNA) at 1539-41.}
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.\footnote{Id. at 1355, 60 U.S.P.Q.2d (BNA) at 1539.}

The Federal Circuit expressly repudiated the reasoning of a prior
district court case, M&\textsuperscript{R} R Marking System, Inc. v. Top Stamp, Inc.,\footnote{Id. at 1076, 60 U.S.P.Q.2d (BNA) at 1861 (Fed. Cir. 2001).}
which had refused at the preliminary injunction stage to apply the
on-sale bar to a sale from a manufacturer to the inventor.\footnote{Id. at 1077-78, 60 U.S.P.Q.2d (BNA) at 1862.}
In that case, the district court had applied the “totality of the circumstances”
test now abandoned by Pfaff.\footnote{Id. at 1078, 60 U.S.P.Q.2d (BNA) at 1863.}
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.\footnote{Id. at 1079, 60 U.S.P.Q.2d (BNA) at 1863.}

In Space Systems/Loral, Inc. v. Lockheed Martin Corp.,\footnote{Special Devices, Inc., 270 F.3d at 1357, 60 U.S.P.Q.2d (BNA) at 1541.}
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.\footnote{Special Devices, Inc., 270 F.3d at 1357, 60 U.S.P.Q.2d (BNA) at 1541.}
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.\footnote{Id., 60 U.S.P.Q.2d (BNA) at 1541 (quoting Pfaff v. Wells Elecs., Inc., 525 U.S. 55, 66 n.11 (1998)).}
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.\footnote{Id. at 1079, 60 U.S.P.Q.2d (BNA) at 1863.} He did not determine that the idea would work, until many
months later, after developing and testing an engineering model. The challenger did not produce evidence disputing the inventor’s testimony. The district court found that it could not conclude as a matter of law that the engineering proposal was an “enabling disclosure.” The district court did hold, however, that the patentee had “legal conception” of the invention and that it was, accordingly, ready for patenting. 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. Thus, the Federal Circuit reversed and remanded.

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. 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. The description, however, need not include information that those skilled in the art already know.

In Union Pacific Resources Co. v. Chesapeake Energy Corp., 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. 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. The patent specification did not disclose how the re-scaling operation should be carried out. Indeed, the patentee considered the computer program that it had designed to perform the re-scaling step to be a trade secret. Based on all the evidence, the Federal Circuit agreed.

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.
453. Id.
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.

In *Durel Corp. v. Osram Sylvania Inc.*, the patent at issue related to electroluminescent phosphor particles encapsulated in metal oxide coatings. 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. 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. The defendant alleged that the patent was not enabling because undue experimentation would be required to produce certain metal oxide coatings from different precursors. 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. 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. 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. Accordingly, the court simply vacated the portion of the district court’s judgment that held that the patents were not valid.

In *Bio-Technology General Corp. v. Genentech, Inc.*, the patent was directed to a method for using recombinant DNA technology to produce human growth hormone (“hGH”) in bacteria. 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. 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.
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.\textsuperscript{472} There was conflicting evidence
on whether the use of the claimed method produced both
“met-hGH” and mature hGH.\textsuperscript{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.\textsuperscript{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.\textsuperscript{475}

\textbf{F. Written Description}

The source of the written description requirement is 35 U.S.C.
\S\ 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.”\textsuperscript{476} Today, the written description requirement is usually at issue
only when the claims have been amended during a patent
application’s prosecution.\textsuperscript{477}

In \textit{Turbocare Division of Demag Delaval Turbomachinery Corp. v. General
Electric Co.},\textsuperscript{478} the patent related to a shaft-sealing system for fluid
turbines.\textsuperscript{479} The original written description disclosed the use of flat
springs located between the ends of ring segments.\textsuperscript{480} During
prosecution, the patentee added a new claim, which placed the
springs in a different location.\textsuperscript{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. \S\ 112(1).\textsuperscript{482} The

\textsuperscript{472} \textit{Id.}, 60 U.S.P.Q.2d (BNA) at 1433.
\textsuperscript{473} \textit{Id.} at 1330-31, 60 U.S.P.Q.2d (BNA) at 1434.
\textsuperscript{474} \textit{Id.}, 60 U.S.P.Q.2d (BNA) at 1434.
\textsuperscript{475} \textit{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.” \textit{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)).
\textsuperscript{476} 35 U.S.C. \S\ 112 (1994).
\textsuperscript{477} DURHAM, supra note 452, at 76-77.
\textsuperscript{478} 264 F.3d 1111, 60 U.S.P.Q.2d (BNA) 1017 (Fed. Cir. 2001).
\textsuperscript{479} \textit{Id.} at 1113, 60 U.S.P.Q.2d (BNA) at 1019.
\textsuperscript{480} \textit{Id.} at 1119, 60 U.S.P.Q.2d (BNA) at 1023.
\textsuperscript{481} \textit{Id.}, 60 U.S.P.Q.2d (BNA) at 1023.
\textsuperscript{482} \textit{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.

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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
The 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." 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. The court believed that such a circuit was outside of the inventor's field of expertise. 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. Because substantial evidence supported the jury's verdict, the Federal Circuit reversed the district court's grant of judgment as a matter of law.

In Eli Lilly & Co. v. Barr Laboratories, Inc., the Federal Circuit affirmed a district court's holding, on summary judgment, that the claims at issue did not violate the best mode requirement. The patent in question related to the pharmaceutical compound fluoxetine hydrochloride, the active ingredient in Lilly's anti-depressant drug Prozac. 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." The court also added that production details and routine details need not be disclosed. 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. The evidence established, however, that the starting compound was not claimed in the patent, nor was it novel. In fact, it was commercially available, and the inventor's

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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.
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)).
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.\textsuperscript{504} The court distinguished cases in which the intermediate compound itself was a novel compound.\textsuperscript{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.\textsuperscript{506} The patent did not claim a recrystallization process or a recrystallization solvent.\textsuperscript{507} Instead, the patent disclosed that a recrystallization step was used to purify the claimed compound.\textsuperscript{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.\textsuperscript{509} The fact that some experimentation might be necessary to find an appropriate solvent did not result in a best mode violation.\textsuperscript{510}

H. Indefiniteness

Section 112 of the United States Code requires claims to “particularly” and “distinctly” define the subject matter claimed.\textsuperscript{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.\textsuperscript{512} The Federal Circuit has recently examined multiple indefiniteness issues.

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

\begin{footnotesize}
504. Id., 58 U.S.P.Q.2d (BNA) at 1875-76.
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”).
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.
\end{footnotesize}
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).
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.
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. 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. While the specification disclosed a “selector,” it did not show the electronic structure of the selector or the details of its electronic operation. 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.” 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.” 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.

In Exxon Research & Engineering Co. v. United States, the Court of Federal Claims held a patent invalid for indefiniteness on summary judgment. 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.” The Court of Federal Claims found these terms indefinite. 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. 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. 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.” In this case, the specification provided guidance as to what was meant by “substantial absence” with a reasonable degree of particularity and definiteness. Accordingly, the Federal Circuit reversed the summary judgment of invalidity and remanded the case to the Court of Federal Claims.

I. Inventorship

An inventor is anyone who conceived the invention, and can include more than one person. 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. 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.

The Federal Circuit discussed inventorship in three separate instances.

In Acromed Corp. v. Sofamor Danek Group, Inc. 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. The challenger to the
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. The evidence suggested that the purportedly omitted inventor, however, was simply following the instructions of the named inventor when he made his alleged contribution. 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. The claimed invention, however, was a new combination. Thus, the challenger had failed to present clear and convincing evidence that the allegedly omitted inventor had actually made an inventive contribution.

In Winbond Electronics Corp. v. International Trade Commission, 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. 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. Following the Commission’s decision, the assignee of the patent obtained a Certificate of Correction adding Mr. Gupta as an inventor. In a second proceeding, the Administrative Law Judge again found the patent unenforceable, concluding that Mr. Gupta was not an inventor. The Commission, however, disagreed and held that the Certificate of Correction listed the correct inventors.

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. 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.

In *Fina Technology, Inc. v. Ewen*, 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. 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. 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. 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.

The Manual of Patent Examining Procedure instructs the examiners to list the inventors in the order used in the inventors’ oath or declaration. Since the order in which the names appear is of no legal consequence, 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

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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.


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


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

In Cooper v. Goldfarb, the Board of Patent Appeals and Interferences awarded priority of invention to the junior party. 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. The material had a structure consisting of solid nodes connected by thin fibrils. The distance between the nodes, or fibril length, was important to the suitability of the material for use as a vascular graft.

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. 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. 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. 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. 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.
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.
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.

Because the particle size and sedimentation rate were express limitations of the counts, they could not be ignored. 581 Although the

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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).
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) 525, 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. Moreover, in this case, the junior party had asserted during prosecution that the result achieved in yeast cells was unexpected. 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. The Federal Circuit distinguished Burroughs Wellcome Co. v. Barr Laboratories, Inc., which stated, “[a]n inventor’s belief that his invention will work or his reasons for choosing a particular approach are irrelevant to conception.” 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.” Therefore, the court held the junior party did not have a reasonable expectation that he would actually produce the claimed invention.

In In re Roemer, 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. 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. 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.
588. Id. at 1228, 32 U.S.P.Q.2d (BNA) at 1920 (citation omitted).
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. The Federal Circuit held that the Board had not correctly construed the claims, which related to a set of shielded gradient coils for nuclear magnetic resonance imaging. 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.

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. Thus, reissue is a process by which patentees may correct errors in a patent.

In Shockley v. Arcan, Inc., 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. There was no dispute that the declarations would have complied with a revised rule adopted during the pendency of the application. The Federal Circuit held that the new rule applied to all reissue applications pending on its effective date.

The court also considered the question of intervening rights potentially arising from a reissued patent. 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.

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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.
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 BIG Leisure Prods. Inc. v.
intervening rights attach to specific goods offered for sale prior to reissue. In comparison, equitable intervening rights may be granted to allow a defendant to continue manufacturing new alleged infringing products. 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. Relying, in part, on this distinction, the court held that only goods actually in existence at the reissue date qualify for absolute intervening rights. Whether to grant equitable intervening rights, however, is a decision committed to the discretion of the district court. In this case, although the district court did not make findings as to whether the defendants had made substantial preparations before the reissue date, the Federal Circuit held that the record amply supported the district court’s denial of equitable intervening rights. 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.

In *Pannu v. Storz Instruments, Inc.*, 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. The patent at issue covered an intra-ocular lens with attached structures (also called ‘haptics’) designed to position and secure the
lens in the eye. During prosecution, the applicant added limitations as to the shape of the haptics in order to obtain issuance of his claims. On reissue, the patentee asserted that he had unnecessarily narrowed the claims by adding the shape limitations. The subsequent reissue application removed the limitations on the shape of the haptics. 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. Thus, the added limitations did not narrow the claims and prevent application of the recapture rule.

In Dethmers Manufacturing Co. v. Automatic Equipment Manufacturing Co., 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. 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. The court raised, sua sponte, the issue of whether it should apply a more deferential standard, 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. 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. Therefore, the court only affirmed the district court’s judgment with respect to the invalidity of reissue claims 4 through 7.
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

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.
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.\footnote{638} Analyzing the language of § 255, the court noted that § 255 permits the correction of errors of a “clerical or typographical nature.”\footnote{639} Since that term is not explicitly defined in the section,\footnote{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.”\footnote{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.”\footnote{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.\footnote{643} The court examined the statutory scheme, including 35 U.S.C. § 251 through § 256 governing the amendment and correction of patents.\footnote{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.\footnote{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.\footnote{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.\footnote{647}

\footnotetext{638}{\textit{Id.} at 1369, 60 U.S.P.Q.2d (BNA) at 1676.}
\footnotetext{639}{\textit{Id.}, 60 U.S.P.Q.2d (BNA) at 1676.}
\footnotetext{640}{\textit{Id.}, 60 U.S.P.Q.2d (BNA) at 1676.}
\footnotetext{641}{\textit{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. \textit{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.’” \textit{Id.} at 1375, 60 U.S.P.Q.2d (BNA) at 1681.}
\footnotetext{642}{\textit{Id.} at 1370, 60 U.S.P.Q.2d (BNA) at 1677 (“[T]he words of § 255 do not preclude broadening corrections.”).}
\footnotetext{643}{\textit{Id.}, 60 U.S.P.Q.2d (BNA) at 1677.}
\footnotetext{644}{\textit{Id.}, 60 U.S.P.Q.2d (BNA) at 1677.}
\footnotetext{645}{\textit{Id.} at 1370-71, 60 U.S.P.Q.2d (BNA) at 1677.}
\footnotetext{646}{\textit{Id.} at 1371, 60 U.S.P.Q.2d (BNA) at 1677.}
\footnotetext{647}{\textit{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.

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).
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.
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. 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.

In construing the claims, the court should follow the general sequence laid out in *Vitronics Corp. v. Conceptronic, Inc.* "[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." In the rare instances where the claim terms remain unclear after consideration of the intrinsic evidence and the general rules of construction, the court may consider extrinsic evidence, including "expert testimony, inventor testimony, dictionaries, and technical treatises and articles."

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. Likewise, the court may always consider extrinsic evidence for the purpose of coming to a better understanding of the technology involved in an invention.

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(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.


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)).


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, as understood by a person of ordinary skill in the art. Thus, the court applies an objective test to construe disputed claim language. 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.

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. In addition, while the

(BNA) at 1408 (“Extrinsic evidence may always be consulted...to assist in understanding the underlying technology.”).


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)).


[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.
The 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

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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. Ebro 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 *Netword 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); *Netword L.L.C.*, 242 F.3d at 1353, 58 U.S.P.Q.2d (BNA) at 1079-80 (holding that the district court improperly 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.”).
676. Id. at 1339, 58 U.S.P.Q.2d (BNA) at 1061.
The district court interpreted the asserted claims to include only catheters with co-axial lumens. 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.

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.

Here, the specification described the advantages of the co-axial structure and distinguished the prior art on the basis of using dual lumens. 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.” The court found that this specific language, “defines SciMed’s invention in a way that excludes the dual, or side-by-side, lumen arrangement.” 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. 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.” 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.

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.
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.\footnote{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.”).}

In \textit{Pall Corp. v. PTI Tech., Inc.}, the claims related to technology used for filtering high-temperature corrosive chemicals.\footnote{259 F.3d 1383, 59 U.S.P.Q.2d (BNA) 1763 (Fed. Cir. 2001).} 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.\footnote{Id. at 1385, 59 U.S.P.Q.2d (BNA) at 1764.} The disclaimer was based on statements made to accompany an information disclosure statement to the Patent Office.\footnote{Id. at 1393, 59 U.S.P.Q.2d (BNA) at 1769.} 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.’”\footnote{Id. at 1391-92, 59 U.S.P.Q.2d (BNA) at 1769.} 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.\footnote{Id. at 1394, 59 U.S.P.Q.2d (BNA) at 1770.}

In \textit{Day International, Inc. v. Reeves Bros., Inc.}, 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.\footnote{Id. at 1391-92, 59 U.S.P.Q.2d (BNA) at 1769.} In this case, the patent related to a method for curing a compressible printing blanket.\footnote{260 F.3d 1343, 59 U.S.P.Q.2d (BNA) 1791 (Fed. Cir. 2001).} In the prosecution history, the patentee had explicitly distinguished and disclaimed the use of prior art temperatures in his curing process.\footnote{Id. at 1394, 59 U.S.P.Q.2d (BNA) at 1790.}

In \textit{Advanced Cardiovascular Systems., Inc. v. Medtronic, Inc.}, the Federal Circuit noted that the prosecution history of a related patent
may be relevant if the two patents have common claim limitations.\textsuperscript{699} In this case, however, there were no common claim terms in dispute.\textsuperscript{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.\textsuperscript{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.”\textsuperscript{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.\textsuperscript{703}

The construction and application of means-plus-function claims raise additional issues. One particular issue, addressed in \textit{Wenger Manufacturing, Inc. v. Coating Machine Systems, Inc.},\textsuperscript{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.\textsuperscript{705} However, a limitation using the word “means” without reciting a function that corresponds to the means does not fall under paragraph 6.\textsuperscript{706}

A second issue relates to the problem of identifying the structure corresponding to the means.\textsuperscript{707} In \textit{Medronic, Inc. v. Advanced

\textsuperscript{699} Id. at 1305, 60 U.S.P.Q.2d (BNA) at 1168-69.
\textsuperscript{700} Id. at 1305-06, 60 U.S.P.Q.2d (BNA) at 1168.
\textsuperscript{701} Id. at 1305-04, 60 U.S.P.Q.2d (BNA) at 1167.
\textsuperscript{702} Id. at 1305, 60 U.S.P.Q.2d (BNA) at 1168.
\textsuperscript{703} 35 U.S.C. § 112, para. 6 (1994).
\textsuperscript{704} 239 F.3d 1225, 57 U.S.P.Q.2d (BNA) 1679 (Fed. Cir. 2001).
\textsuperscript{705} Id. at 1292, 57 U.S.P.Q.2d (BNA) at 1684 (citing \textit{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)).
\textsuperscript{707} \textit{See} \textit{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., the court construed a means-plus-function claim relating to coronary stent technology. The language of the claims stated “means for connecting adjacent elements together.” The only structure disclosed in the specification for connecting adjacent elements of the claimed device was a helically wound continuous wire. The Federal Circuit rejected the argument that the straight wire and hooks of certain figures in the patent also corresponded to the claimed function. 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).

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. The claimed function may not be narrowed or limited beyond the scope of the claim language. “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.”

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. If the specification fails to disclose an adequate
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.\(^{727}\)

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\(^{718}\) 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.

\(^{720}\) *Budde*, 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.


\(^{727}\) *Id.*, 41 U.S.P.Q.2d (BNA) at 1007.
In *Telemac Cellular Corp. v. Topp Telecom, Inc.*, 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. 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. The accused device was a phone system that did not permit the user to make international calls. 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. The district court held and the Federal Circuit affirmed that this capability did not support a claim of literal infringement.

In *Dow Chemical Co. v. Sumitomo Chemical Co.*, the patent at issue related to an improvement in a process for preparing certain types of “epoxy resins.” 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. In particular, the district court had incorrectly relied on language from the Federal Circuit’s decision in *Amstar Corp. v. Envirotech Corp.*, 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. 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

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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).
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).
738.  See *Dow Chem. Co.*, 257 F.3d at 1380, 59 U.S.P.Q.2d (BNA) at 1620.
infringement." In the case at bar, the preamble of the claim used the transitional phrase “which comprises.” The court held that the infringer cannot avoid literal infringement by adding steps to those explicitly recited in the claim. The court also noted that, in addition to using the “which comprises” language, the claimed process was written in “[Jepson format],” describ[ing] certain conditions as an improvement over a well-known process. An accused process in a claim written in the ‘Jepson format’ cannot avoid infringement by adding additional steps.

In Kustom Signals, Inc. v. Applied Concepts, Inc., 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). The accused device searched for both the strongest and fastest signals simultaneously and permitted the operator to choose which one would be displayed. 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. The patentee argued that the accused device literally infringed because it merely added a step to the operation performed by the claimed device. 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”).
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 1390-32, 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.
In Xerox Corp. v. 3Com Corp., the Federal Circuit reversed a district court’s holding, on summary judgment, that the accused system did not infringe. The patent at issue described a system of symbols used for computer recognition of handwritten text. The Federal Circuit held that the district court had committed clear error in applying its own claim construction to the accused system.

In Novartis Corp. v. Ben Venue Laboratories, Inc., the district court found no literal infringement and granted summary judgment for the defendant. The patent in controversy described a crystalline form of pamidronate disodium. 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. 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. The only issue was whether the crystalline form was present transiently at some time during the defendant’s allegedly infringing process. 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. The district court held, however, that the computer model was fatally deficient and that the expert’s affidavit amounted to no more than a

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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”).
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).
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.\textsuperscript{762} The Federal Circuit stated that conclusory opinions by experts are not sufficient to raise material issues of fact and preclude summary judgment.\textsuperscript{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.\textsuperscript{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.”\textsuperscript{765} The Federal Circuit discussed this standard of evaluation in a number of different contexts in 2001.

In \textit{Telemac Cellular Corp. v. Topp Telecom, Inc.},\textsuperscript{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,\textsuperscript{767} the district court examined whether that limitation was

\textsuperscript{762} See \textit{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]”).
\textsuperscript{763} See \textit{id.} at 1050-51, 60 U.S.P.Q.2d (BNA) at 1841-42 (recognizing that patentee may “run risk” of peremptory 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 \textit{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)).
\textsuperscript{764} \textit{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 . . . .”).
\textsuperscript{766} 247 F.3d 1316, 58 U.S.P.Q.2d (BNA) 1545 (Fed. Cir. 2001).
\textsuperscript{767} See \textit{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.\textsuperscript{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.\textsuperscript{769} Such calls would then be billed as local or roaming calls.\textsuperscript{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.\textsuperscript{771}

In \textit{Viskase Corp. v. American National Can Co.},\textsuperscript{772} the Federal Circuit reversed the district court’s decision granting summary judgment on the issue of infringement.\textsuperscript{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.\textsuperscript{774} Therefore, the court held that a reasonable jury could have found that the accused products were not equivalent.\textsuperscript{775}

In \textit{Kustom Signals, Inc. v. Applied Concepts, Inc.},\textsuperscript{776} the court also considered the application of the doctrine of equivalents.\textsuperscript{777} The patent claim, describing a traffic radar system, denoted that the system searched for and processed either magnitude or frequency.\textsuperscript{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.\textsuperscript{779} In this case,
the Federal Circuit held that the word “or” is not an element. 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.

In *Toro Co. v. White Consolidated Industries*, 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. The patent disclosed a design in which the vacuum-blower had a removable cover with an attached restriction ring. The accused device had a two-piece ring and cover. The Federal Circuit held that, since the claims were described solely in structural terms, it was inappropriate to import into them a functional limitation.


780. *Id.* at 1335, 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).


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.\footnote{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).}

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E. Prosecution History Estoppel

Prosecution history estoppel can restrict the availability of the
document of equivalents.\footnote{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).} Prosecution history estoppel arises not only
from the express disclaimer or abandonment of subject matter,\footnote{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).} but also from claim-narrowing amendments made for any reasons related
to patentability, as well as from amendments which cancel broad

In \textit{Pioneer Magnetics, Inc. v. Micro Linear Corp.},\footnote{238 F.3d 1341, 57 U.S.P.Q.2d (BNA) 1553 (Fed. Cir. 2001).} the Federal Circuit
held that prosecution history estoppel arose from a narrowing
amendment, even though the amendment was voluntary.\footnote{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)).} 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.\footnote{Id. at 1344, 57 U.S.P.Q.2d (BNA) at 1555.} Next, the court must determine the
reason for the amendment.\footnote{Id., 57 U.S.P.Q.2d (BNA) at 1555.} The burden lies with the patent holder
to show that the amendment was not made for a reason related to
patentability.\footnote{Id., 57 U.S.P.Q.2d (BNA) at 1555.}
subject matter of the amendment. 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.

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. 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. The Federal Circuit, based on its de novo examination of the prosecution history, concluded that the amendment was made to avoid prior art, and therefore prosecution history estoppel applied.

In *Lockheed Martin Corp. v. Space Systems/Loral, Inc.*, 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. Instead, the court reaffirmed its comprehensive and explicit rejection of a “flexible bar” approach to the scope of equivalents. Because the flexible bar approach was rejected, prosecution history estoppel did not apply.

In *Dow Chemical Co. v. Sumitomo Chemical Co.*, the Federal Circuit held that statements made during reexamination proceedings did

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802. Id. at 1345, 57 U.S.P.Q.2d (BNA) at 1555 (citing *Warner-Jenkinson*, 520 U.S. at 32-33).
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.
not give rise to argument-based prosecution history estoppel.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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.\textsuperscript{816}

In Mycogen Plant Science, Inc. v. Monsanto Co.,\textsuperscript{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.\textsuperscript{818} During prosecution, the claims had been rejected on the ground that the specification enabled only one embodiment.\textsuperscript{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.\textsuperscript{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.”\textsuperscript{821}

\textbf{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

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\item \textsuperscript{813} \textit{Id.} at 1382, 59 U.S.P.Q.2d (BNA) at 1621.
\item \textsuperscript{814} See \textit{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).
\item \textsuperscript{815} See \textit{id.}, 59 U.S.P.Q.2d (BNA) at 1621.
\item \textsuperscript{816} See \textit{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”).
\item \textsuperscript{817} 261 F.3d 1345, 59 U.S.P.Q.2d (BNA) 1852 (Fed. Cir. 2001).
\item \textsuperscript{818} \textit{Id.} at 1350, 59 U.S.P.Q.2d (BNA) at 1856.
\item \textsuperscript{819} \textit{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).
\item \textsuperscript{820} See \textit{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).
\item \textsuperscript{821} \textit{Id.} at 1350, 59 U.S.P.Q.2d (BNA) at 1856.
\end{itemize}
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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.*, the defendant was accused of having violated an injunction that prohibited acts constituting contributory infringement or inducement of infringement. 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. 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.'” 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. 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.

### G. Infringement under § 271(f)

35 U.S.C. § 271(f)(2) provides that:

> whoever 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

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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.
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...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.

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

829. 245 F.3d 1364, 58 U.S.P.Q.2d (BNA) at 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 1458.
832. Id. at 1366, 58 U.S.P.Q.2d (BNA) at 1458.
833. Id. at 1367-68, 58 U.S.P.Q.2d (BNA) at 1459-60.
834. Id., 58 U.S.P.Q.2d (BNA) at 1549.
836. 252 F.3d 1306, 58 U.S.P.Q.2d (BNA) at 1891 (Fed. Cir. 2001).
837. Id. at 1308, 58 U.S.P.Q.2d (BNA) at 1893.
838. Id. at 1318-19, 58 U.S.P.Q.2d (BNA) at 1900-01.
839. Id., 58 U.S.P.Q.2d (BNA) at 1900. A similar conclusion would apply if the
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. However, purchasers are not allowed to reconstruct the articles so as to make an essentially different or recreated item for resale. 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*, 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. First, the court discussed the burdens of proof applicable to the repair issue. 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. In determining whether the defendant in this case met his burden, the court distinguished “repair” from “reconstruction,” which is not a defense to infringement. According to the court, reconstruction occurs when a “new article” is made after the patented article, “viewed as a whole, has become spent.” 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 1101, 59 U.S.P.Q.2d (BNA) at 1911-12.


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).


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 rescaling 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.\textsuperscript{849}

In \textit{Surfco Hawaii v. Fin Control Systems Pty, Ltd.},\textsuperscript{850} the district court granted summary judgment for the patentee.\textsuperscript{851} The patent at issue related to a surfboard with replaceable fins.\textsuperscript{852} The declaratory judgment plaintiff made fins\textsuperscript{853} and defended the product under the doctrine of repair.\textsuperscript{854} The district court held that the repair right included only the right to replace worn or broken parts.\textsuperscript{855} The Federal Circuit held, however, that ownership includes the right to replace parts that are neither broken nor worn.\textsuperscript{856} Therefore, the alleged infringer was not liable because the doctrine of repair applied.

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.\textsuperscript{858} A determination of inequitable conduct requires a two-stage inquiry.\textsuperscript{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

\textsuperscript{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).

\textsuperscript{850} 264 F.3d 1062, 60 U.S.P.Q.2d (BNA) 1056 (Fed. Cir. 2001).

\textsuperscript{851} Id. at 1064, 60 U.S.P.Q.2d (BNA) at 1057.

\textsuperscript{852} Id., 60 U.S.P.Q.2d (BNA) at 1057.

\textsuperscript{853} Id., 60 U.S.P.Q.2d (BNA) at 1057.

\textsuperscript{854} Id., 60 U.S.P.Q.2d (BNA) at 1057.

\textsuperscript{855} Id. at 1065, 60 U.S.P.Q.2d (BNA) at 1058.

\textsuperscript{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).

\textsuperscript{857} Id., 60 U.S.P.Q.2d (BNA) at 1059.

\textsuperscript{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).

carried out with intent to deceive. 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.

The district court has considerable latitude in determining inequitable conduct. 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. Moreover, where the district court has made findings of fact based on the credibility of witnesses, such determinations “can virtually never be clear error.” 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.

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., the Federal Circuit reversed the district court’s grant of a new trial on the issue of inequitable conduct 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).
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))).
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. First, the district court should not have inferred deceptive intent from the inventor’s intentional non-disclosure of a reference. 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.

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.*, the Federal Circuit affirmed the district court’s finding of inequitable conduct. Here, the patent involved claims for a sectional sofa in which controls for operating the reclining seats were located in a center console. The patentee claimed that certain references, called the “Durling references,” were not prior art and therefore not material for purposes of inequitable conduct. The court held, however, that material information is not exclusively limited to prior art. 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.

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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.”).
872. *Id.* at 1275, 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.*, the Federal Circuit addressed the question of when inequitable conduct can be based on a failure to make inquiries. 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. 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.”

Despite the applicant's argument that the inequitable conduct doctrine should not be applied in this case because of the special circumstances involved, the Federal Circuit upheld the district court's decision in full.

In *Aptix Corp. v. Quickturn Design Systems, Inc.*, the Federal Circuit upheld a district court dismissal of the plaintiff's patent infringement and the award of attorney's fees to the defendant. 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. The Federal Circuit distinguished litigation misconduct, which justifies the denial of relief to a particular party, from inequitable conduct, which affects the property

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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. The court found that the conduct at issue in the present case was not inequitable conduct.

B. Estoppels

1. Interference estoppel

The Federal Circuit decided one interference estoppel case in 2001. In Exxon Corp. v. Phillips Petroleum Co., 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. The Federal Circuit reasoned that, “absent 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.” Therefore, the defendant could not assert that the patentee was estopped from asserting the validity of its patent.

2. Licensee estoppel

The Supreme Court rejected the doctrine of licensee estoppel in Lear, Inc. v. Adkins. 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., 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. In Lear, Inc. v. Adkins, the Supreme Court simply held that it was against public policy to preclude a licensee from challenging patent validity. In Lear, however, the licensee had
not expressly agreed to waive validity defenses. Moreover, the agreement in Lear was not entered into as part of a settlement of litigation.

3. Equitable estoppel and laches

In A.C. Aukerman Co. v. R.L. Chaides Construction Co., the Federal Circuit held that the defense of laches may bar an applicant’s claim for damages. 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. 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. This presumption shifts the burden of going forward, but not the burden of persuasion.

In Winbond Electronics Corp. v. International Trade Commission, 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. 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. 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. 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.

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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.
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.”).
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.
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.*, the Federal Circuit affirmed the district court’s denial of the patentee’s motion for a preliminary injunction. The patentee alleged that the district court had denied the injunction by reason of an error of law in construing the claims. 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 judgement.

In *Purdue Pharma L.P. v. Boehringer Ingleheim GmbH*, 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. The court reviewed the four-factor test used in patent cases to evaluate preliminary injunction motions and analyzed the district court’s decision for an abuse of discretion. The court found no clear error and that the moving party had met the burden of the four-factor test, 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.”

In *Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, the Federal Circuit found that the district court, in granting a preliminary injunction,

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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.
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.
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.”\footnote{931} The Federal Circuit observed that the challenger bears a lower burden of proof at the preliminary injunction stage than at trial.\footnote{932} Thus, the court found that the challenger raised a substantial question of invalidity based on this lower standard.\footnote{933}

In \textit{Glaxo Group Ltd. v. Ranbaxy Pharmaceuticals, Inc.},\footnote{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.\footnote{935} The patent at issue related to an antibiotic product, and infringement was alleged under 35 U.S.C. § 271(e)(2).\footnote{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.\footnote{937} In this case, the court construed the plaintiff’s claims to require a product containing less than 10\% crystalline material.\footnote{938} The product described by the defendant’s ANDA was proposed to contain about 10 to 15\% crystalline material.\footnote{939} Not only did the court hold that the plaintiff’s literal infringement claim was unlikely to succeed because

\footnote{931. \textit{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. \textit{Id.} at 1361-63, 57 U.S.P.Q.2d (BNA) at 1760-61.}
\footnote{932. \textit{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”).}
\footnote{933. \textit{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)).}
\footnote{934. \textit{262 F.3d 1333, 59 U.S.P.Q.2d (BNA) 1950 (Fed. Cir. 2001).}}
\footnote{935. \textit{Id.} at 1334, 59 U.S.P.Q.2d (BNA) at 1951.}
\footnote{936. \textit{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).}
\footnote{937. \textit{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).}
\footnote{938. \textit{Id.} at 1337, 59 U.S.P.Q.2d (BNA) at 1953.}
\footnote{939. \textit{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. 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.

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.

In Lans v. Digital Equipment Corp., 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. 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. After sending notice letters to the alleged infringers, the inventor brought suit against the alleged infringers in his own name. 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.
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. Consequently, 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. Therefore, the district court concluded it could not grant relief to the assignee for prior infringements. The Federal Circuit agreed with the district court’s conclusion based on Supreme Court precedent in Dunlap v. Schofield, which determined that the notice requirement of 35 U.S.C. § 287(a) could be fulfilled only by some “affirmative act” by the patentee. Thus, the notice requirement could not be satisfied by the infringer’s knowledge gained from some other source, such as notice from the inventor. 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.

In Gart v. Logitech, Inc., 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). 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”).
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.” The court held that the language of the letters constituted a sufficient charge of infringement to satisfy the notice provision. 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.

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. 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.

In a two supplier market, the courts generally apply the test set out in Panduit Corp. v. Stahlin Bros. Fibre Works, 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. The Panduit test is not the exclusive test, however, 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”).
961. Id. at 1545, 35 U.S.P.Q.2d (BNA) at 1072.
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.

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 damages\(^{976}\) 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 1396, 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 28 U.S.C. § 284 (1994)).
\(^{971}\) Id. at 1354, 57 U.S.P.Q.2d (BNA) at 1962 (citing Minko Inc. v. Combustion Eng’g Inc., 95 F.3d 1109, 1119, 40 U.S.P.Q.2d (BNA) 1001, 1008 (Fed. Cir. 1996) 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. The Federal Circuit relied mainly on the finding that the defendant willfully breached the settlement agreement. In addition, the court noted that the defendant failed to obtain the opinion of counsel on whether its design would breach the agreement.

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. 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. In the case at hand, however, the contempt damages were intended to be punitive and “beyond mere compensation.”

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.” This provision is intended to deter willful patent infringement.

In Crystal Semiconductor Corp. v. TriTech Microelectronics International, the Federal Circuit upheld a jury verdict and district court ruling finding infringement on the part of the defendant, but it

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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.
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).
modified the damage award. The patentee sued a manufacturer and a seller for allegedly infringing upon its audio chip patents. The jury found the manufacturer liable for willfully infringing on the claims and apportioned liability for sixty percent of the damages to the manufacturer. The district court doubled the jury award because the jury found that TriTech willfully infringed the patent. 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. The Federal Circuit noted that the manufacturer was liable “for willful inducement of all of the infringing sales.” 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.

In *Mentor H/S Inc. v. Medical Device Alliance, Inc.*, 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. 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.

Similarly, in *Electro Scientific Industries v. General Scanning Inc.*, the district court refused to award enhanced damages despite a jury

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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.
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 willfullness damages. Therefore, OPT’s damages could not be increased as a result of TriTech’s willful infringement).
994. 244 F.3d 1365, 58 U.S.P.Q.2d (BNA) 1321 (Fed. Cir. 2001).
995. *Ser. 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).
verdict of willfulness. 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. 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.

4. Attorney fees

Under 35 U.S.C. § 285, the district court may award reasonable attorney fees in “exceptional” cases. Courts have discretionary power to impose attorney fees, but even in exceptional cases, the court is not required to impose attorney fees.

In Union Pacific Resources Co. v. Chesapeake Energy Corp., the Federal Circuit upheld the district court’s refusal to grant attorney’s fees sought by the defendant because of the plaintiff’s alleged inequitable conduct and litigation misconduct. 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.

In Electro Scientific Industries v. General Scanning Inc., 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.
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).
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).
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)).
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.\textsuperscript{1008} As the court stated, “‘a finding of willful infringement does not require a finding that a case is exceptional.’”\textsuperscript{1009}

In \textit{Brasseler, U.S.A. I L.P. v. Stryker Sales Corp.},\textsuperscript{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.\textsuperscript{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.\textsuperscript{1012} The court reasoned the defendant would not have incurred fees if the patentee had not committed inequitable conduct.\textsuperscript{1013}

5. \textit{Prejudgment interest}

A district court may require that interest be paid on any monetary judgments in a civil case.\textsuperscript{1014} In \textit{General Motors Corp. v. Devek Corp.},\textsuperscript{1015} the court held that, unless some justification exists to deny the interest award,\textsuperscript{1016} prejudgment interest should be awarded to place the patentee in the original position it would have been in had the infringement not occurred.\textsuperscript{1017}

In \textit{Crystal Semiconductor Corp. v. Tritech Microelectronics International},\textsuperscript{1018} the Federal Circuit upheld the district court’s refusal to award prejudgment interest on damages.\textsuperscript{1019} The court reasoned against awarding prejudgment interest because the plaintiff’s two-year

\begin{thebibliography}{99}
\bibitem{1008} \textit{Id.} at 1355, 58 U.S.P.Q.2d (BNA) at 1506.
\bibitem{1009} \textit{Id.}, 58 U.S.P.Q.2d (BNA) at 1506 (quoting \textit{Cybor Corp. v. FAS Techs., Inc.}, 138 F.3d 1448, 1461, 46 U.S.P.Q.2d (BNA) 1169 (Fed. Cir. 1998) (en banc)).
\bibitem{1010} 267 F.3d 1370, 60 U.S.P.Q.2d (BNA) 1482 (Fed. Cir. 2001).
\bibitem{1011} \textit{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)).
\bibitem{1012} \textit{Id.} at 1386, 60 U.S.P.Q.2d (BNA) at 1492.
\bibitem{1013} \textit{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).
\bibitem{1015} 461 U.S. 648 (1982).
\bibitem{1016} \textit{Id.} at 657 (finding that prejudgment interest should be awarded where the defendant infringed a lubricating process for car parts).
\bibitem{1017} \textit{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).
\bibitem{1018} 246 F.3d 1336, 57 U.S.P.Q.2d (BNA) 1953 (Fed. Cir. 2001).
\bibitem{1019} \textit{See id.} at 1362, 57 U.S.P.Q.2d (BNA) at 1968-69 (reversing the district court’s damages ruling on other aspects).
\end{thebibliography}
delay in initiating suit escalated the damages owed by the defendants, “was self-serving, and resulted in prejudice to the defendant.”

C. Arbitration

The enforcement provisions of the Federal Arbitration Act became applicable to patent contracts in 1982. 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. In addition, courts have recognized that an award also may be vacated for “manifest disregard” of the law.

In Flex-Foot, Inc. v. CRP, Inc., the parties arbitrated patent infringement claims pursuant to a settlement agreement, which had terminated a prior litigation. The district court upheld the arbitration award. The Federal Circuit noted that the arbitration agreement required the arbitrators to write a formal written opinion. The arbitrators’ decision set forth their reasoning, and therefore, it had adequately satisfied the requirements of the contract. The arbitrators were not required to set forth a “claim construction such as would be undertaken by a [district] court.”

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.
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.\footnote{Id. at 1367, 57 U.S.P.Q.2d (BNA) at 1638.}

**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 correction\footnote{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).} and notice under 35 U.S.C. § 287.\footnote{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).} The Federal Circuit also clarified the law on burdens of proof,\footnote{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).} the on-sale bar,\footnote{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).} the application of the complete bar rule adopted in \textit{Festo},\footnote{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 \textit{Pioneer Magnetics}).} and the right to a jury trial in an infringement action that seeks only an injunction and no damages.\footnote{See Tegal Corp. v. Tokyo Electron Am., Inc., 257 F.3d 1331, 1341, 59 U.S.P.Q.2d (BNA) 1383, 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).} 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
of patent claims certain and predictable. By conducting its own de
novo analysis of patent claim terms in so many cases, 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

<table>
<thead>
<tr>
<th>Case Name and Citation</th>
<th>Claim Term</th>
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"generally parallel connecting elements" |
| *AFG Industries, Inc. v. Cardinal IG Company, Inc.*, 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]."

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<th>Case Name and Citation</th>
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"shopping cart ordering model"

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<th>Case Name and Citation</th>
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| *Asyst Technologies, Inc. v. Empak, Inc.*, 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"

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<th>Case Name and Citation</th>
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1038. See supra Part I.G (discussing the standard of review that the Federal Circuit applies to various issues).
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<th>Case Name and Citation</th>
<th>Claim Term</th>
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<tr>
<td>Bell Atlantic Network Services, Inc. v. Covad Communications Group, Inc., 262 F.3d 1258, 59 U.S.P.Q.2d (BNA) 1865.</td>
<td>&quot;plurality of different modes&quot; &quot;ADSL/ADR transceiver&quot; &quot;first channel&quot; &quot;second channel&quot; &quot;selectively changing the transmission rates&quot;</td>
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<td>Biotec Biologische Naturverpackungen v. Biocorp, Inc., 249 F.3d 1341, 58 U.S.P.Q.2d (BNA) 1737.</td>
<td>&quot;substantially water free&quot; &quot;homogeneous mixture having a crystalline content of less than 5% of starch&quot;</td>
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<td>Biovail Corporation International v. Andrx Pharmaceuticals, Inc., 239 F.3d 1297, 57 U.S.P.Q.2d (BNA) 1813.</td>
<td>&quot;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 . . .&quot;</td>
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<td>Bristol-Myers Squibb Company v. Ben Venue Laboratories, Inc., 246 F.3d 1368, 58 U.S.P.Q.2d (BNA) 1508.</td>
<td>&quot;a method for reducing hematologic toxicity&quot; &quot;to effect regression of a taxol-sensitive tumor, said method being associated with reduced hematologic toxicity&quot; &quot;an antineoplastically effective amount&quot;</td>
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<td>Brown v. 3M, 265 F.3d 1349, 60 U.S.P.Q.2d (BNA) 1375.</td>
<td>&quot;or&quot;</td>
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<td>Budde v. Harley-Davidson, Inc., 250 F.3d 1369, 58 U.S.P.Q.2d (BNA) 1801.</td>
<td>&quot;electronic sensing means for determining when the ignition system . . . delivers an electronic pulse&quot; &quot;status sensing means for measuring a combination of air intake and engine temperature and vacuum in the intake manifold&quot;</td>
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<td>Case Name and Citation</td>
<td>Claim Term</td>
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<td><em>Dayco Products, Inc. v. Total Containment, Inc.</em>, 258 F.3d 1317, 59 U.S.P.Q.2d (BNA) 1489.</td>
<td>&quot;projections of said insert means being respectively received in said recesses of said inner hose&quot;</td>
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<td><em>Dow Chemical Company v. Sumitomo Chemical Company, Ltd.</em>, 257 F.3d 1364, 59 U.S.P.Q.2d (BNA) 1609.</td>
<td>&quot;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&quot; &quot;continuous or intermittent manner&quot; &quot;continuously removing water&quot;</td>
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<td>Exxon Research and Engineering Company v. United States, 265 F.3d 1371, 60 U.S.P.Q.2d (BNA) 1272.</td>
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<td>Fin Control Systems Pty, Ltd. v. Oam, Inc., 265 F.3d 1311, 60 U.S.P.Q.2d (BNA) 1203.</td>
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<td>Gart v. Logitech, Inc., 254 F.3d 1334, 59 U.S.P.Q.2d (BNA) 1290.</td>
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<td>Generation II Orthotics Inc. v. Medical Technology Inc., 263 F.3d 1356, 59 U.S.P.Q.2d (BNA) 1919.</td>
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<td>Hilgraeve Corporation v. Symantec Corporation, 265 F.3d 1336, 60 U.S.P.Q.2d (BNA) 1291.</td>
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<td>Innovad Inc. v. Microsoft Corporation, 260 F.3d 1326, 59 U.S.P.Q.2d (BNA) 1676.</td>
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<td>Interactive Gift Express, Inc. v. Compuserve Incorporated, 256 F.3d 1323, 59 U.S.P.Q.2d (BNA) 1401.</td>
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<td>Karsten Manufacturing Corporation v. Cleveland Golf Company; 242 F.3d 1376, 58 U.S.P.Q.2d (BNA) 1286.</td>
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<td>Lockheed Martin Corporation v. Space Systems/Loral, Inc., 249 F.3d 1314, 58 U.S.P.Q.2d (BNA) 1671.</td>
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<td>MSM Investments Company, LLC v. Carolwood Corporation, 259 F.3d 1335, 59 U.S.P.Q.2d (BNA) 1856.</td>
<td>“feeding . . . a beneficial amount of methsulfonyl “methane” “increasing the amount of metabolizable sulfur”</td>
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<td>Mycogen Plant Science, Inc. v. Monsanto Company, 243 F.3d 1316, 58 U.S.P.Q.2d (BNA) 1030.</td>
<td>“codons preferred by the intended plant host”</td>
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<td>Rexnord Corporation v. Laitram Corporation, 278 F.3d 1336, 60 U.S.P.Q.2d (BNA) 1851.</td>
<td>“portion”</td>
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<td>Scimed Life Systems, Inc. v. Advanced Cardiovascular Systems, Inc., 242 F.3d 1337; 58 U.S.P.Q.2d (BNA) 1059.</td>
<td>“dilatation catheter including an inflatable balloon and an inflatable lumen extending through the catheter separate from the guide wire lumen”</td>
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<td>Tellmac Cellular Corporation v. Topp Telecom, Inc., 247 F.3d 1316, 58 U.S.P.Q.2d (BNA) 1545.</td>
<td>“communication means for selectively establishing a communication link with each mobile phone unit” “complex billing algorithm . . . for internally calculating call charges”</td>
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<td>Viskase Corporation v. American National Can Company, 261 F.3d 1316, 59 U.S.P.Q.2d (BNA)1823.</td>
<td>“density not greater than about 0.915 grams per cubic centimeter”</td>
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<td>Xerox Corporation v. 3Com Corporation, 267 F.3d 1361, 60 U.S.P.Q.2d (BNA)1526.</td>
<td>“unistroke symbols” “without reference to and totally independent of their spatial relationship with respect to each other”</td>
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