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Survey of Patent Law Decisions in the Federal Circuit: 1998 in Review

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Survey of Patent Law Decisions in the Federal Circuit: 1998 in Review

Keywords

Patent law, Federal Circuit decisions, Patentability, Patent Validity, Preliminary Injunction, Patent Infringement

AREA SUMMARY

SURVEY OF PATENT LAW DECISIONS IN THE FEDERAL CIRCUIT: 1998 IN REVIEW*

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* This Article reflects the present considerations and views of the authors, which should not be attributed to Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P., or to any of their past, present, or future clients.

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INTRODUCTION

The following Article summarizes recent published patent law-related opinions delivered by the Federal Circuit during the 1998 calendar year. The discussion of these cases is broken down according to the substantive area of patent law discussed therein. Part I addresses the procedural aspects of Federal Circuit practice. Part II discusses those cases dealing with patentability and validity. Part III focuses on infringement. Part IV deals with infringement remedies and limitations on recovery. Finally, Part V concludes with a discussion of cases concerning other sources of liability including

antitrust and breach of contract.

I. PROCEDURAL ASPECTS OF FEDERAL CIRCUIT PRACTICE

A. *Subject Matter Jurisdiction*

Federal courts must have subject matter jurisdiction over a claim before it may be heard. Subject matter jurisdiction exists where a party satisfies either the diversity or federal question requirement. Alternatively, when a case involves both a federal question and state law claim, the Federal Circuit may exercise supplemental jurisdiction so that it may review both claims.¹

In *Textile Productions, Inc. v. Mead Corp.*,² the Federal Circuit considered whether it possessed subject matter jurisdiction to hear Textile's contract claim against Mead after dismissal of the patent infringement claim.³ Although Textile did not raise the issue of subject matter jurisdiction on appeal, the Federal Circuit noted that it could raise the issue *sua sponte*.⁴ The Federal Circuit explained that once the district court dismissed the patent infringement claim, the court lacked supplemental jurisdiction over the contract claim. Even assuming that Textile asserted a breach of contract claim, the district court lacked subject matter jurisdiction after dismissal of the patent infringement claim.⁵ Thus, the Federal Circuit found that the district court correctly dismissed the contract claim.⁶

Dismissals for lack of subject matter jurisdiction are usually dismissals without prejudice.⁷ In the instant case, however, the district court dismissed the case with prejudice.⁸ The Federal Circuit

1. See 28 U.S.C. § 1338 (1994) (granting jurisdiction to district courts over patent claims); see also 28 U.S.C. § 1367 (1994) (regarding supplemental jurisdiction).

2. 134 F.3d 1481, 45 U.S.P.Q.2d (BNA) 1633 (Fed. Cir. 1998). In *Textile Productions*, the plaintiff sued its co-inventor and a company that manufactured additional harnesses, and his suit alleged breach of a requirements contract to purchase plaintiff's harnesses, as well as patent infringement. See *id.* at 1482, 45 U.S.P.Q.2d (BNA) at 1634.

3. See *Textile Prods.*, 134 F.3d at 1485, 45 U.S.P.Q.2d (BNA) at 1637.

4. See *id.*, 45 U.S.P.Q.2d (BNA) at 1636 (discussing the fact that federal appellate courts have an obligation to ensure that both appellate and lower court jurisdiction is proper) (citing *Bender v. Williamsport Area Sch. Dist.*, 475 U.S. 534, 541 (1986)).

5. See *Textile Prods.*, 134 F.3d at 1486, 45 U.S.P.Q.2d (BNA) at 1637 (explaining that diversity jurisdiction could not provide jurisdiction over the contract claim because Fiber Trim and Textile were both Michigan corporations).

6. See *id.* at 1486, 45 U.S.P.Q.2d (BNA) at 1637 (deciding that a district court has no discretion to apply the supplemental jurisdiction doctrine over a pendant state claim after the jurisdiction-conferring patent infringement claim is dismissed for lack of § 281 standing) (citing *Gaia Techs., Inc. v. Reconversion Techs., Inc.*, 104 F.3d 1296, 1297, 41 U.S.P.Q.2d (BNA) 1134, 1140 (Fed. Cir. 1996)).

7. See *id.*, 134 F.3d at 1486, 45 U.S.P.Q.2d (BNA) at 1637.

8. See *id.*, 45 U.S.P.Q.2d (BNA) at 1637.

vacated the dismissal and remanded for a determination of whether Textile actually asserted a breach of contract claim.⁹ The Federal Circuit instructed the district court to enter an order dismissing the action without prejudice if such a claim had been asserted.¹⁰ If, on the other hand, Textile had intentionally dropped or waived its breach of contract claim at some point during the original district court proceeding, the Federal Circuit instructed the district court to renew its original dismissal with prejudice.¹¹

B. Personal Jurisdiction

Personal jurisdiction allows a court to exercise its power over a party, which is either physically present in the state where the court resides or which has sufficient contacts with the forum state to warrant such an exercise of control.¹²

In *Dainippon Screen Manufacturing Co. v. CFMT, Inc.*,¹³ the Federal Circuit reversed the district court's finding that it lacked personal jurisdiction over a declaratory judgment defendant.¹⁴ The defendants were CFM, a semiconductor equipment manufacturer with a sales office in California, and CFMT, a Delaware corporation and wholly owned subsidiary of CFM. CFMT, a holding company with no employees, agents, or offices in California, had been assigned all of CFM's patents.¹⁵ CFM was granted an exclusive license to these patents in return for a ten percent royalty based on CFM's net sales.¹⁶ CFMT, however, maintained both the power to negotiate a sublicense and the power to commence litigation against patent infringers.¹⁷

Unable to negotiate a license with CFMT and CFM, Dainippon filed suit and sought a declaration that the patent at issue was invalid or, in the alternative, that Dainippon had not infringed the patent.¹⁸ The lower court dismissed the suit and held that, although the defendant's actions created a reasonable apprehension of suit on the part of the plaintiff, the court lacked personal jurisdiction over CFMT, a necessary party to the suit under Rule 19(a) of the Federal Rules of Civil Procedure.¹⁹

9. *See id.*, 45 U.S.P.Q.2d (BNA) at 1637.

10. *See id.*, 45 U.S.P.Q.2d (BNA) at 1637.

11. *See id.*, 45 U.S.P.Q.2d (BNA) at 1637.

12. *See International Shoe Co. v. Washington*, 326 U.S. 310, 316 (1945).

13. 142 F.3d 1266, 46 U.S.P.Q.2d (BNA) 1616 (Fed. Cir. 1998).

14. *See id.* at 1273, 46 U.S.P.Q.2d (BNA) at 1623.

15. *See id.*, 46 U.S.P.Q.2d (BNA) at 1623.

16. *See id.*, 46 U.S.P.Q.2d (BNA) at 1623.

17. *See id.*, 46 U.S.P.Q.2d (BNA) at 1623.

18. *See id.* at 1268, 46 U.S.P.Q.2d (BNA) at 1618.

19. According to Fed. R. Civ. P. 19(a), a party shall be joined if "(1) in the person's

On appeal, the Federal Circuit applied a two-part test to determine whether personal jurisdiction existed. The court considered whether the forum state's long-arm statute permitted service of process and whether the assertion of personal jurisdiction violated due process.²⁰ Because California's long arm statute is co-extensive with the limits of due process,²¹ the two-step inquiry collapsed into a single question: whether personal jurisdiction over the defendants in this case comported with due process.²²

To evaluate whether the assertion of personal jurisdiction over CFMT comported with due process, the court utilized the three-part test applied in *Akro Corp. v. Luker*.²³ The *Akro Corp.* three part test asks: (1) whether the defendant purposefully directed its activities towards residents of the forum state; (2) whether the claim arises out of or relates to the defendant's activities within the forum state; and (3) whether the assertion of personal jurisdiction is reasonable and fair.²⁴

The Federal Circuit held that the facts in *Dainippon* compelled it to find personal jurisdiction over the defendants.²⁵ CFMT argued that any threats of suit made to Dainippon only came from CFM agents and did not justify the application of personal jurisdiction.²⁶ The court concluded, however, that the agents of CFM were also the agents of CFMT.²⁷ The court further stated that, if CFMT had intended to distance itself from the negotiations, the CFMT agents should have communicated clearly that they acted on behalf of the parent company only.²⁸ To further buttress its conclusion, the court

absence complete relief cannot be accorded among those already parties, or (2) the person claims an interest relating to the subject of the action." FED. R. CIV. P. 19(a). See *Dainippon*, 142 F.3d at 1268, 46 U.S.P.Q.2d (BNA) at 1618 (rejecting Dainippon's argument that CFMT's receipt of licensing revenues from the state of California created minimum contacts with the state).

20. See *Dainippon*, 142 F.3d at 1269, 46 U.S.P.Q.2d (BNA) at 1619 (citing *Burger King Corp. v. Rudzewicz*, 471 U.S. 462, 471 (1985)).

21. See *id.* at 1270, 46 U.S.P.Q.2d (BNA) at 1619; CAL. CIV. PROC. CODE § 410.10 (West 1997) (providing that a California court "may exercise jurisdiction on any basis not inconsistent with the Constitution of this state or of the United States").

22. See *Dainippon*, 142 F.3d at 1270, 46 U.S.P.Q.2d (BNA) at 1619; see also CAL. CIV. PROC. CODE § 410.10 (West 1997).

23. 45 F.3d 1541, 33 U.S.P.Q.2d (BNA) 1505 (Fed. Cir. 1995).

24. See *Dainippon*, 142 F.3d at 1270 n.2, 46 U.S.P.Q.2d (BNA) at 1620 n.2.

25. See *id.* at 1271, 46 U.S.P.Q.2d (BNA) at 1621 (holding that it is proper for California to assert jurisdiction over CFMT because it had minimum contacts with the state including maintaining sales agents in the state and deriving substantial revenue from in-state sales).

26. See *id.* at 1270, 46 U.S.P.Q.2d (BNA) at 1620.

27. See *id.*, 46 U.S.P.Q.2d (BNA) at 1620 (evaluating individuals' actions and concluding that, in light of CFMT's exclusive authority, CFM did not act alone).

28. See *id.*, 46 U.S.P.Q.2d (BNA) at 1620 (explaining that the language used in the agents' communications to CFMT suggested that they were also agents of CFMT).

referred to the licensing agreement between CFMT and CFM, which empowered only CFMT to enter into licensing negotiations and enforce the patents.²⁹

Although the court noted that delivery of infringement letters into a forum state is insufficient by itself to satisfy the requirements of due process, it also noted that CFMT licensed the technology to CFM, which maintained sales agents in California.³⁰ CFMT captured substantial revenue from CFM's California-based sales and therefore possessed more than a mere casual relationship with CFM.³¹ The court also found that the parent-subsidiary relationship between the defendants further compelled a finding of personal jurisdiction over CFMT.³²

In a reproach of the defendant's argument, the court characterized it as a contention that

a parent company can incorporate a holding company in another state, transfer its patents to the holding company, arrange to have those patents licensed back to itself by virtue of its complete control over the holding company, and threaten its competitors with infringement without fear of being a declaratory judgment defendant, save perhaps in the state of incorporation of the holding company.³³

Ultimately, the court warned that a holding company cannot fairly be used to insulate patent owners from defending declaratory judgment actions in those fora where the parent company operates under the patent and engages in activities sufficient to create personal jurisdiction and declaratory judgment jurisdiction.³⁴ The court concluded by qualifying defendants' argument for one of its "chutzpah" awards.³⁵

C. Standing

To insure that an actual case or controversy exists, every litigant must meet constitutional standing requirements. A federal district court does not have jurisdiction if the litigant does not meet the

29. *See id.* at 1270 n.1, 46 U.S.P.Q.2d (BNA) at 1620 n.1 ("Licensor shall thereupon have the exclusive right, but shall not be obligated to take appropriate legal action in connection therewith.").

30. *See id.* at 1270-71, 46 U.S.P.Q.2d (BNA) at 1620-21.

31. *See id.* at 1271, 46 U.S.P.Q.2d (BNA) at 1621.

32. *See id.*, 46 U.S.P.Q.2d (BNA) at 1621 (holding that personal jurisdiction over CMFT is consistent with *Akro's* requirement that exercising personal jurisdiction over a non-resident defendant must be "reasonable and fair").

33. *Id.* at 1271, 46 U.S.P.Q.2d (BNA) at 1621.

34. *See id.*, 46 U.S.P.Q.2d (BNA) at 1621 (noting that CFM did not appear to incorporate CMFT in Delaware for the specific purpose of avoiding law suits in other fora).

35. *See id.*, 46 U.S.P.Q.2d (BNA) at 1621.

standing requirements.³⁶ Standing requires a demonstration of an “injury in fact” along with a causal connection between the injury and the conduct at issue.³⁷ The Federal Circuit reviews issues of standing *de novo*.³⁸

In *Textile Productions, Inc. v. Mead Corp.*,³⁹ Textile and Mead executed a contract to assign the entire interest in the patent to Mead while the patent application covering a spandex harness was pending and to split the costs of prosecuting the application.⁴⁰ The agreement also gave Textile the opportunity to participate in any litigation that might arise from the assigned patent(s).⁴¹

In 1995, Mead contracted with a third party to manufacture the spandex harness without first notifying Textile.⁴² After Textile discovered that this third party was manufacturing the harness, Mead notified Textile that it was suspending performance under the agreement.⁴³ Textile sued Mead and the third party.⁴⁴ Textile alleged that it was an exclusive licensee of the patent and that Mead and the third party infringed its rights under the license.⁴⁵

Under the Patent Act,⁴⁶ only the patentee has a remedy by civil action for patent infringement.⁴⁷ A patentee is a party to whom the patent is issued or any successor in title.⁴⁸ “This has been interpreted to require that a suit for infringement must ordinarily be brought by a party holding legal title to the patent.”⁴⁹ In the case of a transfer of patent title, anything less than a complete transfer constitutes a license, and title remains in the patent owner.⁵⁰ Therefore, a licensee cannot bring suit in its own name unless the licensee holds all of the

36. See *Sierra Club v. Morton*, 405 U.S. 727, 731-32 (1972) (noting that standing to sue is crucial to a court’s ability to resolve an otherwise justiciable controversy).

37. *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560-61 (1992).

38. See *Enzo APA & Sons, Inc. v. Geapag A.G.*, 134 F.3d 1090, 1092, 45 U.S.P.Q.2d (BNA) 1368, 1369 (Fed. Cir. 1998).

39. 134 F.3d 1481, 45 U.S.P.Q.2d (BNA) 1633 (Fed. Cir. 1998).

40. See *id.* at 1482, 45 U.S.P.Q.2d (BNA) at 1634 (describing a “sock-like” spandex harness developed by employees at Mead and Textile to enable Ford Motor Company to pass a large bundle of wires through a narrow opening during the production of the interior control panel of automobiles).

41. See *id.*, 45 U.S.P.Q.2d (BNA) at 1634.

42. See *id.* at 1483, 45 U.S.P.Q.2d (BNA) at 1634.

43. See *id.*, 45 U.S.P.Q.2d (BNA) at 1634.

44. See *id.*, 45 U.S.P.Q.2d (BNA) at 1634-35.

45. See *id.*, 45 U.S.P.Q.2d (BNA) at 1634.

46. 35 U.S.C. § 281 (1994).

47. See *Enzo APA & Son, Inc. v. Geapag A.G.*, 134 F.3d 1090, 1093, 45 U.S.P.Q.2d (BNA) 1368, 1370 (Fed. Cir. 1998) (interpreting the Patent Act as restricting who may bring a patent infringement suit to a party holding legal title to the patent).

48. See *id.*, 45 U.S.P.Q.2d (BNA) at 1370 (citing 35 U.S.C. § 100(d)).

49. *Id.*, 45 U.S.P.Q.2d (BNA) at 1370.

50. See *id.*, 45 U.S.P.Q.2d (BNA) at 1370.

substantial rights granted under the patent.⁵¹ An exclusive licensee without all substantial rights under the patent only has standing to sue as a co-plaintiff along with the patentee.⁵² Despite this rule, “an exclusive licensee that does not have all substantial rights does have standing to sue in his own name when ‘necessary to prevent an absolute failure of justice, as where the patentee is the infringer, and cannot sue himself.’”⁵³ A bare licensee, on the other hand, has no standing to sue whatsoever.⁵⁴

In the instant case, the Federal Circuit first examined whether Textile was an exclusive licensee under the agreement with Mead because the exception outlined above applies only to an exclusive licensee.⁵⁵ After considering the entire agreement between Mead and Textile, the court concluded that Mead did not promise that all others would be excluded from making the invention.⁵⁶ Further, the court found that Mead did not grant Textile the rights of an exclusive licensee and, therefore, Textile did not have standing to assert a patent infringement claim.⁵⁷ Notably, the Federal Circuit held that “[a]llowing subsequent assignment to automatically cure a standing defect would unjustifiably expand the number of people who are statutorily authorized to sue.”⁵⁸ Thus, the Federal Circuit vacated the district court’s entry of judgment on the merits.⁵⁹

A similar issue arose in *Enzo APA & Son, Inc. v. Geapag A.G.*⁶⁰ The Federal Circuit considered whether Geapag A.G., as a non-exclusive licensee, had standing to bring an action under the patent-in-suit.⁶¹ The court traced the patent’s chain of title to analyze the standing issue.⁶² U.S. Patent No. 4,715,274 (“the ‘274 patent”) was issued on January 31, 1986, with a company called Spidem listed as assignee of record.⁶³ Spidem executed an exclusive license to J&K, which

51. *See Textile Prods.*, 134 F.3d at 1484, 45 U.S.P.Q.2d (BNA) at 1635.

52. *See id.*, 45 U.S.P.Q.2d (BNA) at 1635.

53. *Id.*, 45 U.S.P.Q.2d (BNA) at 1635 (quoting *Waterman v. Mackenzie*, 138 U.S. 252 (1891)).

54. *See id.*, 45 U.S.P.Q.2d (BNA) at 1635 (stating that because a bare licensee does not have “all substantial rights” under the patent, it lacks standing to sue).

55. *See id.*, 45 U.S.P.Q.2d (BNA) at 1635 (explaining that the purpose of permitting standing to an exclusive licensee not holding all substantial rights to sue in its own name is to prevent a miscarriage of justice).

56. *See id.*, 45 U.S.P.Q.2d (BNA) at 1636.

57. *See id.*, 45 U.S.P.Q.2d (BNA) at 1636.

58. *Enzo APA & Son, Inc. v. Geapag A.G.*, 134 F.3d 1090, 1093-94, 45 U.S.P.Q.2d (BNA) 1368, 1371 (quoting *Procter & Gamble Co. v. Paragon Trade Brands, Inc.*, 917 F. Supp. 305, 310, 38 U.S.P.Q.2d (BNA) 1678, 1682 (D. Del. 1995)).

59. *See Textile Prods.*, 134 F.3d at 1485, 45 U.S.P.Q.2d (BNA) at 1636.

60. 134 F.3d 1090, 45 U.S.P.Q.2d (BNA) 1368 (Fed. Cir. 1998).

61. *See id.* at 1092, 45 U.S.P.Q.2d (BNA) at 1369.

62. *See id.*, 45 U.S.P.Q.2d (BNA) at 1369.

63. *See id.*, 45 U.S.P.Q.2d (BNA) at 1370.

subsequently granted a sublicense to Geapag.⁶⁴ The court concluded that the '274 patent was not covered as part of this sublicense grant.⁶⁵

After the action in issue had been filed, Geapag and Spidem attempted to clarify the chain of title to the '274 patent. The two entities entered into an agreement by which all previous licenses were canceled and an exclusive licensing agreement between Geapag and Spidem was executed.⁶⁶ This license gave Geapag rights in the '274 patent and was retroactive so as to predate the ongoing court dispute.⁶⁷

The district court found that Geapag had standing and, after a hearing, declared the '274 patent not invalid and infringed.⁶⁸ On appeal, the Federal Circuit found that it "was clear from the record that there was no writing transferring all substantial rights under the '274 patent to Geapag at the time it brought suit" and that such rights were necessary for an assignee to bring suit.⁶⁹ Geapag's argument that the absence of a written license did not prevent standing was soundly rejected by the court. "While we acknowledge that a license may be written, verbal, or implied, if the license is to be considered a virtual assignment to assert standing, it must be in writing."⁷⁰ To allow otherwise would subsume the narrow exceptions to this rule.⁷¹

Similarly, the court rejected Geapag's assertion that the *nunc pro tunc* assignment with Spidem rendered it a virtual assignee for the purposes of standing. Conferring retroactive standing would unnecessarily expand the circle of those statutorily allowed to sue and would result in unworkable principles and delay.⁷² Accordingly, the Federal Circuit reversed the district court's decision on standing and vacated the court's decision on the merits.

D. Clarification of Prior Decisions

In *Exxon Chemical Patents, Inc. v. Lubrizol Corp.*,⁷³ the Federal Circuit heard Exxon's appeal of the district court's denial of a new trial on

64. *See id.*, 45 U.S.P.Q.2d (BNA) at 1370.

65. *See id.*, 45 U.S.P.Q.2d (BNA) at 1370 (finding that the agreement covered only Italian applications and patents listed in the agreement).

66. *See id.*, 45 U.S.P.Q.2d (BNA) at 1370.

67. *See id.*, 45 U.S.P.Q.2d (BNA) at 1370. The suit was filed on January 27, 1993, and the assignment was retroactively dated December 4, 1992. *See id.* at 1091-92, 45 U.S.P.Q.2d (BNA) at 1369-70.

68. *See id.*, 45 U.S.P.Q.2d (BNA) at 1369.

69. *Id.* at 1093, 45 U.S.P.Q.2d (BNA) at 1370.

70. *Id.*, 45 U.S.P.Q.2d (BNA) at 1370-71.

71. *See id.*, 45 U.S.P.Q.2d (BNA) at 1371.

72. *See id.* at 1093-94, 45 U.S.P.Q.2d at 1371.

73. 137 F.3d 1475, 45 U.S.P.Q.2d (BNA) 1865 (Fed. Cir. 1998).

the issue of infringement under the doctrine of equivalents.⁷⁴ Both Exxon and Lubrizol manufacture lubricating oil compositions for automobiles.⁷⁵ Exxon originally filed a patent infringement suit against Lubrizol on its automobile engine lubricant.⁷⁶ Once the district court adopted a favorable claim construction,⁷⁷ however, Exxon removed its proposed jury instruction on the issue of infringement under the doctrine of equivalents.⁷⁸ Lubrizol then appealed the jury's finding for Exxon of literal infringement,⁷⁹ and the Federal Circuit held that, under the correct claim interpretation, no reasonable jury could find for Exxon on the issue of literal infringement.⁸⁰ The court reversed the district court judgment. Exxon petitioned for rehearing and requested that the panel clarify its opinion regarding Exxon's right to move for a new trial on the issue of doctrine of equivalents.⁸¹ The panel denied this petition without the requested clarification. Subsequently, the district court denied Exxon's motion for a new trial on infringement under the doctrine of equivalents. The district court stated that the Federal Circuit's decision left it with "no authority to grant a new trial."⁸² Exxon then appealed that order.

Exxon argued that the Federal Circuit's previous decision was confined to literal infringement and thus did not preclude further proceedings regarding the doctrine of equivalents.⁸³ The Federal Circuit agreed that its original decision only referred to the issue of literal infringement and was not meant to be construed as covering infringement under the doctrine of equivalents.⁸⁴ Thus, it was not the court's original objective to determine whether Exxon would receive a new trial under the doctrine of equivalents.⁸⁵ Exxon "cannot be charged with having abandoned its doctrine of equivalents theory of liability by not submitting it to the jury. Once

74. See *id.* at 1477, 45 U.S.P.Q.2d (BNA) at 1866.

75. See *Exxon Chem. Patents, Inc. v. Lubrizol Corp.*, 64 F.3d 1553, 35 U.S.P.Q.2d (BNA) 1801 (Fed. Cir. 1995).

76. See *Exxon*, 137 F.3d at 1477, 45 U.S.P.Q.2d (BNA) at 1866.

77. Exxon's claim was that its lubricating oil composition contained five ingredients and that its patent covered any product made by using these five ingredients. Lubrizol's claim was that Exxon's patent only covered the product, not the process for making a product or a product made by a claimed process. *Exxon*, 64 F.3d at 1555.

78. See *Exxon*, 137 F.3d at 1477, 45 U.S.P.Q.2d (BNA) at 1866.

79. See *Exxon*, 64 F.3d at 1559 ("Literal infringement requires that every limitation in Exxon's claims be found in the accused product.").

80. See *Exxon*, 137 F.3d at 1477, 45 U.S.P.Q.2d (BNA) at 1866.

81. See *id.*, 45 U.S.P.Q.2d (BNA) at 1867.

82. *Id.*, 45 U.S.P.Q.2d (BNA) at 1867.

83. See *id.*, 45 U.S.P.Q.2d (BNA) at 1867.

84. See *id.* at 1478, 45 U.S.P.Q.2d (BNA) at 1867.

85. See *id.*, 45 U.S.P.Q.2d (BNA) at 1867.

the district court construed the claim in Exxon's favor, the doctrine of equivalents issue became moot.⁸⁶ The court held that Exxon was not required to request alternative jury instructions seeking an advisory verdict on whether the patent would be infringed under the doctrine of equivalents.⁸⁷

Lubrizol argued, however, that the original Federal Circuit decision implied that Exxon was not entitled to a new trial because Exxon asked for clarification of its right to move for a new trial, and the court failed to respond to this request.⁸⁸ The court, however, responded that:

[n]o inferences can be drawn from the court's silence in response to Exxon's request for clarification. Courts normally do not respond to petitions for rehearing and it would be a mistake to conclude that a court's non-response to an argument made in a rehearing petition necessarily means that the court has rejected that argument on the merits.⁸⁹

Lubrizol also argued that the Supreme Court, in *Neely v. Martin K. Eby Construction Co.*,⁹⁰ found that "in an appropriate case, a court of appeals may direct that judgment be granted against an appellee without permitting the appellee to seek a new trial from the district court."⁹¹ The Supreme Court, however, explicitly tied the exercise of this appellate court power to a court's ability to make an informed judgment based on the record before it.⁹² According to the Federal Circuit, the discussion in *Neely* "did not implicitly adopt a new rule requiring all possible grounds for a new trial to be presented to the reviewing court, no matter how tenuous their connection to the issues on appeal."⁹³

Therefore, a court does not expect an appellee "to preserve all issues that might give rise to a motion for a new trial."⁹⁴ Exxon's first opportunity to make arguments for a new trial would be in the petition for rehearing. Rehearing petitions normally are not suitable for making new arguments to the appellate court.⁹⁵ A petition for rehearing must specifically address those points of law or fact that the

86. *Id.*, 45 U.S.P.Q.2d (BNA) at 1868.

87. *See id.*, 45 U.S.P.Q.2d (BNA) at 1868.

88. *See id.* at 1479, 45 U.S.P.Q.2d (BNA) at 1868.

89. *Id.* at 1478, 45 U.S.P.Q.2d (BNA) at 1868.

90. 386 U.S. 317 (1967).

91. *Exxon*, 137 F.3d at 1481, 45 U.S.P.Q.2d (BNA) at 1870.

92. *See id.*, 45 U.S.P.Q.2d (BNA) at 1870.

93. *Id.* at 1482, 45 U.S.P.Q.2d (BNA) at 1870.

94. *Id.*, 45 U.S.P.Q.2d (BNA) at 1870.

95. *See id.*, 45 U.S.P.Q.2d (BNA) at 1870 (citing *Pentax Corp. v. Robison*, 135 F.3d 760, 762 (Fed. Cir. 1998)).

petitioner believes the court left unaddressed or misunderstood. Otherwise, the court will not consider the arguments raised.⁹⁶

The Federal Circuit did not make any decisions on the merits of Exxon's doctrine of equivalents infringement claim, nor did the court consider whether a procedural error would prevent the district court from deciding this claim on the merits. Instead, the Federal Circuit left those issues to the discretion of the district court.⁹⁷ The Federal Circuit held that although a court of appeals may find in favor of appellant without allowing appellee to request a new trial from a district court,⁹⁸ this finding would not deprive the district court of the authority to entertain Exxon's motion for a new trial.⁹⁹

E. Vacatur and Remand

The Federal Circuit revisited a familiar case in *Hughes Aircraft Co. v. United States*.¹⁰⁰ Earlier, the Federal Circuit had found the government liable for infringement of Hughes' '051 patent and remanded to the trial court for a damages determination. On appeal regarding the damages calculation, the Federal Circuit refused, under the doctrine of law of the case, to reconsider its infringement determination. The Supreme Court granted certiorari on that judgment and vacated. The Court remanded to the Federal Circuit for reconsideration in light of its *Warner-Jenkinson* decision.

The Federal Circuit, in construing the scope of the Supreme Court's remand, stated that the Court will issue such an order when intervening developments or recent developments that the court below did not consider, reveal a reasonable probability that the lower court would now reject its previous decision if given the opportunity.¹⁰¹

The Federal Circuit noted that a vacatur and remand order does not imply that the lower court should change its prior determination, but merely raises an issue that it may not have been considered fully for reconsideration in light of the newly presented authority.¹⁰² Accordingly, the Federal Circuit limited its review on remand to

96. See *Pentax*, 135 F.3d at 762.

97. See *Exxon*, 137 F.3d at 1483, 45 U.S.P.Q.2d (BNA) at 1871.

98. See *id.*, 45 U.S.P.Q.2d (BNA) at 1871; see also FED. R. CIV. P. 50(d).

99. See *id.*, 137 F.3d at 1483, 45 U.S.P.Q.2d (BNA) at 1871.

100. 140 F.3d 1470, 46 U.S.P.Q.2d (BNA) 1285. A total of eight decisions were previously issued in *Hughes Aircraft*, which makes the Supreme Court's vacatur and remand order the ninth decision and the Federal Circuit's review the tenth decision. See *id.* at 1472-73, 46 U.S.P.Q.2d (BNA) at 1286-87 (summarizing the previous decisions).

101. See *id.* at 1473, 46 U.S.P.Q.2d (BNA) at 1278 (citing *Lawrence v. Chater*, 516 U.S. 163, 167 (1996)).

102. See *id.*, 46 U.S.P.Q.2d (BNA) at 1286-87.

whether the trial court's analysis was proper in light of the recently issued *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*¹⁰³ decision.¹⁰⁴

F. Preemption

In *Dow Chemical Co. v. Exxon Corp.*,¹⁰⁵ the Federal Circuit considered whether federal patent law preempts the state law tort of intentional interference with actual and prospective contractual relations. Relying upon the common law definition of the state law tort of intentional interference with contractual relations,¹⁰⁶ the court stated that one who intentionally and improperly interferes with the performance of a contract or with the prospective contractual relations is liable for the resulting pecuniary harm caused to the other.¹⁰⁷ Pursuant to the Supremacy Clause of the Constitution,¹⁰⁸ state causes of action are preempted if they present an obstacle to the accomplishment and execution of the full purposes and objectives of a congressionally enacted statute.¹⁰⁹ The Supreme Court has provided significant guidance as to what constitutes such an obstacle.¹¹⁰ "Under the standard mandated by the Supreme Court, the state law cause of action at issue [in *Dow Chemical Co.*] does not present an 'obstacle' to the execution and accomplishment of the

103. 520 U.S. 17 (1997) (upholding *Graver Tank & Mfg. Co. v. Linde Air Prod. Co.*, 339 U.S. 605 (1950) (affirming the application of the doctrine of equivalents when the trial court's decision was not "clearly erroneous").

104. See *Hughes Aircraft*, 140 F.3d at 1474, 46 U.S.P.Q.2d (BNA) at 1287-88; see also *Warner-Jenkinson*, 520 U.S. at 29 (holding that "each element in a patent claim is deemed material to defining the scope of the patented invention, and thus, the doctrine of equivalents must be applied to individual elements of the claim, not to the invention as a whole").

105. 139 F.3d 1470, 46 U.S.P.Q.2d (BNA) 1120 (Fed. Cir. 1998).

106. See *id.* at 1473, 46 U.S.P.Q.2d (BNA) at 1123.

107. See *id.* at 1472 n.1, 46 U.S.P.Q.2d (BNA) at 1122 n.1. The Federal Circuit goes on to quote from the Restatement (Second) of Torts:

One who intentionally and improperly interferes with the performance of a contract . . . between another and a third person by inducing or otherwise causing the third person not to perform the contract, is subject to liability to the other for the pecuniary loss resulting to the other from the failure of the third person to perform the contract. . . . One who intentionally and improperly interferes with another's prospective contractual relation . . . is subject to liability to the other for the pecuniary harm resulting from loss of the benefits of the relation

Id. (quoting RESTATEMENT (SECOND) OF TORTS §§ 766, 766B (1979)).

108. See U.S. CONST. art. VI, cl. 2 ("This Constitution, and the Laws of the United States which shall be made in pursuance thereof; and all Treaties made, or which shall be made, under the Authority of the United States shall be the Supreme Law . . .").

109. See *Dow Chem.*, 139 F.3d at 1473, 46 U.S.P.Q.2d (BNA) at 1123.

110. See, e.g., *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 181 U.S.P.Q. (BNA) 673 (1974) (focusing on preemption due to discord with federal objectives); *Compco Corp. v. Day-Brite Lighting, Inc.*, 376 U.S. 234, 140 U.S.P.Q. (BNA) 528 (1964) (declaring preemption of state law to be appropriate when state law isolates something from the public which federal law has deemed to be public).

patent laws.”¹¹¹

Dow Chemical Co. concerned an allegation that Exxon Corp. engaged in bad faith enforcement of an unenforceable patent.¹¹² The evidence indicated that the tortfeasor, Exxon, knew that its patent was unenforceable when it engaged in market misconduct.¹¹³ Exxon contended that Dow Chemical’s state law cause of action was an impermissible attempt to create an alternative state remedy for inequitable conduct before the Patent and Trademark Office (“PTO”).¹¹⁴ The elements necessary to establish this tort, however, must occur in the marketplace, not before the PTO.¹¹⁵ As stated by the court: “[b]ecause it requires entirely different elements to establish a prima facie state tort action for intentional interference with contractual relations, it plainly is not a preempted alternative or additional state law remedy for inequitable conduct.”¹¹⁶ Similarly, the Federal Circuit noted that the wrongful acts, remedies, and forum were all different for tortious interference of contract and inequitable conduct.¹¹⁷ Thus, the court concluded that no preemption of state law existed and allowing Dow Chemical to litigate its claim would not create a new cause of action.¹¹⁸

In *Hunter Douglas, Inc. v. Harmonic Design, Inc.*,¹¹⁹ the Federal Circuit determined the extent to which federal patent law preempts state law causes of action that prohibit tortious activities in the marketplace.¹²⁰ The Federal Circuit also considered whether such state law causes of action arise under federal patent law with respect to exclusive jurisdiction under 28 U.S.C. § 1338.¹²¹

111. *Dow Chem.*, 139 F.3d at 1475, 46 U.S.P.Q.2d (BNA) at 1124.

112. *See id.* at 1476, 46 U.S.P.Q.2d (BNA) at 1126.

113. *See id.*, 46 U.S.P.Q.2d (BNA) at 1126. *See generally* Modine Mfg. Co. v. United States Int’l Trade Comm’n, 75 F.3d 1545, 1557, 37 U.S.P.Q.2d (BNA) 1609, 1617 (Fed. Cir. 1996) (holding that both materiality and intent are essential factual predicates of unenforceability due to inequitable conduct, and each must be proven by clear and convincing evidence).

114. *See Dow Chem.*, 139 F.3d at 1476, 46 U.S.P.Q.2d (BNA) at 1126.

115. *See id.* at 1477, 46 U.S.P.Q.2d (BNA) at 1126 (listing as required elements that “the tortfeasor have knowledge of the contractual relationship with which he is interfering and that he commit an act of intentional inducement to harm that relationship”).

116. *Id.*, 46 U.S.P.Q.2d (BNA) at 1126.

117. *See id.*, 46 U.S.P.Q.2d (BNA) at 1126.

118. *See id.*, 46 U.S.P.Q.2d (BNA) at 1126.

119. 153 F.3d 1318, 47 U.S.P.Q.2d (BNA) 1769 (Fed. Cir. 1998), *cert. denied*, 119 S. Ct. 1037 (1999), *overruled in part by* *Midwest Indus., Inc. v. Karavan Trailers, Inc.*, 175 F.3d 1356, 1358, 50 U.S.P.Q.2d (BNA) 1672, 1674 (Fed. Cir. 1999) (overturning the court’s previous holding that, in cases where patent law preempts particular state law causes of action, courts are to apply the law of the circuit from which the case originated and noting that the Federal Circuit will now apply their own law to such questions).

120. *See id.* at 1321, 47 U.S.P.Q.2d (BNA) at 1770 (ruling that federal patent law preempts state law causes of action when the state law conflicts with federal patent law).

121. 28 U.S.C. § 1338 provides:

(a) The district courts shall have original jurisdiction of any civil action arising under

In its complaint, the plaintiff, Hunter Douglas, pleaded a total of eight claims, with both federal and state causes of action.¹²² To succeed on the state claims, the plaintiff was required to prove either the invalidity or unenforceability of a U.S. patent.¹²³ The district court dismissed plaintiff's federal claim for lack of jurisdiction and failure to state a claim. The court exercised jurisdiction over the state law claims but dismissed the claims with prejudice, finding them preempted by federal patent law.¹²⁴ Ultimately, the Federal Circuit affirmed the dismissal of the federal claims and the ruling on jurisdiction but vacated the trial court's preemption ruling.

The Federal Circuit began its review by considering the jurisdiction issue. Under 28 U.S.C. § 1338(a), district courts can exercise original jurisdiction over any civil action arising under any act of Congress relating to patents.¹²⁵ A cause of action "arises under" federal patent law if the federal law creates the cause of action, or if the plaintiff's right to relief depends on a substantial question of federal patent law.¹²⁶ The plaintiff asserted that jurisdiction was proper because both claims were based on the Declaratory Judgment Act, a federal law.¹²⁷ In addition, resolution of the state law tort claims required

any Act of Congress relating to patents, plant variety protection, copyrights and trademarks. Such jurisdiction shall be exclusive of the courts of the states in patent, plant variety protection and copyright cases.

(b) The district courts shall have original jurisdiction of any civil action asserting a claim of unfair competition when joined with a substantial and related claim under the copyright, patent, plant variety protection or trade-mark laws.

28 U.S.C. § 1338 (1994).

122. See *Hunter Douglas*, 153 F.3d at 1320, 47 U.S.P.Q.2d (BNA) at 1771 (identifying Hunter Douglas' federal and state claims for relief). Under the federal law, Hunter Douglas first sought a declaratory judgment of "noninfringement, invalidity, or unenforceability of claims" of the defendant Harmonic's patents while alternatively alleging that under the Patent Clause of the Constitution and 35 U.S.C. §§ 102 and 103, it had a federal right to material classified as public domain. See *id.* at 1322. The remaining five claims were state law causes of action, including: "unfair competition, violation of the Unfair Competition Act, California Business & Professional Code § 17200 *et seq.*, injurious falsehood, negligence, intentional interference with prospective economic advantage." *Id.*

123. See *id.* at 1321, 47 U.S.P.Q.2d (BNA) at 1770.

124. See *id.* at 1323, 47 U.S.P.Q.2d (BNA) at 1771-72 (summarizing the district court's decision to dismiss the federal cause of action while denying the motion to dismiss the state claims because 28 U.S.C. § 1338(a) grants district courts jurisdiction over matters which require resolution of questions of federal patent law).

125. See *id.* at 1324, 47 U.S.P.Q.2d (BNA) at 1772. See generally *Travel Magazine, Inc. v. Travel Digest, Inc.*, 191 F. Supp. 830, 833 (S.D.N.Y. 1961) (noting that district courts have original jurisdiction over a claim of unfair competition if it is joined with a substantial and related claim under patent, copyright, or trademark laws, and that identity of issues is not required for the claims to be related).

126. See *Christianson v. Colt Indus. Operating Corp.*, 486 U.S. 800, 808 (quoting *Franchise Tax Bd. of Cal. v. Construction Laborers Vacation Trust*, 463 U.S. 1, 27-28 (1983)).

127. See *Hunter Douglas*, 153 F.3d at 1322, 47 U.S.P.Q.2d (BNA) at 1771 (stating that plaintiff asserts federal jurisdiction under Declaratory Judgment Act, 28 U.S.C. § 2201 (1994)).

resolution of a federal question—the validity of the patent at issue.¹²⁸

The plaintiff's federal law claim sought a declaration under the Declaratory Judgment Act¹²⁹ that the defendant's patents were invalid and unenforceable because of inequitable conduct.¹³⁰ The Federal Circuit agreed with the district court that it could not exercise jurisdiction over this claim because the plaintiff failed to demonstrate a reasonable apprehension of being sued for infringement.¹³¹ Without such an apprehension, no actual case or controversy existed and therefore, the court had no jurisdiction.¹³²

The plaintiff also asserted a federal right to copy and use information in the public domain and noted that an implied cause of action existed to enforce that right.¹³³ The Federal Circuit, however, agreed with the district court that no such right existed because the patent laws did not create an affirmative right to copy what was in the public domain.¹³⁴ It is worth noting that, because the Federal Circuit found the plaintiff's case to be insubstantial and frivolous, the court dismissed it for lack of federal jurisdiction under Federal Rule of Civil Procedure 12(b)(1)¹³⁵ instead of dismissing the claim under Rule 12(b)(6)¹³⁶ for failure to state a claim.¹³⁷ This difference is significant because, if the court had jurisdiction over the federal claim, which would have been implied if the court had dismissed the claim under Rule 12(b)(6), then the claim would have supported jurisdiction over

128. *See id.* at 1322, 47 U.S.P.Q.2d (BNA) at 1771.

129. 28 U.S.C. § 2201 (1994) (allowing any court of the United States, in a case of actual controversy within its jurisdiction, to declare the rights and other legal relations of any interested party, whether or not further relief is or could be sought).

130. *See id.*, 47 U.S.P.Q.2d (BNA) at 1771.

131. *See id.* at 1326, 47 U.S.P.Q.2d (BNA) at 1771 (noting that for a district court to have jurisdiction over a declaratory judgment action, there must be an "actual controversy"). A two-step inquiry is necessary to determine whether there is an "actual controversy": (1) an explicit threat or other action by the patentee, which creates a reasonable apprehension on the part of the declaratory plaintiff that it will face an infringement suit; and (2) present activity that could constitute infringement or concrete steps taken with intent to conduct such activity. *See Cyganus Therapeutics Sys. v. ALZA Corp.*, 2 F.3d 1153, 1159, 39 U.S.P.Q.2d (BNA) 1666, 1670 (Fed. Cir. 1996).

132. *See Hunter Douglas*, 153 F.3d at 1326, 47 U.S.P.Q.2d (BNA) at 1771.

133. *See id.* at 1327, 47 U.S.P.Q.2d (BNA) at 1775.

134. *See id.* at 1328, 47 U.S.P.Q.2d (BNA) at 1776.

135. FED. R. CIV. P. 12(b)(1). Rule 12(b)(1) provides a defense alleging a court's lack of subject matter jurisdiction. *See id.* This defense may be made in a responsive pleading or by motion. *See id.* According to Rule 12(h)(3), the court shall dismiss the action if it appears that subject matter jurisdiction is lacking. *See* FED. R. CIV. P. 12(h)(3).

136. FED. R. CIV. P. 12(b)(6). Rule 12(b)(6) provides a defense on grounds that a party failed to state a claim upon which relief can be granted. *See id.* Pursuant to Rule 12(h)(2), an objection of failure to state a claim may be made by pleading, motion for judgment, or trial upon the merits. *See* FED. R. CIV. P. 12(h)(2).

137. *See* FED. R. CIV. P. 12(b)(6); *see also* *Bell v. Hood*, 327 U.S. 678, 682-83 (1946) (holding that wholly insubstantial and frivolous claims do not merit federal jurisdiction).

the state claims pursuant to 28 U.S.C. § 1367.¹³⁸ If there were no jurisdiction over the federal claim, however, the plaintiff would need to seek an independent basis for federal jurisdiction for its state claims.¹³⁹

After it had dispensed with all claims purportedly created by federal law, the Federal Circuit reviewed the remaining six state law counts¹⁴⁰ to determine whether any of the counts arose under federal law, thereby permitting the court to confer jurisdiction under 28 U.S.C. § 1338(a).¹⁴¹ The question under § 1338 is whether the state law cause of action “necessarily depends on resolution of a substantial question of federal patent law, in that patent law is a necessary element of one of the well-pleaded claims.”¹⁴² Every element of the complaint’s stated claims is reviewed to ascertain whether all the theories upon which a plaintiff could prevail rely solely on the resolution of a substantial question of federal patent law.¹⁴³

The Federal Circuit, in accord with the district court, found that the plaintiff’s claim alleging that the defendants committed an injurious falsehood arose under § 1338(a).¹⁴⁴ An element of the plaintiff’s alleged claim was that the defendant had made a false statement.¹⁴⁵ The alleged false statement was the defendant’s assertion that it had “exclusive” rights to make or sell the product allegedly covered by the patent.¹⁴⁶ Accordingly, to prove this cause of action, the plaintiff needed to establish that the claims were either

138. See *Hunter Douglas*, 153 F.3d at 1328, 47 U.S.P.Q.2d (BNA) at 1776; see 28 U.S.C. § 1367 (1994) (stating that district courts have supplemental jurisdiction over other claims that “are so related to claims in the action within such original jurisdiction that they form part of the same case or controversy under Article III of the United States Constitution”).

139. See *Hunter Douglas*, 153 F.3d at 1328, 47 U.S.P.Q.2d (BNA) at 1776 (noting that since the court did not have jurisdiction under Rule 12(b)(1) over the federal claim, the remaining state law claims “stand naked” and at least one would need to fall under 28 U.S.C. § 1338(a) for the court to consider them).

140. See *id.*, 47 U.S.P.Q.2d (BNA) at 1771 (stating that counts two through seven involved allegations of state law relations concerning unfair competition, violation of the Unfair Competition Act, injurious falsehood, negligence, intentional interference with prospective economic advantage, and negligent interference with prospective economic advantage).

141. See *id.*, 47 U.S.P.Q.2d (BNA) at 1776 (indicating that under § 1338(a), whether a state law claim has federal jurisdiction depends on whether resolution of the claim requires consideration of a substantial question of federal patent law).

142. *Id.*, 47 U.S.P.Q.2d (BNA) at 1776 (quoting *Christianson v. Colt Indus. Operating Corp.*, 486 U.S. 800, 808-09 (1998)).

143. See *id.*, 47 U.S.P.Q.2d (BNA) at 1776 (discussing the Court’s holding in *Christianson*, 486 U.S. at 808-09).

144. See *id.*, 47 U.S.P.Q.2d (BNA) at 1776 (explaining that the plaintiff’s state law claim of injurious falsehood arose under § 1338(a) because theories used to establish the state law falsity claim depended on resolving a question of federal patent law).

145. See *id.*, 47 U.S.P.Q.2d (BNA) at 1776 (illustrating that claimant must satisfy the well-pleaded complaint rule by showing how an element of the state law cause of action “necessarily depends on a question of federal patent law”).

146. See *id.*, 47 U.S.P.Q.2d (BNA) at 1776.

invalid or unenforceable, which are both questions of federal patent law.¹⁴⁷ The Federal Circuit held that invalidity and unenforceability, like infringement, are “substantial” questions of federal patent law because one determines whether there is a property right, while the other determines whether that right is enforceable.¹⁴⁸ Ultimately, the court determined whether federal law preempted the remaining state cause of actions.¹⁴⁹ State law is preempted in one of three ways: explicit, field, or conflict preemption.¹⁵⁰

In analyzing preemption by federal patent laws, the Federal Circuit applied regional circuit law according to established precedent. It should be noted that this practice was later overruled in *Midwest Industries, Inc. v. Karavan Trailers, Inc.*: “Henceforth, we will apply our own law to such questions. To the extent that . . . *Hunter Douglas, Inc. v. Harmonic Design, Inc.*, hold[s] that we are required to apply regional circuit law to conflicts between patent law and other legal rights, we therefore overrule [that] decision[.]”¹⁵¹ Although this holding overrules statements of law in *Hunter Douglas* regarding the standard for determining preemption, it should have no effect on the underlying conclusions of law, as the court in *Hunter Douglas* ultimately applied Federal Circuit law in deciding the preemption issues. The court stated: “Because Ninth Circuit law does not require any analytic process for assessment of preemption based on conflict with federal patent law, we apply our plenary authority to the issue at hand.”¹⁵²

The district court in *Hunter Douglas* held that federal law preempted the field of state unfair competition laws based on patent

147. *See id.*, 47 U.S.P.Q.2d (BNA) at 1776.

148. *See id.* at 1330, 47 U.S.P.Q.2d (BNA) at 1777-78 (expanding the substantiality requirement under *Christianson*, with respect to the nature of the federal interest, to include invalidity and unenforceability as a component of infringement, one of the four recognized substantial, federal patent law interests).

149. *See id.* at 1331, 47 U.S.P.Q.2d (BNA) at 1778. The court noted that the Supreme Court has set forth two presumptions that guide preemption analysis: (1) Congress does not “cavalierly” preempt state law causes of action unless there is a clear manifestation of congressional intent such as federal legislation in field occupied traditionally by states, and (2) “[t]he purpose of Congress is the ultimate touchstone.” *See id.*, 47 U.S.P.Q.2d (BNA) at 1778 (quoting *Medtronic Inc. v. Lohr*, 518 U.S. 470, 485 (1996)).

150. *See id.* at 1333, 47 U.S.P.Q.2d (BNA) at 1779; *see also* *English v. General Elec. Co.*, 496 U.S. 72, 78-79 (providing the three circumstances in which state law is preempted by the Supremacy Clause). First, a state law is preempted when Congress explicitly defines the extent to which its laws preempt state laws. *See English*, 496 U.S. at 78. Second, a state law is preempted when it regulates conduct that Congress “intended the Federal Government to occupy exclusively.” *See id.* at 79. Third, a state law is preempted when it directly conflicts with a federal law. *See id.*

151. *Midwest Indus.*, 175 F.3d 1356, 1359, 50 U.S.P.Q.2d (BNA) 1672, 1674-75.

152. *Hunter Douglas*, 153 F.3d at 1333, 47 U.S.P.Q.2d (BNA) at 1780.

claims.¹⁵³ The lower court reasoned that federal law did not create the state law claims. The court, however, concluded that the issue of whether there is a valid patent claim is a substantial question of federal patent law, conferring federal jurisdiction.¹⁵⁴ The Federal Circuit reversed the district court's finding and held that federal patent law issues embedded in state law causes of action may be adjudicated, even without an accompanying federal claim.¹⁵⁵

G. Declaratory Judgments

A declaratory judgment action allows a non-patent holder to seek a determination as to whether another's patent is valid and/or enforceable, as well as whether its product or method infringes the patent. In order for a federal court to have Article III jurisdiction over a declaratory judgment suit, an actual case or controversy must exist. Even if such an actual case or controversy were present, a court may nevertheless utilize its discretion to not hear the action.¹⁵⁶

In *Fina Research, S.A. v. Baroid, Ltd.*,¹⁵⁷ the Federal Circuit addressed whether an actual controversy exists with respect to the Declaratory Judgment Act¹⁵⁸ when the plaintiff's potential liability is solely for inducing infringement.¹⁵⁹ In *Fina Research, S.A.*, the declaratory judgment plaintiff, Fina Research, S.A. ("FRSA"), manufactured an ingredient ("FINAGREEN") in a mud or fluid that is used when drilling for oil.¹⁶⁰ FRSA had not sold any of the product to any customer in the United States.¹⁶¹ It had been established that FRSA could only be liable for inducing infringement.¹⁶²

153. See *id.*, 47 U.S.P.Q. (BNA) at 1770 (describing the district court's determination that the federal patent law pre-empted the state law claims).

154. See *id.*, 47 U.S.P.Q.2d (BNA) at 1770.

155. See *id.*, 47 U.S.P.Q.2d (BNA) at 1770.

156. See *Spectronics Corp. v. H.B. Fuller Co.*, 940 F.2d 631, 634, 19 U.S.P.Q.2d (BNA) 1545, 1547 (Fed. Cir. 1991).

157. 141 F.3d 1479, 46 U.S.P.Q.2d (BNA) 1461 (Fed. Cir. 1998).

158. See 28 U.S.C. § 2201(a). Section 2201(a) provides:

In a case of actual controversy within its jurisdiction . . . as determined by the administering authority, any court pleading, may declare the rights and other legal relations of any interested party seeking such declaration, whether or not other relief is or could be sought. Any such declaration shall have the force and effect of a final judgment of decree and shall be reviewable as such.

Id.

159. See *Fina*, 141 F.3d at 1480, 46 U.S.P.Q.2d (BNA) at 1462; see also 35 U.S.C. § 271(b) ("Whoever actively induces infringement shall be liable as an infringer.").

160. See *Fina*, 141 F.3d at 1480, 46 U.S.P.Q.2d (BNA) at 1462.

161. See *id.*, 46 U.S.P.Q.2d (BNA) at 1462.

162. See *id.* at 1481, 46 U.S.P.Q.2d (BNA) at 1463 (stating that, first, suit could not be brought against FRSA for contributory infringement because defendants noted that FINAGREEN is suitable for "substantial noninfringing use," and second, both parties stipulated that FRSA had no intention of directly infringing the '910 patent).

The court applied a two-prong test, which required: (1) an explicit threat or other action by the patentee, which creates a reasonable apprehension on the part of the declaratory plaintiff that it will face an infringement suit; and (2) a present activity that can constitute infringement or concrete steps taken with the intent to conduct such activity, to establish a basis for a declaratory judgment action.¹⁶³ With respect to the first prong, the court noted that the defendant had sent two letters to FRSA with statements such as: “Baroid . . . intends to vigorously protect and enforce its rights in the subject patents, including the filing of suit if necessary.”¹⁶⁴ The court found these letters sufficient to establish a reasonable apprehension of suit.¹⁶⁵

Baroid, however, attempted to show that it had disavowed the letters.¹⁶⁶ Baroid pointed to a third letter in which Baroid’s counsel wrote that the company “has not and does not make any claim of infringement against [FRSA].”¹⁶⁷ The court found this letter insufficient, under its precedent, to disavow the threats.¹⁶⁸ In particular, the court noted that the letter did not amount to a covenant not to sue equivalent to those approved in previous cases.¹⁶⁹

The defendants countered that they are not required to “covenant not to sue” to avert the creation of a reasonable apprehension of suit.¹⁷⁰ Despite the fact that the court agreed with this statement, it noted that a reasonable apprehension of suit already existed and that the defendants sought to dissipate the threat, not to avoid its creation.¹⁷¹ Although the court noted that means or factors other than a covenant not to sue, such as changed circumstances, can dispel an apprehension of suit. It also commented that such an exception to the covenant requirement should be narrow to avoid the scare and run tactics that the Declaratory Judgment Act was

163. *See id.*, 46 U.S.P.Q.2d (BNA) at 1463 (holding that the declaratory judgment plaintiff bears the burden of proving that there is an actual controversy).

164. *Id.* at 1482, 46 U.S.P.Q.2d (BNA) at 1464.

165. *See id.*, 46 U.S.P.Q.2d (BNA) at 1464.

166. *See id.* at 1483, 46 U.S.P.Q.2d (BNA) at 1464.

167. *See id.*, 46 U.S.P.Q.2d (BNA) at 1465.

168. *See id.*, 46 U.S.P.Q.2d (BNA) at 1465 (noting that the third letter was written after FRSA had already filed suit and taking the three letters as a whole would not have altered FRSA’s apprehension of a possible suit).

169. *See id.* at 1483-84, 46 U.S.P.Q.2d (BNA) at 1465. *See, e.g.*, *Super Sack Mfg. Corp. v. Chase Packaging Corp.*, 57 F.3d 1054, 1059, 35 U.S.P.Q.2d (BNA) 1139, 1143 (Fed. Cir. 1995) (holding that Super Sack is “forever estopped by its counsel’s statement of nonliability.”); *Spectronics Corp. v. H.B. Fuller Co., Inc.*, 940 F.2d 631, 636, 19 U.S.P.Q.2d (BNA) 1545, 1549 (Fed. Cir. 1991) (holding that in light of defendant’s statement of non-liability it is “forever estopped from asserting . . . patent claims against Spectronics”).

170. *See Fina*, 141 F.3d at 1484, 46 U.S.P.Q.2d (BNA) at 1465.

171. *Id.*, 46 U.S.P.Q.2d (BNA) at 1465.

intended to forestall.¹⁷²

The defendant also argued that no actual controversy existed because no customer of FRSA directly infringed the patent in suit.¹⁷³ The Federal Circuit refused to create a per se rule that an actual controversy that is predicated only on a claim of inducing infringement may only exist if direct infringement has already occurred.¹⁷⁴ Instead, the court held that even if inducing infringement were an issue, the second prong of the Declaratory Judgment inquiry is a “question of degree to be resolved on a case-by-case basis.”¹⁷⁵

The Federal Circuit’s decision in *Genentech, Inc. v. Regents of the University of California*¹⁷⁶ (“*Genentech II*”) may be more interesting for the legal determinations that it did not make than for those that it did. *Genentech II* focused on Public Law 102-560,¹⁷⁷ a congressional attempt to abrogate Eleventh Amendment immunity for states in patent cases.

Previously, the Federal Circuit had dealt with Public Law 102-560 in *Genentech, Inc. v. Eli Lilly & Co.*¹⁷⁸ (“*Genentech I*”). In *Genentech I*, the Federal Circuit heard arguments concerning the applicability of Public Law 102-560 to declaratory judgment actions under the patent laws and concluded that it was applicable.¹⁷⁹ Following the decision, Genentech’s declaratory action in district court against the

172. See *id.*, 46 U.S.P.Q.2d (BNA) at 1465 (noting, however, that “changed circumstances” were not at issue in this case, and thus the exception would not apply, leaving the apprehension created by defendants intact).

173. See *id.*, 46 U.S.P.Q.2d (BNA) at 1466.

174. See *id.* at 1485, 46 U.S.P.Q.2d (BNA) at 1467.

175. *Id.*, 46 U.S.P.Q.2d (BNA) at 1467 (quoting *BP Chems. Ltd. v. Union Carbide Corp.*, 4 F.3d 975, 977-78, 28 U.S.P.Q.2d (BNA) 1124, 1126 (Fed. Cir. 1993)); accord *Arrowhead Indus. Water, Inc. v. Ecolochemical, Inc.*, 846 F.2d 731, 736, 6 U.S.P.Q.2d (BNA) 1685, 1689 (Fed. Cir. 1988).

176. 143 F.3d 1446, 46 U.S.P.Q.2d (BNA) 1586 (Fed. Cir. 1998).

177. See Patent and Plant Variety Protection Remedy Clarification Act, Pub. L. No. 102-560, 106 Stat. 4230 (codified as amended at 35 U.S.C. §§ 271(h), 296 (1995)) (allowing states, as well as their instrumentalities, officers, and employees acting in their official capacity, to be subject to suit in federal court for infringement of patents and plant variety protection); see also *Genentech*, 143 F.3d at 1449, 46 U.S.P.Q.2d (BNA) at 1588 (noting that it is not necessary to decide the constitutionality of Public Law 102-560, because the University waived its Eleventh Amendment immunity and consented to the suit).

178. 998 F.2d 931, 27 U.S.P.Q.2d (BNA) at 1241 (Fed. Cir. 1993).

179. See *Genentech*, 143 F.3d at 1448, 46 U.S.P.Q.2d (BNA) at 1588 (noting that the Federal Circuit’s finding that Public Law 102-560 included not only infringement, but “any other violation under this title,” and therefore concluding that Public Law 102-560 included declaratory actions against the states). No constitutional question was presented in *Genentech I*. At the time of argument, the statute was presumed to be constitutional because it conformed to the holding in *Pennsylvania v. Union Gas Co.*, 491 U.S. 1 (1989). See *id.*, 47 U.S.P.Q.2d (BNA) at 1588. In *Union Gas*, the Supreme Court held that Article I of the Constitution allowed Congress to supersede state immunity when appropriate to effectuate the purposes of Article I. See *Union Gas*, 491 U.S. at 23.

University of California and Lilly resumed; it sought a declaration of invalidity, unenforceability, and non-infringement of California's 4,363,877 patent ("the '877 patent").¹⁸⁰ While the district court case was pending, the Supreme Court decided *Seminole Tribe of Florida v. Florida*,¹⁸¹ which expressly overruled *Pennsylvania v. Union Gas*¹⁸² and held that Article I did not permit Congress to abrogate a state's Eleventh Amendment immunity.¹⁸³ The district court in *Genentech* subsequently held that "Public Law 102-560 must now be deemed to be in violation of the Eleventh Amendment, at least as applied in *Genentech I* to encompass a declaratory action against the state when the state is the patent owner."¹⁸⁴

On appeal, both parties debated and briefed the constitutional basis for Public Law 102-560. A significant portion of the Federal Circuit's decision discusses the law's constitutionality.¹⁸⁵ The Federal Circuit, however, explicitly avoided the constitutional validity of Public Law 102-560 when rendering its decision.¹⁸⁶ Instead, the Federal Circuit reversed the lower court's holding on a purely factual basis.¹⁸⁷ The court found that the University had waived its Eleventh Amendment immunity protection by availing itself to the protection of the federal laws based upon its litigation-related actions.¹⁸⁸

The Federal Circuit relied on numerous factors in making its determination. The court placed great emphasis on the University's "voluntary and deliberate creation of a case or controversy that can be resolved only in federal courts, concerning federally-created property rights of a national scope that are enforceable only by

180. See *Genentech*, 143 F.3d at 1448, 47 U.S.P.Q.2d (BNA) at 1588.

181. 517 U.S. 44 (1996).

182. 491 U.S. 1 (1989).

183. See *Seminole Tribe*, 517 U.S. at 45; see also *Genentech*, 143 F.3d at 1449, 46 U.S.P.Q.2d (BNA) at 1588.

184. *Genentech*, 143 F.3d at 1449, 46 U.S.P.Q.2d (BNA) at 1592.

185. See *id.* at 1451-52, 46 U.S.P.Q.2d (BNA) at 1590-91. *Genentech* argued that Public Law 102-560 is constitutional as written and interpreted by the district court, because the Patent clause of Article I, as well as "broad property principles" in accordance with the Fourteenth Amendment, permitted statutory abrogation. See *id.* at 1450, 46 U.S.P.Q.2d (BNA) at 1590. *Genentech* further contended that if not permitted to bring declaratory action against the University, it would be deprived of property and liberty interests, without due process. See *id.* at 1450, 46 U.S.P.Q.2d (BNA) at 1590. The University contended that Congress had no power under the Fourteenth Amendment to enact Public Law 102-560, as the court in *Genentech I* interpreted it. See *id.* at 1452, 46 U.S.P.Q.2d (BNA) at 1591.

186. See *Genentech*, 143 F.3d at 1449, 46 U.S.P.Q.2d (BNA) at 1588.

187. *Id.* at 1454, 46 U.S.P.Q.2d (BNA) at 1588 (discussing the factual basis underlying the decision, including the creation of federal property rights by federal law and the property of national effect that is actionable only through the federal judicial power).

188. See *id.* at 1453, 46 U.S.P.Q.2d (BNA) at 1592 (finding that the University's threat of federal legal action implicated the power of "nation-wide injunction" whereby the University voluntarily created a case and controversy under Article III that could be resolved only by federal judicial authority).

federal judicial power.”¹⁸⁹ The court stressed that the University’s attempts to secure patent protection for its inventions did not waive its immunity.¹⁹⁰ Rather, the University created the federal cause of action through its accusations of patent infringement and “threat of federally imposed and enforced remedial action.”¹⁹¹ In addition, the court noted that the University’s actions did not lie at the heart of its education and research purposes.¹⁹²

The court specifically rejected the University’s argument that it “simply manag[ed] its property for optimum income” in accordance with a California law that required it to manage its real and personal property in a manner beneficial to the public.¹⁹³ The court found that patents are neither personal nor real property, normally subject to state law, but rather property of “national scope.”¹⁹⁴ The Federal Circuit concluded that the University chose to enter the “federal arena” and thus consciously created a controversy.¹⁹⁵ In doing so, the University had consented to federal jurisdiction.¹⁹⁶

H. Standard of Review

In a long-anticipated decision, the Federal Circuit agreed to hear an *en banc* argument in *In re Zurko*¹⁹⁷ regarding the standard of review employed to review factual findings by the PTO Board of Patent Appeals and Interferences (“Board”).¹⁹⁸ The court granted *en banc* review after a panel reversed the Board’s decision that Zurko’s method claims for improving security in computer systems was obvious under 35 U.S.C. § 103 as based on clearly erroneous findings of fact.¹⁹⁹ Specifically, the Federal Circuit agreed to review the

189. *Id.* at 1453, 46 U.S.P.Q.2d (BNA) at 1592.

190. *See id.*, 46 U.S.P.Q.2d (BNA) at 1592 (stating that consent to suit requires more than entering a field of activity).

191. *See id.* at 1453-54, 46 U.S.P.Q.2d (BNA) at 1592.

192. *See id.*, 46 U.S.P.Q.2d (BNA) at 1592-94 & n.5 (stating that “the University is California’s primary stated supported academic agency for research, and is charged with the mission to provide undergraduate instruction in the liberal arts and sciences and in the professions”) (citing the California Educational Code § 66010.4(c) (West 1989)).

193. *See Genetech*, 143 F.3d at 1453-54, 46 U.S.P.Q.2d (BNA) at 1592 (citing CAL. EDUC. CODE § 92431n (West 1989)).

194. *See id.*, 46 U.S.P.Q.2d (BNA) at 1592 (“The federal government grants to the patentee the right to exclude others from making, using or selling the patented subject matter anywhere in the United States and its possessions.”).

195. *See id.*, 46 U.S.P.Q.2d (BNA) at 1592 (“Neither the creation nor the validity or enforcement of this right is subject to state law.”).

196. *See id.*, 46 U.S.P.Q.2d (BNA) at 1592.

197. 142 F.3d 1447, 46 U.S.P.Q.2d (BNA) 1691 (Fed. Cir. 1998), *rev’d*, *Dickinson v. Zurko*, 119 S. Ct. 1816 (1999).

198. *See id.* at 1449, 46 U.S.P.Q.2d (BNA) at 1693.

199. *See In re Zurko*, 111 F.3d 887, 890, 42 U.S.P.Q.2d 1476, 1479 (Fed. Cir. 1997) (“[A] patentable invention may lie in the discovery of the source of a problem even though the

following question: “Should this court review Patent and Trademark Office fact-findings under the Administrative Procedure Act standard of review instead of the presently applied ‘clearly erroneous’ standard?”²⁰⁰ Ultimately, the court declined to adopt the Administrative Procedure Act (“APA”) standard of review based on its reading of the legislative history of the APA and principles of *stare decisis*.²⁰¹ This decision has subsequently been reversed by the Supreme Court, thus the following discussion is purely illustrative of the Federal Circuit’s thinking on the issue and is not proper law.²⁰²

The Commissioner argued that the court should accept factual findings that underlie Board patentability decisions “as long as they are supported by probative evidence of a substantial nature.”²⁰³ In the APA, this standard is known as the “substantial evidence standard.”²⁰⁴ Alternatively, the Commissioner suggested that the court apply the “arbitrary and capricious standard” of the APA, which called for acceptance of Board factual findings, provided they were based upon “consideration of the proper factors.”²⁰⁵ Both APA standards require a review of the decisions based on the Board’s reasoning.²⁰⁶

The court first performed an extensive review of the legislative history of the APA.²⁰⁷ With a focus on the underlying purpose of the APA, the Federal Circuit stressed that Congress sought to eliminate abuses of power by agencies and to foster “uniformity and consistency in and among the administrative and adjudicative processes of these agencies.”²⁰⁸ The APA expressly provides in § 559 that its judicial review provisions “do not limit or repeal additional requirements

remedy may be obvious once the source of the problem is identified.”) (quoting *In re Spnonoble*, 405 F.2d 578, 585 (1969) (alteration in original)).

200. *In re Zurko*, 142 F.3d at 1449, 46 U.S.P.Q.2d (BNA) at 1693.

201. *See id.*, 46 U.S.P.Q.2d (BNA) at 1693 (“[S]ection 559 of the Administrative Procedure Act permits, and *stare decisis* warrants, our continued application of the clearly erroneous standard in our review of these fact-findings.”).

202. *See Dickinson*, 119 S. Ct. at 1821 (holding that the framework provided by § 706 of the APA applies to findings of fact by the PTO).

203. *Id.*, 46 U.S.P.Q.2d (BNA) at 1693.

204. *See id.* at 1449 n.1, 46 U.S.P.Q.2d (BNA) at 1693 n.1 (“This standard is often quantified as: ‘more than a scintilla. It means such relevant evidence as a reasonable mind might accept as adequate to support a conclusion.’”) (quoting *Consolidated Edison Co. v. NLRB*, 305 U.S. 197, 229 (1938)); *see also* Administrative Procedure Act, 5 U.S.C. § 706(2) (E) (1994).

205. *In re Zurko*, 142 F.3d at 1448-49, 46 U.S.P.Q.2d (BNA) at 1693; *see also* 5 U.S.C. § 706(2) (A).

206. *See In re Zurko*, 142 F.3d at 1449, 46 U.S.P.Q.2d (BNA) at 1693 (“Currently, we affirm convictions as long as we lack a definite and firm conviction that a mistake has been made.”).

207. *See id.* at 1450-51, 46 U.S.P.Q.2d (BNA) at 1695-96 (analyzing the legislative history of the Administrative Procedure Act (“APA”) to determine the effect of the APA on judicial review of Patent and Trademark Board decisions).

208. *Id.* at 1450, 46 U.S.P.Q.2d (BNA) at 1695.

imposed by statute or otherwise recognized by law.”²⁰⁹ The court concluded that the APA is not intended to replace existing standards absent express congressional action.²¹⁰ As applied to the Patent statute, the legislative history of the APA suggests that Congress did not intend to alter the then “existing common law standards and the availability of trial *de novo* pursuant to section 4915 of the Revised Statutes, the predecessor of 35 U.S.C. § 145”²¹¹ The court then construed “section 559 of the APA as freeing Patent and Trademark Office patentability decisions from judicial review” under the arbitrary and capricious standard or the substantial evidence standard to the extent that they would replace standards of review that existed prior to 1947.²¹²

The Federal Circuit then explored the judicial review of Board fact-finding prior to 1947 under both the common law and the Patent Statutes.²¹³ The court found that no statute explicitly provided the standard of review for Board factual findings.²¹⁴ The court did find, however, that the common law provided several standards prior to 1947, including clear error and its equivalents.²¹⁵ It also noted that since the Board’s creation in 1982, the court used the clearly erroneous standard to review factual findings by the Board.²¹⁶ This exploration of judicial review led the court to conclude that the clear error standard is “an ‘additional requirement’ that was ‘recognized’ in our jurisprudence before 1947,” and which courts continue to apply under the APA § 559 exception.²¹⁷

Finally, the Federal Circuit found that principles of *stare decisis* supported its conclusion. Reiterating that courts are hesitant to replace long-standing practices without substantial justification, the

209. *Id.*, 46 U.S.P.Q.2d (BNA) at 1695 (quoting 5 U.S.C. § 559).

210. *See id.* at 1452, 46 U.S.P.Q.2d (BNA) at 1695. The court stated that:

[T]his history suggests that Congress drafted the APA to apply to agencies generally, but that because of existing common law standards and the availability of trial *de novo* pursuant to section 4915 of the Revised Statutes, the predecessor of 35 U.S.C. § 145, Congress did not intend the APA to alter the review of substantive Patent Office decision.

Id., 46 U.S.P.Q.2d (BNA) at 1695.

211. *Id.* at 1452, 46 U.S.P.Q.2d (BNA) at 1697.

212. *See id.*, 46 U.S.P.Q.2d (BNA) at 1697.

213. *See id.* at 1452-57, 46 U.S.P.Q.2d (BNA) at 1697-99.

214. *See id.* at 1456, 46 U.S.P.Q.2d (BNA) at 1699 (“[C]ongress intended not to encumber other Patent Office proceedings, such as fact finding by the Board of Appeals, with the type of deferential review contemplated by section 10 of the APA.”).

215. *See id.* at 1454-55, 46 U.S.P.Q.2d (BNA) at 1697-98 (detailing “manifest error” as the standard employed between 1925 and 1952 to review the Board’s factual findings).

216. *See id.* at 1457, 46 U.S.P.Q.2d (BNA) at 1700.

217. *Id.*, 46 U.S.P.Q.2d (BNA) at 1700; *see also* Administrative Procedure Act 5 U.S.C. § 559 (1994).

Federal Circuit noted that the Commissioner did not argue that the current standard is “unworkable, intolerable, prejudicial, burdensome, or even that it adversely affects the administration of the patent system.”²¹⁸

II. PATENTABILITY AND VALIDITY

A. *Preliminary Injunction-Validity*

In *Canon Computer Systems, Inc. v. Nu-Kote International, Inc.*,²¹⁹ the Federal Circuit affirmed the district court’s decision to grant the patentee’s motion for a preliminary injunction.²²⁰ Canon brought an action against Nu-Kote International for infringing their patent relating to replacement ink cartridges for “bubble jet” printers. Nu-Kote argued that the grant of the preliminary injunction was based erroneously on the district court’s determination that Canon made a strong showing on the issue of validity.²²¹

The Federal Circuit noted that Canon had the burden of establishing the validity.²²² Nu-Kote argued that the sheer number of named inventors on the patent in question was evidence of the patent’s invalidity.²²³ The Federal Circuit disagreed. The court stated that the evidence indicated the plausibility of the contributions made by each of the named inventors.²²⁴ The court also dismissed Nu-Kote’s argument that two of the inventors were joined improperly to the action because they were not listed on any of the foreign priority documents.²²⁵ Thus, the Federal Circuit did not find clear error in the district court’s determination that Canon successfully fulfilled its burden of demonstrating the validity of the patent.²²⁶

218. *In re Zurko*, 142 F.3d at 1458, 46 U.S.P.Q.2d (BNA) at 1701.

219. 134 F.3d 1085, 45 U.S.P.Q.2d (BNA) 1344 (Fed. Cir. 1998).

220. *See id.* at 1090, 45 U.S.P.Q.2d (BNA) at 1350 (“The district court properly applied the law and did not clearly err in finding that Cannon made a strong showing on both the infringement and validity issues.”).

221. *See id.* at 1097, 45 U.S.P.Q.2d (BNA) at 1357.

222. *See id.* at 1098, 45 U.S.P.Q.2d (BNA) at 1358 (“It is true that Canon carries the burden of establishing a likelihood of success on the validity issue and thus must show that Nu-Kote will not likely prove that the patent is invalid.”).

223. *See id.*, 45 U.S.P.Q.2d (BNA) at 1358.

224. *See id.*, 45 U.S.P.Q.2d (BNA) at 1359 (“[N]one of the inventors testified that any named inventor was not involved in that collaborative effort.”).

225. *See id.*, 45 U.S.P.Q.2d (BNA) at 1358 (stating that “a strong showing of misjoinder by Nu-Kote would not necessarily preclude the imposition of a preliminary injunction. Incorrect inventorship is a technical defect in a patent that may be easily curable.”).

226. *See id.* at 1089, 45 U.S.P.Q.2d (BNA) at 1350.

B. Anticipation

Under 35 U.S.C. § 102, one may receive a patent on an invention unless it is anticipated. A claim in a patent application is anticipated (i.e., lacks novelty) if all of its elements are present in a single reference in the prior art. The test for anticipation is the same as for infringement: does the claim, properly construed, read on the product or process in question?

In *Key Pharmaceuticals, Inc. v. Hercon Laboratories Corp.*,²²⁷ the Federal Circuit affirmed a district court's finding that a patent owned by Key Pharmaceuticals, Inc. was valid and enforceable. Key's patent, U.S. Patent No. 5,186,938 ("the '938 patent") covered an adhesive nitroglycerin transdermal patch for the treatment of coronary artery disease, known as "Nitro-Dur II."²²⁸ The claim at issue specified an adhesive layer comprising a cross-linked acrylate polymer and a pharmaceutically active drug, nitroglycerin.²²⁹ The claim further required that the patch deliver "a pharmaceutically effective amount" of nitroglycerin to the skin over a twenty-four hour time interval.²³⁰ Hercon Laboratories, Corp. sought approval from the Food and Drug Administration ("FDA") for a generic version of Nitro-Dur II.²³¹ Key sued Hercon and alleged that Hercon infringed on the '938 patent when it submitted applications to the FDA for approval.²³² In its defense, Hercon first argued the invalidity of the asserted claim based on a published prior art Japanese patent application.²³³

At issue in the validity dispute was whether the Japanese prior art disclosed a transdermal patch capable of delivering the amount of nitroglycerin claimed in the '938 patent.²³⁴ The district court construed the '938 patent's claim to mean a dose capable of providing a patient with 2.5-15 mg of nitroglycerin per day,²³⁵ or more specifically, 2.5-15 mg of nitroglycerin, plus an excess amount to ensure delivery of the desired amount.²³⁶ Based on this claim construction, the district court found that Hercon failed to prove by clear and convincing evidence that the Japanese prior art anticipated

227. 161 F.3d 709, 48 U.S.P.Q.2d (BNA) 1911 (Fed. Cir. 1998).

228. *See id.* at 711, 48 U.S.P.Q.2d at 1912.

229. *See id.*, 48 U.S.P.Q.2d (BNA) at 1913.

230. *See id.*, 48 U.S.P.Q.2d (BNA) at 1912-13.

231. *See id.*, 48 U.S.P.Q.2d (BNA) at 1912.

232. *See id.*, 48 U.S.P.Q.2d (BNA) at 1912.

233. *See id.*, 48 U.S.P.Q.2d (BNA) at 1912-13.

234. *See id.* at 712, 48 U.S.P.Q.2d (BNA) at 1913.

235. *See id.*, 48 U.S.P.Q.2d (BNA) at 1913 (noting that the district court based construction "on range of nitroglycerin doses conditionally approved by FDA in 1984").

236. *See id.*, 48 U.S.P.Q.2d (BNA) at 1913.

or rendered obvious the asserted claim.²³⁷

The Federal Circuit rejected Hercon's assertion that one example shown in the Japanese prior art would inherently anticipate or render obvious the asserted claim.²³⁸ Hercon argued that the size of the exemplary patch need only be increased in size by twenty-five percent to deliver the appropriate amount of drug.²³⁹ The court found no support in the record for this argument, and held that the trial court did not err in its conclusion that Hercon failed to prove, by clear and convincing evidence, that the '938 patent was anticipated or rendered obvious by the prior art Japanese patent application.²⁴⁰ Accordingly, the court affirmed the trial court's finding of validity.²⁴¹

In *Trust v. Flowertree Nursery, Inc.*,²⁴² the Federal Circuit reversed the district court's holding that U.S. Patent No. 4,763,440 ("the '440 patent") was invalid as anticipated under 35 U.S.C. § 102(a).²⁴³ The '440 patent claimed a method and apparatus for protecting a plot of foliage plants from freezing by establishing an insulating covering of ice over ground watering.²⁴⁴ The district court found that the claims of the '440 patent were anticipated under 35 U.S.C. § 102(a) because the subject matter was previously known or used in the U.S. before the invention was made by the patent applicant.²⁴⁵ In reaching its conclusion, the district court relied solely on the oral, uncorroborated testimony of four witnesses.²⁴⁶

Judge Newman, writing for the Federal Circuit, first noted that by barring a person who is not a true inventor from the patent system, § 102(a) prohibits a later inventor from obtaining a monopoly without the inventor having contributed to the store of knowledge the patent system seeks to develop.²⁴⁷ Thus, prior knowledge or use by others in this country only invalidates a patent under 35 U.S.C. § 102(a) if the prior knowledge or use was accessible to the public.²⁴⁸ The court further noted, that a person challenging the validity of a

237. *See id.*, 48 U.S.P.Q.2d (BNA) at 1913.

238. *See id.*, 48 U.S.P.Q.2d (BNA) at 1919.

239. *See id.*, 48 U.S.P.Q.2d (BNA) at 1919.

240. *See id.* at 718-19, 48 U.S.P.Q.2d (BNA) at 1919.

241. *See id.* at 719, 48 U.S.P.Q.2d (BNA) at 1919.

242. 148 F.3d 1368, 47 U.S.P.Q.2d (BNA) 1363 (Fed. Cir. 1998).

243. *See id.* at 1373, 47 U.S.P.Q.2d (BNA) at 1367.

244. *See id.* at 1369, 47 U.S.P.Q.2d (BNA) at 1364.

245. *See id.* at 1370, 47 U.S.P.Q.2d (BNA) at 1365; *see also* 35 U.S.C. § 102(a) (1994).

246. *See Woodland Trust*, 148 F.3d at 1369-70, 47 U.S.P.Q.2d (BNA) at 1365.

247. *See id.* at 1370, 47 U.S.P.Q.2d (BNA) at 1365.

248. *See id.*, 47 U.S.P.Q.2d (BNA) at 1365. The Federal Circuit also noted that the district court mentioned 35 U.S.C. § 102(b) as a possible ground for invalidating the '440 patent, however, Judge Newman summarily dismissed the applicability of this argument by noting that § 102(b) only applies to situations where the asserted prior use is by the applicant, not by the third party. *See id.*, 47 U.S.P.Q.2d (BNA) at 1365.

patent must prove the patent's invalidity by clear and convincing evidence.²⁴⁹

With the above principles in mind, the Federal Circuit noted that the only evidence relied on by the district court was oral testimony by four interested witnesses,²⁵⁰ and that as a general rule, corroboration of oral evidence of prior invention is required.²⁵¹ In assessing corroboration, the Federal Circuit has endorsed the following criteria:

- (1) the relationship between the corroborating witness and the alleged prior user; (2) the time period between the event and the trial; (3) the interest of the corroborating witness in the subject matter of the suit; (4) contradiction or impeachment of the witness' testimony; (5) the extent and details of the corroborating testimony; (6) the witness' familiarity with the subject matter of the patented invention and the prior use; (7) probability that a prior use could occur considering the state of the art at the time; [and]
- (8) impact of the invention on the industry, and the commercial value of its practice.²⁵²

Applying these factors to the facts of the case, the Federal Circuit found that the uncorroborated oral testimony of interested parties was insufficient to meet the clear and convincing standard necessary to invalidate the patent.²⁵³ In reaching its conclusion, the court found particularly troubling the total absence of any physical report to support the oral testimony, the relationship of the witnesses, and the fact that the asserted prior uses allegedly began over thirty years and ended twenty years before the commencement of the suit.²⁵⁴

1. *On-sale bar*

An inventor is entitled to a patent unless the invention was "on sale" in the United States more than one year prior to the filing date of the patent application under 35 U.S.C. § 102(b).

In *Continental Plastic Containers v. Owens Brockway Plastic Products, Inc.*,²⁵⁵ the Federal Circuit reviewed the district court's holding on summary judgment that a design patent was invalid under 35 U.S.C. § 102(b) because of an "on sale" bar violation.²⁵⁶

A claimed design is considered to be "on-sale," within the meaning

249. *See id.* at 1373, 47 U.S.P.Q.2d (BNA) at 1368.

250. *See id.* at 1372, 47 U.S.P.Q.2d (BNA) at 1367.

251. *See id.*, 47 U.S.P.Q.2d (BNA) at 1367.

252. *Id.* at 1371, 47 U.S.P.Q.2d (BNA) at 1366.

253. *Id.* at 1371, 47 U.S.P.Q.2d (BNA) at 1366.

254. *See id.* at 1373, 47 U.S.P.Q.2d (BNA) at 1368.

255. 141 F.3d 1073, 46 U.S.P.Q.2d (BNA) 1277 (Fed. Cir. 1998).

256. *See id.* at 1076, 46 U.S.P.Q.2d (BNA) at 1278.

of section 102(b), when an embodiment of the design was sold or offered for sale in this country more than one year before a filing date to which the claim is entitled (the critical date) and the sale or offer to sell was primarily for profit rather than for experimental purposes.²⁵⁷

Courts consider all of the circumstances surrounding the sale or offer to sell to determine whether the activity was an actual sale or offer to sell, or done for experimental purposes.²⁵⁸ The courts review surrounding circumstances that include the "stage of development of the invention and the nature of the invention."²⁵⁹ The policies affecting this determination include: discouraging the removal of designs from the public domain; favoring the prompt and widespread disclosure of inventions; allowing the inventor a reasonable amount of time following sales activity to determine the potential economic value of a patent; and prohibiting the commercial exploitation for a period greater than the statutorily prescribed one year.²⁶⁰

In *Continental Plastic Containers*, Continental entered into a supply agreement on January 3, 1992.²⁶¹ The contract, beginning in the fall of 1992, represented the culmination of a series of events beginning in late 1990.²⁶² Continental solicited interest through utilization of a series of drawings and molds depicting the design in question.²⁶³ Despite this, Continental argued that the molds and drawings did not embody the patented design because significant changes were made as a result of its failure to mass-produce a bottle using the earlier designs.²⁶⁴ The Federal Circuit noted, however, that insufficient differences existed between the early drawings and the patented designs, and "hence, the molds and article drawings did embody the patented design."²⁶⁵

Continental also argued that the patent was not subject to the "on-sale" bar²⁶⁶ because it was unable to produce a functional object prior

257. *Id.* at 1077, 46 U.S.P.Q.2d (BNA) at 1279.

258. *See id.*, 46 U.S.P.Q.2d (BNA) at 1279.

259. *Id.*, 46 U.S.P.Q.2d (BNA) at 1279.

260. *See id.*, 46 U.S.P.Q.2d (BNA) at 1279 (citing *King Instrument Corp. v. Otari Corp.*, 767 F.2d 853, 859-60, 226 U.S.P.Q. (BNA) 402, 406 (Fed. Cir. 1985)).

261. *See id.*, 46 U.S.P.Q.2d (BNA) at 1279.

262. *See id.*, 46 U.S.P.Q.2d (BNA) at 1279.

263. *See id.*, 46 U.S.P.Q.2d (BNA) at 1279-80 ("The series of drawings begin with the three-dimensional article drawing designated HM-2189-1 and dated 18 October 1991, and end with the article drawing designated HM-2189-7 and dated 19 August 1992.").

264. *See id.*, 46 U.S.P.Q.2d (BNA) at 1280 (stating that changes were made to "the rocker bottom and surface handle eye, height, vertical load, cavity area, wall thickness, lip width and label size/contour" of the container).

265. *See id.*, 46 U.S.P.Q.2d (BNA) at 1280.

266. *See id.*, 46 U.S.P.Q.2d (BNA) at 1280 (refusing to extend *Tone Bros. v. Sysco Corp.*, 28 F.3d 1192, 31 U.S.P.Q.2d (BNA) 1321 (Fed. Cir. 1994) to hold that "any adjustments to

to the critical date.²⁶⁷ The court rejected the argument, stating that Continental's failure to manufacture a "functionally acceptable container" was irrelevant in the triggering of the "on-sale" bar.²⁶⁸

Continental then argued that the "on-sale" status of its patented design was negated by experimental use.²⁶⁹ In utility patent cases, "[e]xperimental use negation applies . . . if there is genuine experimentation directed to perfecting the features of the claimed invention."²⁷⁰ The Federal Circuit dismissed this argument, noting that the application of this "experimental usage" exception in the design context allows entities to increase the life of their design patents beyond the life of their patents "merely by tarrying over the production of their article of manufacture."²⁷¹ Therefore, the court affirmed the district court's ruling and found that Continental only sold the bottles for commercial exploitation.²⁷²

In *Celeritas Technologies, Ltd. v. Rockwell International Corp.*,²⁷³ the Federal Circuit reversed, as a matter of law, the denial of Rockwell International Corporation's motion for Judgment as a Matter of Law ("JMOL") issued by the district court regarding patent validity.²⁷⁴ The court found that Rockwell was entitled to judgment as a matter of law on its anticipation defense because substantial evidence did not support the jury's verdict.²⁷⁵ That is, the Court found that the patent at issue was invalid as anticipated by prior art.

Celeritas was the assignee of U.S. Patent No. 5,386,590 ("the '590 patent") for an apparatus used to increase the rate of data transmission over analog cellular networks.²⁷⁶ The analog cellular network combated a common noise problem "by boosting the high

functional features of the article of manufacture suspends the application of a section 102(b) bar for the purpose of claiming the ornamental design").

267. *See id.*, 46 U.S.P.Q.2d (BNA) at 1279 (explaining that "a claimed design is considered to be 'on-sale,' . . . when an embodiment of the design was sold or offered for sale in the country more than one year before a filing date to which the claim is entitled" (the critical date)).

268. *See id.* at 1078, 46 U.S.P.Q.2d (BNA) at 1280 ("Continental's agreement with L&A Juice to sell the patented design is an explicit commercial exploitation of the claimed design outside of the generous one year grace period.").

269. *See id.* at 1079, 46 U.S.P.Q.2d (BNA) at 1281.

270. *See id.*, 46 U.S.P.Q.2d (BNA) at 1281 (relying on *Western Marine Elec., Inc. v. Foruno Elec. Co.*, 764 F.2d 840, 226 U.S.P.Q. (BNA) 334 (Fed. Cir. 1985)).

271. *See id.*, 46 U.S.P.Q.2d (BNA) at 1281.

272. *See id.*, 46 U.S.P.Q.2d (BNA) at 1281.

273. 150 F.3d 1354, 47 U.S.P.Q.2d 1516 (Fed. Cir. 1998).

274. *See id.* at 1356, 47 U.S.P.Q.2d (BNA) at 1517 (holding that the "claims of the patent have been shown to be anticipated as a matter of law"). A claim is anticipated "if each and every limitation is found either expressly or inherently in a single prior art reference." *See id.*, 47 U.S.P.Q.2d (BNA) at 1522.

275. *See id.* at 1357, 47 U.S.P.Q.2d (BNA) at 1520.

276. *See id.* at 1354, 47 U.S.P.Q.2d (BNA) at 1518.

frequency components of the transmitted signal and then decreasing the components at the receiving ends.”²⁷⁷ “The de-emphasis on the receiving end, however, reduces the high frequency hiss and therefore increases the fidelity of the cellular communications channel.”²⁷⁸ The claimed invention counteracted the adverse distortion effects of the pre-emphasis and limiter circuits by de-emphasizing the data signal before presenting it to the cellular network.²⁷⁹

Rockwell claimed that a 1991 Telebit Corp. article²⁸⁰ disclosed each limitation of the ‘590 patent claims.²⁸¹ Because the 1991 Telebit Corp. article was before the PTO during the prosecution of the ‘590 patent and the PTO considered the reference before granting the patent, Rockwell’s burden on this claim was particularly heavy.²⁸² Celeritas responded that the article taught away from the claimed invention because it disclosed multi-carrier systems and stated that de-emphasis would not work well in a single-carrier system, which was the subject matter of the ‘590 patent claims.²⁸³ The court dismissed this argument because “[a] reference is no less anticipatory if, after disclosing the invention, the reference then disparages it. Thus, the question whether a reference ‘teaches away’ from the invention is inapplicable to an anticipation analysis.”²⁸⁴ Celeritas’s own witnesses previously testified that the 1991 Telebit Corp. article described a test signal that sends twenty-one tones to simulate a modulated signal, which had a probability distribution of a magnitude that closely matched that of the V.29 modem, a single-carrier data signal.²⁸⁵ The court said that “[t]he fact that a modem with a single carrier data signal is shown to be less than optimal does not vitiate the fact that it is disclosed.”²⁸⁶

On appeal, the Federal Circuit found for Rockwell on its anticipation claim, and dismissed the trial court’s award of \$900,000

277. *Id.*, 47 U.S.P.Q.2d (BNA) at 1518.

278. *Id.*, 47 U.S.P.Q.2d (BNA) at 1518.

279. *See id.* at 1360, 47 U.S.P.Q.2d (BNA) at 1521.

280. *See id.*, 47 U.S.P.Q.2d (BNA) at 1521 (citing *The Static Characteristics of Analog Cellular Radio Channels and Their Effects Upon Data Transmission*, CCITT Study Group XVII, Delayed Contribution D 136, Geneva, Oct. 29-Nov. 6, 1991).

281. *See id.* at 1360, 47 U.S.P.Q.2d (BNA) at 1521.

282. *See id.*, 47 U.S.P.Q.2d (BNA) at 1521 (noting Celeritas’ argument that the article was disclosed to the Patent and Trademark Office during prosecution, thus adding to Rockwell’s burden and affirming that “the burden of showing . . . invalidity . . . is especially difficult when the prior art was before the PTO examiner”) (citing *Hewlett-Packard Co. v. Bausch & Lomb, Inc.*, 909 F.2d 1464, 1467, 15 U.S.P.Q.2d (BNA) 1525, 1527 (Fed. Cir. 1990)).

283. *See id.*, 47 U.S.P.Q.2d (BNA) at 1521-22.

284. *Id.*, 47 U.S.P.Q.2d (BNA) at 1522.

285. *See id.* at 1360-61, 47 U.S.P.Q.2d (BNA) at 1522.

286. *Id.*, 47 U.S.P.Q.2d (BNA) at 1522.

in attorney's fees for Celeritas under 35 U.S.C. § 285.²⁸⁷ Celeritas did not lose any of the actual damages awarded by the lower court, however, because the Federal Circuit affirmed the district court's conclusions on Celeritas' breach of contract claim.²⁸⁸ Celeritas agreed to accept the highest award under its three independent theories of liability: breach of contract, patent infringement, and trade secret misappropriation.²⁸⁹ The patent infringement award (after remittitur)²⁹⁰ was only \$17,484,160, which an agreement by the parties doubled to \$34,968,320 in light of Rockwell's willful infringement.²⁹¹ This amount still was less than the amount Celeritas was entitled to recover for its successful breach of contract claim, which was \$57,658,000.²⁹²

In *Scaltech, Inc. v. Retec/Tetra, L.L.C.*,²⁹³ the Federal Circuit vacated the district court's grant of summary judgment.²⁹⁴ The district court found Scaltech, Inc.'s U.S. Patent No. 5,433,717 ("the '717 patent") invalid "because an embodiment of the claimed invention was 'on sale' within the meaning of 35 U.S.C. § 102(b)."²⁹⁵

The '717 patent disclosed a method of producing coke, a porous solid fuel.²⁹⁶ Specifically, the claimed invention involved a process for the production of coke through use of a particular quench stream that had from five to thirty-five percent of solids by weight.²⁹⁷ Seventy percent of the solids would have a particle size of less than fifteen microns.²⁹⁸ The specific solid content and particle size distribution limitations enhanced the amount of recycled waste that could be used in the process as compared to the amounts of waste recycled in

287. See *id.* at 1362, 47 U.S.P.Q.2d (BNA) at 1523; 35 U.S.C. § 285 (1994) (stating "[t]he court in exceptional cases may award reasonable attorney fees to the prevailing party").

288. See *Celeritas Technologies*, 150 F.3d at 1362, 47 U.S.P.Q.2d (BNA) at 1523.

289. See *id.* at 1357, 47 U.S.P.Q.2d (BNA) at 1519. Celeritas claimed breach of contract against Rockwell based on evidence that Rockwell breached an agreement not to disclose Celeritas' proprietary technology, patent infringement, and misappropriation of trade secrets. See *id.* at 1357, 47 U.S.P.Q.2d at 1519.

290. Black's Law Dictionary defines "remittitur" as the procedural process by which an excessive jury verdict is reduced. See BLACK'S LAW DICTIONARY 1295 (6th ed. 1990).

291. See *Celeritas Technologies*, 150 F.3d at 1362, 47 U.S.P.Q.2d (BNA) at 1523. Willful infringement "is established only where it is shown that there was a deliberate purpose to infringe, and such a purpose is not found where the reliability of the patent is open to honest doubt." *American Standard, Inc. v. Pfizer, Inc.*, 722 F. Supp. 86, 106, 14 U.S.P.Q.2d (BNA) 1673, 1689 (D. Del. 1989) (citing *International Mfg. Co. v. Landon, Inc.*, 336 F.2d 723, 728, 142 U.S.P.Q. (BNA) 421, 425 (9th Cir. 1964)).

292. See *Celeritas Technologies*, 150 F.3d at 1357, 47 U.S.P.Q.2d (BNA) at 1519.

293. 156 F.3d 1193, 48 U.S.P.Q.2d (BNA) 1037 (Fed. Cir. 1998).

294. See *id.* at 1194, 47 U.S.P.Q.2d (BNA) at 1038.

295. *Id.*, 48 U.S.P.Q.2d (BNA) at 1037.

296. See *id.*, 156 F.3d at 1194, 48 U.S.P.Q.2d (BNA) at 1037.

297. See *id.* at 1194-95, 48 U.S.P.Q.2d (BNA) at 1038.

298. See *id.* at 1195, 48 U.S.P.Q.2d (BNA) at 1038.

conventional processes.²⁹⁹

Retec/Tetra, L.L.C., in moving for summary judgment under § 102(b), argued that Scaltech sold or offered to sell a process that embodied the claimed invention more than one year before the patent's filing date of January 19, 1993.³⁰⁰ Retec pointed to several contacts with refineries from 1988 to 1991, where Scaltech proposed to use a "DC-6" centrifuge to treat refinery waste before recycling the waste as a quench stream in the coking process.³⁰¹ During this time, Scaltech did not mention any specific solids content or particle size in the proposals.³⁰² In 1992, using the DC-6 centrifuge under contract with CITGO, Scaltech discovered that the centrifuge could dramatically increase the amount of refinery waste used in the quench stream.³⁰³ In February 1992, Scaltech found that this enhanced performance was due to the high concentration of solids in the quench stream.³⁰⁴ Ultimately, Scaltech claimed the high solids concentration and small particle size limitations in the '717 patent.³⁰⁵

The Federal Circuit reviewed the district court's grant of summary judgment and stated that a § 102(b) analysis must first ask whether the subject of the barring activity met each limitation of the claim.³⁰⁶ The court found that under this standard, the district court erred in granting summary judgment because the record failed to indicate whether the processes in Scaltech's 1998 proposals actually would produce the limitations of five to thirty-five percent of solids in the quench stream and the specified particle size.³⁰⁷

The court, after assuming that no offer for sale of an actual embodiment of the invention existed, addressed whether Scaltech nonetheless offered a substantially completed invention with the expectation that it would work for its intended purpose.³⁰⁸ The court relied on *UMC Electronics Co. v. United States*³⁰⁹ and found that Scaltech did not, in reality, hold this expectation. The court noted that Scaltech did not determine the importance of the claimed solids concentration and particle size until it performed the CITGO

299. *See id.* at 1196, 48 U.S.P.Q.2d (BNA) at 1039.

300. *See id.* at 1195, 48 U.S.P.Q.2d (BNA) at 1038.

301. *See id.* at 1196, 48 U.S.P.Q.2d (BNA) at 1039.

302. *See id.*, 48 U.S.P.Q.2d (BNA) at 1039.

303. *See id.*, 48 U.S.P.Q.2d (BNA) at 1039.

304. *See id.* at 1196, 48 U.S.P.Q.2d (BNA) at 1039-40.

305. *See id.* at 1196, 48 U.S.P.Q.2d (BNA) at 1039.

306. *See id.* at 1197, 48 U.S.P.Q.2d (BNA) at 1040.

307. *See id.*, 48 U.S.P.Q.2d (BNA) at 1040 (noting that "invention" offered for sale must be limited by details of the claim).

308. *See id.* at 1197-98, 48 U.S.P.Q.2d (BNA) at 1040.

309. 516 F.2d 647, 656, 2 U.S.P.Q.2d (BNA) 1465, 1472 (Fed. Cir. 1987) (stating that there was no "invention" where inventor merely had conception or was developing conception).

contract in February 1992.³¹⁰ Therefore, Scaltech did not conceive of the claimed invention until February 1992, less than a year before the filing date of January 19, 1993.³¹¹ Because the patent's inventor was still working toward the development of a conception, the court found that there was no invention to offer for sale before the critical date.³¹² The Federal Circuit also noted that neither the district court nor the parties addressed whether the activity would have applied as prior art under 35 U.S.C. §§ 102 and 103, or whether the 1988 use was an "experimental use."³¹³ Thus, the court vacated the district court's summary judgment that Scaltech's proposals rendered the '717 patent unenforceable under § 102(b)'s "on-sale" bar.³¹⁴

C. Obviousness

The determination of obviousness under 35 U.S.C. § 103 is based on four factors: (1) the scope and content of the prior art, (2) the differences between the claims and the prior art, (3) the level of ordinary skill in the art, and (4) secondary considerations, if any, of nonobviousness.³¹⁵ Secondary considerations, also known as "objective evidence of nonobviousness," include commercial success of the invention, satisfying a long-felt need, failure of others to find a solution to the problem, and copying of the invention by others.³¹⁶ A prima facie case of obviousness requires that there be a suggestion or motivation to combine the teachings of prior art.³¹⁷

In *In re Dance*,³¹⁸ the Federal Circuit affirmed a rejection by the Board of Patent Appeals and Interferences of claims directed to a

310. See *Scaltech*, 156 F.3d at 1197-98, 48 U.S.P.Q.2d (BNA) at 1040.

311. See *id.*, 48 U.S.P.Q.2d (BNA) at 1040.

312. See *id.*, 48 U.S.P.Q.2d (BNA) at 1041 (noting that the critical date is more than one year prior to the date of application for patent).

313. See *id.*, 48 U.S.P.Q.2d (BNA) at 1041. The 1988 experimental use involved injecting de-oiled waste sediment into large drums or "coker units" in order to convert unrefined hydrocarbons into solid coke fuel. Previous attempts at this process by other companies resulted in waste injection rates in excess of one to two pounds of solids per ton of coke. This in turn typically caused uneven solid coke formation, noxious odors and soft spots in the coke bed. Scaltech believed its method may overcome the one to two pound waste per ton of coke ratio and thus create a viable method for waste product disposal. See *id.* at 1195-96, 48 U.S.P.Q.2d at 1038-39; see also *Lough v. Brunswick Corp.*, 86 F.3d 1113, 1122, 30 U.S.P.Q.2d (BNA) 1100, 1106 (Fed. Cir. 1996) (describing the policy behind "experimental use negation" as a provision of opportunity for an inventor to discover if an invention is suitable for its intended purpose).

314. See *Scaltech*, 156 F.3d at 1911, 48 U.S.P.Q.2d (BNA) at 1041.

315. *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 1050, 5 U.S.P.Q.2d (BNA) 1434, 1440 (Fed. Cir. 1988).

316. See *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1566, 1 U.S.P.Q.2d (BNA) 1593, 1598 (Fed. Cir. 1987).

317. See *ACS Hosp. Sys., Inc. v. Montefiore Hosp.*, 732 F.2d 1572, 1577, 221 U.S.P.Q. (BNA) 929, 934 (Fed. Cir. 1984).

318. 160 F.3d 1339, 48 U.S.P.Q.2d (BNA) 1635 (Fed. Cir. 1998).

obstruction-removing catheter device based on a finding of obviousness in view of prior art.³¹⁹ During prosecution, the examiner found the claims to be obvious over a combination of two prior patents.³²⁰ The applicants argued before the Board that the examiner's act of combining two prior art patents constituted hindsight reconstruction of the claimed invention and therefore, was an improper basis for rejection.³²¹

According to the Federal Circuit, "[o]bviousness is a question of law based on findings of underlying facts related to the prior art, the skill of the artisan, and objective considerations."³²² Moreover, a showing of some teaching, suggestion, or motivation in the prior art comprising the applicant's specific combination may establish a *prima facie* case of obviousness.³²³ The court held, however, that using hindsight combination to produce the claimed invention cannot be used to establish obviousness.³²⁴

The inquiry of whether it is obvious to select and combine certain teachings will be satisfied if those specific teachings suggest to one skilled in the art to combine the teachings to produce the claimed invention.³²⁵ The court also held that if the prior art references are in the same field as that of the applicant's invention, knowledge of those references will be presumed.³²⁶ Because the Federal Circuit agreed with the Board's finding that knowledge of the references within the

319. *See id.* at 1341, 48 U.S.P.Q.2d (BNA) at 1636.

320. *See id.* at 1341-43, 48 U.S.P.Q.2d (BNA) at 1636-37 (noting the examiner's comment that "it would have been obvious to one of ordinary skill in the art" to combine two prior devices to construct the device at issue).

321. *See id.* at 1342, 48 U.S.P.Q.2d (BNA) at 1637. The Kensey patent disclosed all of the same processes as the claimant with the exclusion of a "means for recovery fluid and debris." *See id.* at 1342, 48 U.S.P.Q.2d (BNA) at 1636. Sullivan, a different catheter patent holder, had already disclosed a means for recovery fluid and debris namely, attaching a return channel that removes the debris released by the catheter. *See id.*, 48 U.S.P.Q.2d (BNA) at 1636-37. The examiner combined the Kensey device with the Sullivan device and held that anyone skilled in the art would naturally combine the two in order to create a catheter capable of removing debris. *See id.*, 48 U.S.P.Q.2d (BNA) at 1636. Accordingly, the examiner held that in light of both existing patents, claimant's patent was obvious and thus, unpatentable. *See id.* at 1341, 48 U.S.P.Q.2d (BNA) at 1636. This determination, from which claimant appealed, was an alleged product of hindsight reconstruction as the examiner looked to two distinct patents, previously granted, and determined that the current patent was too obvious to be patented.

322. *Id.* at 1343, 48 U.S.P.Q.2d (BNA) at 1637.

323. *See id.*, 48 U.S.P.Q.2d (BNA) at 1637; *see also In re Rynes*, 7 F.3d 1037, 1039, 28 U.S.P.Q.2d (BNA) 1630, 1631 (Fed. Cir. 1993) (stating that "focus is upon the state of knowledge at the time the invention was made. The Commissioner bears the burden of showing that such knowledge provided some teaching, suggestion, or motivation to make the particular combination.").

324. *See In re Dance*, 160 F.3d at 1343, 48 U.S.P.Q.2d (BNA) at 1637 (holding that "[o]bviousness cannot be established by hindsight combination to produce the claimed invention").

325. *See id.*, 48 U.S.P.Q.2d (BNA) at 1637.

326. *See id.*, 48 U.S.P.Q.2d (BNA) at 1637.

same narrow field were to be presumed and that the prior art did not teach away from the claimed invention, the court affirmed the finding of obviousness.³²⁷

In *Johns Hopkins University v. CellPro, Inc.*,³²⁸ which also involved the issue of obviousness, the Federal Circuit overturned the district court's grant of summary judgment in favor of Johns Hopkins University for non-obviousness.³²⁹ The court noted that the district court erroneously prohibited CellPro from introducing evidence of a reference not relied on in the first trial.³³⁰ CellPro sought introduction of the reference only after the district court adopted its broad claim construction.³³¹ The district court, however, ruled that CellPro waived the right to assert the reference when it failed to produce it in the claim construction phase and then sought to introduce it for the first time during the court's consideration of Hopkins' motion for summary judgment. Under these facts, the Federal Circuit ruled that a party is allowed to rely on a reference that becomes relevant only after the district court adopts a broad claim construction.³³² Accordingly, the Federal Circuit reversed and remanded the case to the district court for consideration of the reference's merits.³³³

In *In re Daniels*,³³⁴ the court reversed a decision of the Board of Patent Appeals and Interferences rejecting Daniels' design patent application. The Board found Daniels' application unpatentable as obvious in light of a prior publication.³³⁵ The central issue on appeal was whether Daniels' patent application was entitled to the benefit of an earlier filing date for a co-pending application under 35 U.S.C. § 120.³³⁶

Daniels, through the American Inventors Corporation ("AIC"),

327. *See id.* at 1344-45, 48 U.S.P.Q.2d (BNA) at 1368-69.

328. 152 F.2d 1342, 47 U.S.P.Q.2d (BNA) 1705 (Fed. Cir. 1998).

329. *See id.* at 1356, 47 U.S.P.Q.2d (BNA) at 1715-16.

330. *See id.* at 1356, 47 U.S.P.Q.2d (BNA) at 1715-16.

331. *See id.* at 1354-55, 47 U.S.P.Q.2d (BNA) at 1713-14. The district court had adopted its own definition of the term "substantially free" as it was contained in an earlier patent with regards to the patent's ability to require more than 10% mature cells to allow for a cell suspension of 90% purity.

332. *See id.* at 1358, 47 U.S.P.Q.2d (BNA) at 1715-16 (ruling that the district court's claim construction may have been "unorthodox," but not erroneous).

333. *See id.*, 47 U.S.P.Q.2d (BNA) at 1716.

334. 144 F.3d 1452, 46 U.S.P.Q.2d (BNA) 1788 (Fed. Cir. 1998).

335. *See id.* at 1455, 46 U.S.P.Q.2d (BNA) at 1788-89.

336. *See* 35 U.S.C. § 120 (1994). The statute reads:

An application for patent for an invention disclosed in the manner provided by the first paragraph of section 112 of this title in an application previously filed in the United States . . . shall have the same effect, as to such invention, as though filed on the date of the prior application,

originally filed a design patent application on a “leecher,” a device that trapped leeches.³³⁷ Among the drawings included in the application were several showing the leecher with a leaf pattern.³³⁸ Daniels later learned that the application was part of a deceptive invention-promotion scheme by AIC.³³⁹ He retained new counsel and filed a continuation design application under 37 C.F.R. § 1.62.³⁴⁰ By amendment, Daniels requested removal of the leaf design from the drawings.³⁴¹

The examiner rejected the application based on an intervening marketing brochure that depicted the leecher with the leaf pattern of the original application.³⁴² On appeal, the Board affirmed the rejection of the application and held that Daniels was not entitled to the benefit of the filing date for his parent application under 35 U.S.C. § 120, which would have obviated the rejection.³⁴³ The Board found that Daniels’ design in the continuation application was “new and different” from the original design.³⁴⁴ Thus, in the Board’s view, the continuation application failed to satisfy the written description requirement of 35 U.S.C. § 112, ¶ 1³⁴⁵ and therefore, Daniels was not entitled to the earlier filing date.³⁴⁶

On appeal, the Federal Circuit stressed that 35 U.S.C. § 120 applies equally to design patents and utility patents, with the “common thread” being adherence to the requirements of 35 U.S.C. § 112, ¶ 1, which requires that the specification contain a written description of the invention in such terms so as to allow “any person skilled in the art” to make and use the invention.³⁴⁷ When one analyzes the sufficiency of a written description for a design patent, one must examine the drawings.³⁴⁸ The Federal Circuit found the leaf design to be a mere ornamentation that did not obscure the overall design of

337. See *In re Daniels*, 144 F.3d at 1454, 46 U.S.P.Q.2d (BNA) at 1788.

338. See *id.*, 46 U.S.P.Q.2d (BNA) at 1789.

339. See *id.*, 46 U.S.P.Q.2d (BNA) at 1789 (noting that AIC misled inventors by concealing the difference between design patent and utility applications).

340. See *id.*, 46 U.S.P.Q.2d (BNA) at 1789.

341. See *id.* at 1454-55, 46 U.S.P.Q.2d (BNA) at 1789.

342. See *id.* at 1455, 46 U.S.P.Q.2d (BNA) at 1789.

343. See *id.*, 46 U.S.P.Q.2d (BNA) at 1789.

344. See *id.*, 46 U.S.P.Q.2d (BNA) at 1789.

345. See 35 U.S.C. § 112, ¶ 1 (1994) (requiring specification to certain terms sufficiently concise to enable a person skilled in art to make and use the device).

346. See *In re Daniels*, 144 F.3d at 1455, 46 U.S.P.Q.2d (BNA) at 1789-90.

347. See *id.* at 1456, 46 U.S.P.Q.2d (BNA) at 1790.

348. See *id.*, 46 U.S.P.Q.2d (BNA) at 1790 (“It is the drawings of the design patent that provide the description of the invention.”); see also *In re Klein*, 987 F.2d 1569, 1691, 26 U.S.P.Q.2d (BNA) 1133, 1134 (Fed. Cir. 1993) (stating that drawings are often only a description in design applications).

the leecher.³⁴⁹ Consequently, the court held that it would have been apparent to any artisan who examined the original application that Daniels possessed the design of the leecher at the time of the application.³⁵⁰ Accordingly, Daniels met the written description requirement of 35 U.S.C. § 112 and was entitled to the filing date of his original application under 35 U.S.C. § 120.³⁵¹ Thus, the court reversed the Board's decision and overruled the examiner's rejection.³⁵²

In *Gentry Gallery, Inc. v. Berklene Corp.*,³⁵³ the Federal Circuit, in a cross-appeal, considered whether the claims of Gentry Gallery, Inc.'s patent were invalid under 35 U.S.C. § 103³⁵⁴ as being obvious.³⁵⁵ The Federal Circuit reviews the legal conclusion of non-obviousness *de novo* and its underlying facts for clear error.³⁵⁶ Berklene Corporation argued that the simplicity of Gentry's console design was evidence of its obviousness.³⁵⁷ The court, however, concluded that Gentry's design solved a problem that Berklene's alleged combination of prior art did not overcome.³⁵⁸ Thus, the Federal Circuit held that Berklene failed to prove that the invention would have been obvious at the time it was made.³⁵⁹

In *Monarch Knitting Machinery Corp. v. Sulzer Morat GMBH*,³⁶⁰ the Federal Circuit reviewed the district court's grant of summary judgment on the issue of obviousness.³⁶¹ Ultimately, obviousness is a question of law based on underlying questions of fact including: scope and content of the prior art; level of ordinary skill in the art; differences between the claimed invention and the prior art; and

349. See *In re Daniels*, 144 F.3d at 1457, 46 U.S.P.Q.2d (BNA) at 1790-91.

350. See *id.*, 46 U.S.P.Q.2d (BNA) at 1791.

351. See *id.*, 46 U.S.P.Q.2d (BNA) at 1791.

352. See *id.*, 46 U.S.P.Q.2d (BNA) at 1791.

353. 134 F.3d 1473, 45 U.S.P.Q.2d (BNA) 1498 (Fed. Cir. 1998).

354. See 35 U.S.C. § 103 (1994) (describing non-obvious subject matter and conditions for patentability).

355. See *Gentry Gallery*, 134 F.3d at 1474, 45 U.S.P.Q.2d (BNA) at 1499.

356. See *id.* at 1478, 45 U.S.P.Q.2d (BNA) at 1502.

357. See *id.* at 1478, 45 U.S.P.Q.2d (BNA) at 1501-02 ("Simplicity is not inimical to patentability.") (quoting *In re Oetiker*, 977 F.2d 1443, 1447, 24 U.S.P.Q.2d (BNA) 1443, 1446 (Fed. Cir. 1992)).

358. See *id.* at 1478, 45 U.S.P.Q.2d (BNA) at 1502. The patent at issue disclosed a sectional sofa containing two reclining seats facing the same direction. There was evidence that when tow of the prior art reclining seats were physically inserted into a prior art sectional sofa, the seats "bumped against the side," which caused the seats to open prematurely. The invention solved this problem by recessing the push button slightly. See *id.* at 1478, 45 U.S.P.Q.2d (BNA) at 1446.

359. See *id.*, 45 U.S.P.Q.2d (BNA) at 1502.

360. 139 F.3d 877, 45 U.S.P.Q.2d (BNA) 1977 (Fed. Cir. 1998).

361. See *id.* at 878, 45 U.S.P.Q.2d (BNA) at 1979.

existence of objective indicia of non-obviousness.³⁶²

In *Monarch Knitting Machinery Corp.*, the Federal Circuit first analyzed the scope of the prior art.³⁶³ The court disputed the district court's formulation of the problem that confronted the inventors of the patent.³⁶⁴ The Federal Circuit determined that "[t]he district court based its conclusion of obviousness heavily on its determination that the prior art showed a 'trend'"³⁶⁵ Although a trend may constitute evidence of a suggestion to make "minor" changes over the prior art, it is important that the prior art actually contain a suggestion or motivation to combine the references to form the trend.³⁶⁶ The Federal Circuit noted that the evidence of record called into question the assertion that the prior art showed a "trend" and found a genuine issue of material fact with respect to whether a trend existed.³⁶⁷

The Federal Circuit then examined the district court's review of the objective evidence of the secondary considerations.³⁶⁸ The court agreed with the district court's determination that there was no genuine issue of fact with respect to the existence and degree of commercial success. The Federal Circuit, however, disagreed with the district court as to other facts.³⁶⁹ Although the appellants argued that the "uninterrupted existence of a long-felt need in the art" negated any evidence of contemporaneous independent development, the Federal Circuit stated that the relevant consideration is actually "long-felt but unsolved need."³⁷⁰ Thus, the Federal Circuit held that genuine issues of material fact existed as to whether the evidence of contemporaneous development solved the need in the art.³⁷¹ Finally, the Federal Circuit noted that the record also contained evidence of skepticism in the art, as well as evidence that the prior art taught away from the claimed invention.³⁷² The

362. *See id.* at 881, 45 U.S.P.Q.2d (BNA) at 1981 (citing *Graham v. John Deere Co.*, 383 U.S. 1, 17-18, 148 U.S.P.Q. (BNA) 459, 467 (1966)).

363. *See id.*, 45 U.S.P.Q.2d (BNA) at 1981.

364. *See id.*, 45 U.S.P.Q.2d (BNA) at 1981 (commenting that the district court's formulation of the inventor's problem, defined by the court as designing a portion of a knitting needle to minimize damage to itself and maximize operating speed of an industrial knitting machine, presumes a solution to the problem).

365. *Id.*, 45 U.S.P.Q.2d (BNA) at 1981.

366. *See id.* at 881, 45 U.S.P.Q.2d (BNA) at 1981.

367. *See id.* at 882-83, 45 U.S.P.Q.2d (BNA) at 1982.

368. *See id.* at 883, 45 U.S.P.Q.2d (BNA) at 1983 (examining, under these secondary considerations, both the trial court's conclusions and the evidence in record regarding commercial success).

369. *See id.*, 45 U.S.P.Q.2d (BNA) at 1983.

370. *See id.* at 884, 45 U.S.P.Q.2d (BNA) at 1983.

371. *See id.*, 45 U.S.P.Q.2d (BNA) at 1983.

372. *See id.* at 885, 45 U.S.P.Q.2d (BNA) at 1984 (adding that skepticism can be evidence of

Federal Circuit vacated and remanded the case to the district court for further proceedings after holding that summary judgment was improper where genuine issues of material fact existed.³⁷³

In *In re Rouffet*,³⁷⁴ the court reversed the Board's rejection of an application as obvious under 35 U.S.C. § 103(a).³⁷⁵ Rouffet's application disclosed a method to reduce the number of handovers between beams transmitted by the same satellite, that were caused by the satellite's motion.³⁷⁶ Handovers result from a satellite's motion causing a receiver to move from the footprint of a beam transmitted by one satellite into the footprint of a beam transmitted by a second satellite.³⁷⁷ Handovers cause interruptions in signal transmission and reception.³⁷⁸ Rouffet eliminated satellite-motion handovers by having the satellite's antenna emit a fan-shaped beam.³⁷⁹ A fixed point on the Earth's surface would likely remain within a single footprint until it became necessary to switch to another satellite.³⁸⁰

The Board affirmed Rouffet's rejection over U.S. Patent No. 5,199,762 ("King") in view of U.S. Patent No. 4,872,015 ("Rosen") and a conference report ("Ruddy"). King disclosed a system for launching a plurality of satellites into low Earth orbits from a single launch vehicle.³⁸¹ Rosen taught a geostationary satellite that used a plurality of fan beams to communicate with both mobile and fixed terminals on the Earth.³⁸² Ruddy taught the use of a series of satellites in Molniya orbits, which always followed an identical path across the sky when viewed from a stationary position on the ground.³⁸³ Ruddy used a fan beam to eliminate the need for the ground station's antenna to track the satellite's motion around the apogee loop.³⁸⁴ Ruddy, however, taught the projection of a single beam from the Earth to the satellites.³⁸⁵ In contrast, Rouffet's application taught the projection of multiple beams from a satellite to the Earth.³⁸⁶ Despite these differences, the court found that the Board was correct in

non-obviousness and teaching away is a more pointed form of skepticism).

373. *See id.* at 886, 45 U.S.P.Q.2d (BNA) at 1985.

374. 149 F.3d 1350, 47 U.S.P.Q.2d (BNA) at 1453 (Fed. Cir. 1998).

375. *See id.* at 1352, 47 U.S.P.Q.2d (BNA) at 1454.

376. *See id.* at 1353, 47 U.S.P.Q.2d (BNA) at 1455.

377. *See id.*, 47 U.S.P.Q.2d (BNA) at 1454 (noting analogy of cellular phone traveling from one cell to another).

378. *See id.*, 47 U.S.P.Q.2d (BNA) at 1455.

379. *See id.*, 47 U.S.P.Q.2d (BNA) at 1455.

380. *See id.*, 47 U.S.P.Q.2d (BNA) at 1455.

381. *See id.* at 1356, 47 U.S.P.Q.2d (BNA) at 1456.

382. *See id.*, 47 U.S.P.Q.2d (BNA) at 1456.

383. *See id.*, 47 U.S.P.Q.2d (BNA) at 1456.

384. *See id.*, 47 U.S.P.Q.2d (BNA) at 1456.

385. *See id.*, 47 U.S.P.Q.2d (BNA) at 1457.

386. *See id.*, 47 U.S.P.Q.2d (BNA) at 1457.

finding that the combination of King, Rosen, and Ruddy contained all of the elements claimed in Rouffet's application.³⁸⁷

Nevertheless, the Federal Circuit found that the Board erred in failing to identify any motivation to combine these references.³⁸⁸ Lacking a motivation to combine the references, the Board simply failed to make out a *prima facie* case of obviousness.³⁸⁹ In fact, Ruddy addressed the handover problem with orbit selection, not beam shape.³⁹⁰

The court identified three possible motivational sources to combine references: "the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art."³⁹¹ The Board incorrectly relied upon the very high level of skill in the art to overcome the differences between the claimed invention and the selected elements in the references.³⁹² This rejection impermissibly allowed the examiner to use the claimed invention as a model for combining elements in the prior art to undermine the patentability of the claimed invention with hindsight.³⁹³ A "rote invocation" of the high level of skill in the field of art did not suffice to supply a motivation to combine.³⁹⁴ Rejections on such grounds make it difficult for the "more sophisticated scientific fields" to ever "experience a patentable technical advance."³⁹⁵

The Board also affirmed a rejection over U.S. Patent No. 5,394,561 ("Freeburg") in view of U.S. Patent No. 5,170,485 ("Levine").³⁹⁶ Freeburg taught a cellular radiotelephone system on a constellation of low Earth orbit satellites that use conical beams to transmit from the satellite to both fixed and mobile Earth stations.³⁹⁷ Levine taught an Earth-based cellular radio system that used fan beams broadcast from antenna towers.³⁹⁸

Again, the Federal Circuit determined that the Board erred in failing to identify a motivation to combine Levine and Freeburg.³⁹⁹ The court stated that "even when the level of skill in the art is high,

387. *See id.* at 1357, 47 U.S.P.Q.2d (BNA) at 1457.

388. *See id.*, 47 U.S.P.Q.2d (BNA) at 1457.

389. *See id.*, 47 U.S.P.Q.2d (BNA) at 1457.

390. *See id.*, 47 U.S.P.Q.2d (BNA) at 1457.

391. *Id.*, 47 U.S.P.Q.2d (BNA) at 1458.

392. *See id.*, 47 U.S.P.Q.2d (BNA) at 1458.

393. *See id.*, 47 U.S.P.Q.2d (BNA) at 1458.

394. *See id.*, 47 U.S.P.Q.2d (BNA) at 1458.

395. *Id.*, 47 U.S.P.Q.2d (BNA) at 1458.

396. *See id.* at 1354, 47 U.S.P.Q.2d (BNA) at 1455.

397. *See id.* at 1358, 47 U.S.P.Q.2d (BNA) at 1458.

398. *See id.*, 47 U.S.P.Q.2d (BNA) at 1458.

399. *See id.* at 1359, 47 U.S.P.Q.2d (BNA) at 1459.

the Board must identify specifically the principle, known to one of ordinary skill, that suggests the claimed combination.”⁴⁰⁰

Although Levine *multiplied* the number of potential handovers and then isolated the necessary handovers from the unnecessary,⁴⁰¹ Rouffet *eliminated* handovers attributable to the satellite’s motion by using a different beam shape.⁴⁰² The Board gave no actual suggestion that one could select part of the teachings of Levine for combination with Freeburg’s satellite system.⁴⁰³ Thus, the court concluded that “[t]he Board’s naked invocation of skill in the art to supply a suggestion to combine the references cited in this case is therefore clearly erroneous.”⁴⁰⁴

In *Kahn v. General Motors Corp.*,⁴⁰⁵ the Federal Circuit affirmed a decision by the district court of non-infringement of two means-plus-function claims, but reversed the district court’s holding that the two claims were invalid for obviousness.⁴⁰⁶ Kahn owned U.S. Patent No. 4,018,994 (“the ‘944 patent”), which addressed the problem of minimizing distortion within an AM stereophonic receiver.⁴⁰⁷

Kahn sued General Motors Corp. (“GM”) for allegedly infringing two means-plus-function claims (Claims 53 and 54) of the ‘994 patent.⁴⁰⁸ In the court’s view, claims written in means-plus-function form are interpreted to cover the structure described in the specification and its equivalents.⁴⁰⁹ The claim limitation at issue required a “means for deriving a distortion cancellation component from the stereo sum signal component.”⁴¹⁰ The court identified the structure in the specification and drawings corresponding to the claimed means to include an electronic amplifier, summer, and frequency doubler.⁴¹¹

The district court found Claims 53 and 54 invalid under 35 U.S.C. § 103 as obvious over two patents.⁴¹² The Federal Circuit reviewed the underlying factual issues⁴¹³ for clear error and reviewed

400. *Id.*, 47 U.S.P.Q.2d (BNA) at 1459.

401. *See id.*, 47 U.S.P.Q.2d (BNA) at 1458.

402. *See id.* at 1353, 47 U.S.P.Q.2d (BNA) at 1455.

403. *See id.* at 1359, 47 U.S.P.Q.2d (BNA) at 1459.

404. *Id.*, 47 U.S.P.Q.2d (BNA) at 1459.

405. 135 F.3d 1472, 45 U.S.P.Q.2d (BNA) 1608 (Fed. Cir. 1998), *cert. denied*, 119 S. Ct. 177 (1998).

406. *See id.* at 1473, 45 U.S.P.Q.2d (BNA) at 1608.

407. *See id.* at 1474-75, 45 U.S.P.Q.2d (BNA) at 1609.

408. *See id.* at 1474, 45 U.S.P.Q.2d (BNA) at 1609.

409. *Id.* at 1476, 45 U.S.P.Q.2d (BNA) at 1610 (citing 35 U.S.C. § 112, ¶ 6 (1994)).

410. *Id.*, 45 U.S.P.Q.2d (BNA) at 1611.

411. *See id.* at 1476-77, 45 U.S.P.Q.2d (BNA) at 1611.

412. *See id.* at 1479, 45 U.S.P.Q.2d (BNA) at 1613 (citing U.S. Patent No. 2,420,230 issued to Crosby on May 6, 1947, and U.S. Patent No. 3,080,453 issued to Avins on March 5, 1963).

413. The underlying factual issues involved differences between the prior art and the

the district court's ultimate legal conclusion *de novo*.⁴¹⁴

The Federal Circuit disagreed with the district court's conclusion that the two prior art patents invalidated the asserted claims.⁴¹⁵ The court recognized that the same structural analysis for the deriving means limitation considered for infringement must also be considered for obviousness.⁴¹⁶ Thus, the Federal Circuit concluded that the district court erred by failing to limit the asserted claim to the structure in the '944 specification.⁴¹⁷ The Federal Circuit held that Claims 53 and 54 were not obvious to one of ordinary skill in the art based on the combination of the two prior art patents.⁴¹⁸

In *Chiuminatta Concrete Concepts, Inc. v. Cardinal Industries, Inc.*,⁴¹⁹ the Federal Circuit affirmed the district court's decision that the plaintiff's invention was not obvious.⁴²⁰ The court held that the accused infringer did not show the existence of prior art that demonstrated the claimed process.⁴²¹ Chiuminatta owned U.S. Patent No. 4,889,675 ("the '675 patent"), which pertained to methods for cutting concrete prior to its complete hardening.⁴²² Chiuminatta sued Cardinal arguing that Cardinal induced infringement of its '675 patent.⁴²³ Cardinal responded that the '675 patent was invalid as obvious.⁴²⁴

At trial, Cardinal maintained that one prior art reference, a manual authored by the American Concrete Institute, disclosed the cutting

claimed invention, the level of ordinary skill in the art, and objective evidence of secondary considerations of patentability. *See id.*, 45 U.S.P.Q.2d (BNA) at 1613.

414. *See id.*, 45 U.S.P.Q.2d (BNA) at 1613 (stating that the determination of obviousness is "freely reviewable on appeal") (citing *Stiftung v. Renishaw PLC*, 945 F.2d 1173, 1182, 20 U.S.P.Q.2d (BNA) 1094, 1102 (Fed. Cir. 1991)).

415. *See id.* at 1481, 45 U.S.P.Q.2d (BNA) at 1614-15.

416. *See id.*, 45 U.S.P.Q.2d (BNA) at 1614-15.

417. *See id.* at 1480, 45 U.S.P.Q.2d (BNA) at 1614 (stating that the district court's failure to limit Claim 53 precludes a finding of obviousness).

418. *See id.* at 1481, 45 U.S.P.Q.2d (BNA) at 1614.

419. 145 F.3d 1303, 46 U.S.P.Q.2d (BNA) 1752 (Fed. Cir. 1998).

420. *See id.* at 1305, 46 U.S.P.Q.2d (BNA) at 1753 (Fed. Cir. 1998) (reversing the district court's summary judgment holding for patent infringement and affirming the remainder of the decision).

421. *See id.* at 1313, 46 U.S.P.Q.2d (BNA) at 1760.

422. *See id.* at 1305, 46 U.S.P.Q.2d (BNA) at 1753.

423. *See id.*, 46 U.S.P.Q.2d (BNA) at 1753.

424. *See Chiuminatta*, CV 95-4995 LGB, 1996 U.S. Dist. LEXIS 22196, at *27 (C.D. Cal. Nov. 4, 1996), *rev'd in part*, 145 F.3d 1303, 46 U.S.P.Q.2d (BNA) 1752 (Fed. Cir. 1998). Cardinal also asserted that the patent was invalid because Chiuminatta engaged in inequitable conduct when it withheld material information from the PTO with culpable intent. *See id.*, 1996 U.S. Dist. LEXIS 22196, at *48. The district court granted summary judgment in favor of Chiuminatta on this issue. *See id.*, 1996 U.S. Dist. LEXIS, at *57. On appeal, Cardinal also argued that the claims failed to specify the proper time for cutting, but the Federal Circuit rejected this argument, and noted that "[t]he cutting step limitation has both qualitative and quantitative language." *Chiuminatta*, 145 F.3d at 1312, 46 U.S.P.Q.2d (BNA) at 1759.

step at a hardness covered by the claimed invention.⁴²⁵ The fact that during reexamination of the '675 patent, the patent examiner initially rejected the claims as obvious in light of the prior art supported this argument.⁴²⁶ Chiuminatta later convinced the examiner that its claimed invention functioned at a lower hardness range than that disclosed in the prior art.⁴²⁷

Cardinal also argued that Chiuminatta misled the examiner when Chiuminatta interpreted the American Concrete Institute's manual in a "tortuous" manner so as to render Chiuminatta's invention nonobvious.⁴²⁸ The district court rejected this argument and granted the plaintiffs summary judgment, finding that the prior art did not disclose the cutting step.⁴²⁹ The district court concluded that Cardinal failed to introduce sufficient evidence to create a genuine issue of material fact with respect to the American Concrete Institute manual's teachings.⁴³⁰

On appeal, Cardinal pointed to a report prepared by the Department of Transportation⁴³¹ to support its argument that Chiuminatta's claims were obvious.⁴³² The Department of Transportation report detailed the results of several studies that addressed the cutting of highway concrete.⁴³³ Cardinal argued that the report demonstrated that "'acceptable' cuts were achieved on various concrete mixtures at hardnesses below" those claimed in the '675 patent.⁴³⁴ The district court found the report to be irrelevant because it described results of tests that occurred after the filing date

425. See *Chiuminatta*, 1996 U.S. Dist. LEXIS 22196, at *36-40 (dismissing this element of Cardinal's prior art argument because the manual concerned itself with "the hardness of the concrete, rather than on the time elapsed since the concrete was finished").

426. See *id.*, 1996 U.S. Dist. LEXIS 22196, at *36 (quoting the patent examiner stating that "in view of the teachings of [the American Concrete Institute's manual]" Chiuminatta's invention "would have been obvious to one having ordinary skill").

427. See *id.*, 1996 U.S. Dist. LEXIS 22196, at *39-42 (detailing a series of phone conversations between the plaintiff and the examiner that resulted in the reversal of the examiner's decision and confirmation of the patentability of the '675 claims).

428. See *id.*, 1996 U.S. Dist. LEXIS 22196, at *40-42 (asserting as incorrect the defendants' interpretation that the hardness range of the concrete claimed in his patent differed from that described in American Concrete Institute's manual, and thus that his invention was nonobvious).

429. See *id.*, 1996 U.S. Dist. LEXIS 22196, at *67-68.

430. See *id.*, 1996 U.S. Dist. LEXIS 22196, at *42 (finding Cardinal's argument, that the hardness range claimed in defendants' patent was the same as found in the language of the manual and rendering defendant's invention obvious, to be unpersuasive).

431. See *Chiuminatta*, 145 F.3d at 1312, 46 U.S.P.Q.2d (BNA) at 1759 (citing FED. HIGHWAY ADMIN., U.S. DEP'T OF TRANSP., PUB. NO. FHWA-RD-91-079, GUIDELINES FOR TIMING CONTRACTION JOINT SAWING AND EARLIEST LOADING FOR CONCRETE PAVEMENTS (1994)).

432. See *id.* at 1311-12, 46 U.S.P.Q.2d (BNA) at 1759-60 (arguing that genuine issues of material fact preclude summary judgment on the claims relating to the '675 patent).

433. See *id.* at 1312-13, 46 U.S.P.Q.2d (BNA) at 1760.

434. *Id.*, 46 U.S.P.Q.2d (BNA) at 1760.

of the '675 patent application.⁴³⁵

The Federal Circuit affirmed the district court's ruling and emphasized that parties need to provide support for the existence of a genuine issue of material fact to avoid summary judgment.⁴³⁶ Indeed, the court noted that Cardinal failed to provide evidence of its contention that the results contained in the report were indicative of pre-filing prior art results.⁴³⁷

1. *Obviousness-type double patenting*

Obviousness-type double patenting is a judicial doctrine that prevents patent applicants from extending their patent right past the statutory time limit.⁴³⁸ The doctrine prevents an unjustified extension of a patent's term by disallowing a second patent to issue on an obvious variation of an invention to the same owner at a later time.⁴³⁹ Typically, examiners apply a "one-way test" that determines whether the subsequent application would be obvious over the patent claims.⁴⁴⁰ In unusual circumstances, however, examiners may apply a "two-way test" that, in addition to the one-way test, examines whether the patent claims are obvious over the application's claims.⁴⁴¹

In *In re Berg*,⁴⁴² the Federal Circuit addressed the applicability of the "one-way test" and the "two-way test" to patent certification.⁴⁴³ The court first noted that the "'two-way test' is a narrow exception to the general rule of the 'one-way test.'"⁴⁴⁴ Berg claimed that the invention was entitled to the "two-way test" because he filed two applications simultaneously and could not be held responsible for their differing

435. See *Chiuminatta*, 1996 U.S. Dist. LEXIS 22196, at *44.

436. See *Chiuminatta*, 145 F.3d at 1313, 46 U.S.P.Q.2d (BNA) at 1760.

437. See *id.*, 46 U.S.P.Q.2d (BNA) at 1760 (holding that without supporting testimony, affidavits, or other evidence relating to the connection between the report and prior art cutting techniques, no reasonable jury could find for the defendants).

438. See *In re Berg*, 140 F.3d 1428, 1431, 46 U.S.P.Q.2d (BNA) 1226, 1229 (Fed. Cir. 1998).

439. See *id.* at 1431, 46 U.S.P.Q.2d (BNA) at 1229.

440. See *id.* at 1432, 46 U.S.P.Q.2d (BNA) at 1229 (defining the "one-way" test as a means of "determin[ing] obviousness-type double patenting"). Under the "one-way" test, it is the duty of the examiner to ask "whether the application claims are obvious over the patent claims." *Id.*, 46 U.S.P.Q.2d (BNA) at 1229. Upon adjudication, the court will evaluate the examiner's determination and decide whether or not the application is a mere and obvious variation of the patent claim. See *id.*, 46 U.S.P.Q.2d (BNA) at 1229.

441. See *id.* at 1432, 46 U.S.P.Q.2d (BNA) at 1229.

442. 140 F.3d 1428, 46 U.S.P.Q.2d (BNA) 1226 (Fed. Cir. 1998).

443. See *id.* at 1432-34, 46 U.S.P.Q.2d (BNA) at 1229-31 (discussing whether the "one-way" or the "two-way" test is appropriate under the circumstances).

444. *Id.* at 1432, 46 U.S.P.Q.2d (BNA) at 1229. The "two-way test" is reserved for unusual circumstances and allows the examiner to look at whether the patent claims are obvious to the application claims, rather than whether the application claims are obvious to the patent claims. See *In re Braat*, 937 F.2d 589, 592, 19 U.S.P.Q.2d (BNA) 1289, 1291 (Fed. Cir. 1991) (addressing whether a patent application was a mere and obvious variation of an existing patent by determining whether the patent claims are obvious to the application claims).

rates of prosecution.⁴⁴⁵ In addition, Berg argued that claim 1 of the patent was not obvious under claim one of the application and therefore, the rejection of the claims could not be sustained under the “two-way test.”⁴⁴⁶ The Federal Circuit rejected this argument, however, because Berg could have filed all of the claims in one instead of two applications, when the two applications contained nearly identical disclosures.⁴⁴⁷ Thus, the court held that Berg was not entitled to the “two-way test.”⁴⁴⁸

In its discussion of the circumstances in which the “two-way test” is appropriate,⁴⁴⁹ the Court noted that the two-way test applies “when a later-filed improvement patent issues before an earlier filed basic invention.”⁴⁵⁰ The Federal Circuit concluded that when an applicant can file all of its claims in one application, the applicant is not entitled to the exception of the “two-way test.”⁴⁵¹ The court also dismissed Berg’s contention that filing a terminal disclaimer would be unfair.⁴⁵² The court explained that Berg knowingly assumed the risk that he would be required to disclaim terminally by filing two identical applications simultaneously.⁴⁵³ Thus, the court applied the “one-way test” to Berg’s two simultaneously filed patent applications and affirmed the decision of the Board.⁴⁵⁴

D. Written Description

The written description requirement of 35 U.S.C. § 112, ¶ 1, mandates that the specification adequately described the subject matter. Although the specification does not need to describe the

445. See *In re Berg*, 140 F.3d at 1432, 46 U.S.P.Q.2d (BNA) at 1229. Berg argued that he should not be penalized merely because the PTO issued one claim before the other, especially when both claims had been filed simultaneously. See *id.* at 1433, 46 U.S.P.Q.2d (BNA) at 1230. Thus, Berg claimed that because the PTO was responsible for the differing prosecution rates—one claim issued before the other—the “two-way test” ought to apply in order to account for the PTO’s actions.

446. See *id.*, 46 U.S.P.Q.2d (BNA) at 1230.

447. See *id.*, 46 U.S.P.Q.2d (BNA) at 1230.

448. See *id.*, 46 U.S.P.Q.2d (BNA) at 1230.

449. The court uses the example of *In re Braat* in holding that the “two-way test” is appropriate when: (1) the filing party could not file both claims together because “the inventive entity named in the application did not invent the subject matter of all the patent claims and vice versa,” (2) the “patent invention . . . [was] totally separate from that of [the application], and could conceivably have been developed earlier rather than later,” or (3) “when a later-filed improvement patent issues before an earlier filed basic invention.” *Id.* at 1433-34, 46 U.S.P.Q.2d (BNA) at 1230 (citations omitted).

450. *Id.* at 1434, 46 U.S.P.Q.2d (BNA) at 1230 (quoting *In Re Braat*, 937 F.2d at 593, 19 U.S.P.Q.2d (BNA) at 1292).

451. See *id.* at 1434, 46 U.S.P.Q.2d (BNA) at 1231 (admonishing Berg for taking a “calculated risk” when he simultaneously filed two applications).

452. See *id.* at 1435, 46 U.S.P.Q.2d (BNA) at 1231.

453. See *id.* at 1437, 46 U.S.P.Q.2d (BNA) at 1233.

454. See *id.*, 46 U.S.P.Q.2d (BNA) at 1233.

claimed subject matter in any particular form, it must convey with reasonable clarity to one skilled in the art, that, as of the filing date, the inventor was in possession of the invention.⁴⁵⁵

In *Gentry Gallery, Inc. v. Berklene Corp.*,⁴⁵⁶ Berklene argued that certain claims of Gentry's patent were invalid for failing to comply with the written description requirement of 35 U.S.C. § 112, ¶ 1.⁴⁵⁷ Berklene argued that the patent only described sofas with controls on the console,⁴⁵⁸ while "an object of the invention [was] to provide a sectional sofa with a console . . . that accommodates the controls for both the reclining seats"⁴⁵⁹ According to the court, "the original disclosure clearly identifies the console as the only possible location for the controls."⁴⁶⁰ Applicants only are entitled to claims that their disclosure will allow.⁴⁶¹ Claims may be no broader than the supporting disclosure, and therefore, a narrow disclosure will limit claim breadth.⁴⁶²

E. Best Mode

The "best mode" requirement set out in 35 U.S.C. § 112 requires a patent's specification to set forth "the best mode contemplated by the inventor of carrying out his invention." The requirement asks whether the inventor had, at the time the patent application was filed, a preferred way of practicing the invention, and if so, whether the preferred way was disclosed in sufficient detail to allow "a skilled artisan to practice it without undue experimentation. . . ."⁴⁶³

In *Nobelpharma AB v. Implant Innovations, Inc.*,⁴⁶⁴ the Federal Circuit reviewed a grant of judgment as a matter of law on patent invalidity for failure to disclose, as required by 35 U.S.C. § 112, the best mode

455. *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 19 U.S.P.Q.2d (BNA) 1111 (Fed. Cir. 1991). See generally 35 U.S.C. § 112 (1994). The statute notes that:

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

Id.

456. 134 F.3d 1473, 45 U.S.P.Q.2d (BNA) 1498, *reh'g denied*, No. 97-1182, 1998 U.S. App. LEXIS 7500 (Fed. Cir. Apr. 3, 1998).

457. See *id.* at 1478, 45 U.S.P.Q.2d (BNA) at 1502.

458. See *Gentry Gallery*, 134 F.3d at 1478, 45 U.S.P.Q.2d (BNA) at 1502.

459. *Id.*, 45 U.S.P.Q.2d (BNA) at 1502.

460. *Id.* at 1479, 45 U.S.P.Q.2d (BNA) at 1503.

461. See *id.* at 1480, 45 U.S.P.Q.2d (BNA) at 1503 (citing *In re Rasmussen*, 650 F.2d 1212, 1214, 211 U.S.P.Q. (BNA) 323 (C.C.P.A. 1981)).

462. See *id.*, 45 U.S.P.Q.2d (BNA) at 1503.

463. *Nobelpharma AB v. Implant Innovations, Inc.*, 141 F.3d 1059, 1064, 46 U.S.P.Q.2d (BNA) 1097, 1101 (Fed. Cir. 1998).

464. 141 F.3d 1059, 46 U.S.P.Q.2d (BNA) 1097 (Fed. Cir. 1998).

contemplated by the inventor of carrying out the invention.⁴⁶⁵ In response to Nobelpharma's ("NP") argument that the district court erred in granting judgment as a matter of law,⁴⁶⁶ Implant Innovations ("3I") argued that NP's own admissions indicated that it developed and tested a preferred method of making the claimed invention when the patent application was filed.⁴⁶⁷

The Federal Circuit reapplied the standard used by the district court to review the grant of 3I's motion for judgment as a matter of law.⁴⁶⁸ Under the applicable standard of review, the record is reviewed in the light most favorable to the non-movant. Therefore, the non-movant is afforded the benefit of all reasonable inferences and the court will affirm if the judgment is the only one possible under controlling law.⁴⁶⁹ The determination of whether a patent fails to comply with the best mode requirement involves two factual inquiries.⁴⁷⁰ First, the fact finder must determine whether, at the time the patent application was filed, the inventor had a best mode of practicing the invention.⁴⁷¹ Second, if a best mode existed, the fact finder must determine whether it was disclosed "in sufficient detail to allow a skilled artisan to practice it without undue experimentation."⁴⁷²

At trial, the deposition statements of the inventor, which NP offered into evidence, actually weakened NP's case.⁴⁷³ Indeed, the inventor's testimony explicitly stated that the patent did not include some details of the invention. The court found the inventor's testimony to be persuasive evidence because it demonstrated that, "[the inventor] was aware that a variety of undisclosed machining parameters were critical to the production of a functional implant at

465. *See id.* at 1061, 46 U.S.P.Q.2d (BNA) at 1098-99 (defining the issues under review as (1) whether the patent is invalid due to a "failure to disclose the best mode of carrying out the invention," (2) whether the patent infringes upon an earlier patent, and (3) whether claimant is entitled to either a court judgment or a new trial).

466. *See id.* at 1063-64, 46 U.S.P.Q.2d (BNA) at 1100-01.

467. *See id.* at 1064, 46 U.S.P.Q.2d (BNA) at 1100-01.

468. *See id.* at 1064, 46 U.S.P.Q.2d (BNA) at 1101 (explaining that the district court's decision would be reviewed under the *de novo* standard).

469. *See id.*, 46 U.S.P.Q.2d (BNA) at 1101 (citations omitted) (ruling that under FED. R. CIV. P. 50(a), "the verdict may be directed . . . when it is clear that completion of the trial is unnecessary in that the only sustainable verdict could be in favor of the defendant") (citing *Allied Colloids, Inc. v. American Cyanamid Co.*, 64 F.3d 1570, 1573 (Fed. Cir. 1995)).

470. *See id.*, 46 U.S.P.Q.2d (BNA) at 1101.

471. *See id.*, 46 U.S.P.Q.2d (BNA) at 1101.

472. *See id.*, 46 U.S.P.Q.2d (BNA) at 1101 (stating that the existence of a disclosure is determined on an objective basis).

473. *See Nobelpharma AB v. Implant Innovations, Inc.*, 930 F. Supp. 1241, 1247-48 (N.D. Ill. 1996), *aff'd*, 141 F.3d 1059, 46 U.S.P.Q.2d (BNA) 1097 (Fed. Cir. 1997), *cert. denied*, 119 S. Ct. 178 (1998).

the time he filed his patent application.”⁴⁷⁴ The Federal Circuit found that the evidence led to one reasonable conclusion: the inventor failed to disclose his best mode of practicing the invention.⁴⁷⁵ A grant of judgment as a matter of law in favor of a party bearing the burden of proof may be granted only when the only reasonable conclusion is a decision in favor of the movant.⁴⁷⁶ In unusual circumstances, like those in *Nobelpharma*, an admission by the plaintiff’s witness can support entry of judgment as a matter of law in favor of the defendant.⁴⁷⁷

F. Definiteness

Paragraph two of 35 U.S.C. § 112 requires that a patent specification conclude with claims that particularly point out and distinctly claim the subject matter of the invention.⁴⁷⁸ This requirement has come to be known as the “definiteness requirement.”⁴⁷⁹

In *Personalized Media Communications, LLC v. International Trade Commission*,⁴⁸⁰ the Federal Circuit considered whether the patent’s claims were statutorily indefinite and thereby, in violation of 35 U.S.C. § 112. To determine whether a claim is sufficiently definite, the trier of fact must decide whether one skilled in the art would understand the bounds of the claims when read in light of the specification.⁴⁸¹ In *Personalized Media Communications*, the Federal Circuit found that the International Trade Commission official overseeing the proceeding erred in finding the asserted claims to be indefinite and noted that the evidence did not indicate that the claims were imprecise.⁴⁸²

474. *Nobelpharma*, 141 F.3d at 1065, 45 U.S.P.Q.2d (BNA) at 1102.

475. *See id.*, 46 U.S.P.Q.2d (BNA) at 1101-02.

476. *See id.*, 46 U.S.P.Q.2d (BNA) at 1102 (“Accordingly, grant of JMOL in favor of a party bearing the burden of proof may be granted only where . . . the ‘only reasonable conclusion is in [the movant’s] favor.’”) (quoting *Hurd v. American Hoist & Derrick Co.*, 734 F.2d 495 (10th Cir. 1984)).

477. *See id.*, 46 U.S.P.Q.2d (BNA) at 1102 (“Given [plaintiff’s] admission, we conclude that this is one of those ‘extreme’ cases in which it was not improper to grant judgment as a matter of law in favor of a defendant on an issue regarding which it bore the burden of proof.”).

478. 35 U.S.C. § 112 (1994).

479. *See Personalized Media Communications, LLC v. International Trade Comm’n*, 161 F.3d 696, 705, 48 U.S.P.Q.2d (BNA) 1880, 1891 (Fed. Cir. 1998).

480. 161 F.3d 696, 48 U.S.P.Q.2d (BNA) 1880 (1998), *reh’g denied, reh’g en banc denied*, No. 98-1160, 1999 U.S. App. LEXIS 4910 (Fed. Cir. Feb. 19, 1999).

481. *See id.*, 161 F.3d at 705, 48 U.S.P.Q.2d (BNA) at 1888.

482. *See id.* at 705-06, 48 U.S.P.Q.2d (BNA) at 1888-89.

G. Means-Plus-Function

Paragraph six of § 112 of the Patent Act allows an inventor to express an element in a claim as a means or step for performing a specified function without the recital of structure.⁴⁸³ For example, a patentee may claim a device comprising a first wooden board, a second wooden board, and a nail connecting the first and second wooden boards. Paragraph six, however, allows the patentee to claim a device comprising a first wooden board, a second wooden board, and *means for connecting* the first wooden board to the second wooden board. At first glance this means-plus-function way of claiming elements seems to allow a patentee broad protection. As will be gleaned from the cases, however, the protection afforded by this drafting technique is actually quite limited.

In *Cybor Corp. v. FAS Technologies, Inc.*,⁴⁸⁴ the Federal Circuit addressed the construction of two means-plus-function limitations in the relevant claims.⁴⁸⁵ In doing so, the court interpreted 35 U.S.C. § 112, ¶ 6 and explained that under the statute “an accused device with structure not identical to the structure described in the patent will literally infringe the patent if the device performs the identical function required by the claim with a structure equivalent to that described in the patent.”⁴⁸⁶ Accordingly, the prosecution history is relevant to the construction of means-plus-function language claims because a patent applicant may surrender subject matter that is arguably within the scope of the specification in order to overcome a prior art rejection.⁴⁸⁷

In *Cyber Corp.*, the Federal Circuit did not find that the district court erred in its claim construction⁴⁸⁸ or in its refusal to grant judgment as a matter of law.⁴⁸⁹ In addition, the court found the district court’s jury instructions sufficient, even though the

483. 35 U.S.C. § 112, ¶ 6 (1994).

484. 138 F.3d 1448, 46 U.S.P.Q.2d (BNA) 1169 (Fed. Cir. 1998) (en banc).

485. *See id.* at 1457, 46 U.S.P.Q.2d (BNA) at 1175.

486. *Id.*, 46 U.S.P.Q.2d (BNA) at 1175.

487. *See id.*, 46 U.S.P.Q.2d (BNA) at 1175-76 (discussing whether the district court properly refused to limit the scope of the claims “based on statements made to the examiner during prosecution” and concluding that the “relevant inquiry is whether a competitor would reasonably believe that the applicant had surrendered the relevant subject matter”).

488. The district court construed the disputed language at issue in each of the claims. Notably, the court instructed the jury that the second pumping means limitation within the claim “refers to a structure identical to the structure disclosed in the specification of the patent, or the equivalent to that structure, which performs the function of fluid accumulator/dispense pump.” *Id.* at 1458, 46 U.S.P.Q.2d (BNA) at 1176. Accordingly, the Federal Circuit ruled that such construction “did not narrow the scope of the claim language” so as to create an error in the jury instructions. *Id.*, 46 U.S.P.Q.2d (BNA) at 1176.

489. *See id.* at 1458, 46 U.S.P.Q.2d (BNA) at 1176 (emphasizing that the district court “construed several limitations, or disputed language, in the claims”).

instructions failed to narrow the scope of the claim to exclude a pump with any external reservoir as urged by Cybor.⁴⁹⁰ The Federal Circuit explained that the district court instructed the jury to determine two issues: (1) whether Cybor's device, with its pump and attached reservoir was structurally equivalent, and (2) whether Cybor's device possessed the same functionality as the second pumping means.⁴⁹¹ The Federal Circuit agreed with the district court's claim construction and jury instructions, finding that "nothing in the specification or prosecution history suggests the interpretation put forth by [the claimant]."⁴⁹²

In *Cybor Corp.*, the inventors also limited the scope of their claims to overcome a prior art reference⁴⁹³ by emphasizing the distinctions between the prior art container and the claimed invention.⁴⁹⁴ According to the district court's claim constructions, the inventors did not disclaim a reservoir in overcoming the prior art.⁴⁹⁵ Thus, the Federal Circuit found that the district court's interpretations were supported by substantial evidence and concluded that it properly denied Cybor's motion for judgment as a matter of law as to literal infringement.⁴⁹⁶

Chiuminatta Concrete Concepts, Inc. also involved the means-plus-function issue.⁴⁹⁷ The Federal Circuit once again stated that a means-plus-function claim under 35 U.S.C. § 112, ¶ 6 cannot be read to cover any structure that would perform the claimed function.⁴⁹⁸

Chiuminatta owned U.S. Patent No. 5,056,499 ("the '499 patent"), claiming an apparatus for cutting concrete at a time before the concrete reaches its final, hardened stage.⁴⁹⁹ Cardinal manufactured and sold the Green Machine TM saw, which performed the same function as Chiuminatta's cutting mechanism.⁵⁰⁰ As a result of this functional similarity, Chiuminatta sued Cardinal and alleged literal patent infringement.⁵⁰¹

490. *See id.* at 1458, 46 U.S.P.Q.2d (BNA) at 1176.

491. *See id.*, 46 U.S.P.Q.2d (BNA) at 1176.

492. *Id.* at 1458, 46 U.S.P.Q.2d (BNA) at 1177.

493. *See id.* at 1460, 46 U.S.P.Q.2d (BNA) at 1178.

494. *See id.*, 46 U.S.P.Q.2d (BNA) at 1178.

495. *See id.*, 46 U.S.P.Q.2d (BNA) at 1178 (determining that the inventor's statements "do not show the deliberate unequivocal surrender of all external reservoirs").

496. *See id.* at 1459, 46 U.S.P.Q.2d (BNA) at 1177.

497. *See Chiuminatta Concrete Concepts, Inc. v. Cardinal Indus., Inc.*, 145 F.3d 1303, 1307-09, 46 U.S.P.Q.2d (BNA) 1752, 1755-57 (Fed. Cir. 1998).

498. *See Chiuminatta*, 145 F.3d at 1307-08, 46 U.S.P.Q.2d (BNA) 1755-56.

499. *See id.* at 1305-06, 46 U.S.P.Q.2d (BNA) at 1753-54.

500. *See Chiuminatta Concrete Concepts, Inc. v. Cardinal Indus., Inc.*, No. 95-4995, 1996 U.S. Dist. LEXIS 22196, at *6-7, *aff'd in part, rev'd in part*, 145 F.3d 1303, 46 U.S.P.Q.2d (BNA) 1752 (Fed. Cir. 1998).

501. *See id.*, U.S. Dist. LEXIS 22196, at *11-27.

The pertinent claim in the '499 patent included a means-plus-function limitation: "means connected to the saw for supporting the surface of the concrete adjacent to the leading edge of the cutting blade to inhibit" cracking the concrete.⁵⁰² The only structure disclosed in the patent for "supporting the surface" was a skid plate.⁵⁰³ The Federal Circuit explained, however, that the district court construed the limitation to include "every conceivable support surface."⁵⁰⁴ Thus, the district court found that Cardinal's apparatus literally infringed the '499 patent and granted summary judgment for Chiuminatta.⁵⁰⁵

On appeal, Cardinal argued that the district court erred in its interpretation of the means-plus-function limitation.⁵⁰⁶ Specifically, Cardinal argued that the limitation should be limited to the disclosed skid plate and equivalent structures.⁵⁰⁷ Cardinal asserted that the district court incorrectly identified the disclosed structure broadly based on function, rather than on narrowly defined physical structure.⁵⁰⁸ The Federal Circuit agreed with Cardinal and held that the specification clearly identified the structure that performed the limitation, which was the skid plate.⁵⁰⁹ Thus, the Federal Circuit found the district court's interpretation erroneous.⁵¹⁰

The Federal Circuit also addressed whether the structure employed by Cardinal was equivalent to the skid plate.⁵¹¹ Cardinal's machine utilized wheels to perform the same task as the skid plate.⁵¹² Cardinal argued that the differences between its wheels and Chiuminatta's skid plate were substantial, thereby foreclosing a finding of literal infringement.⁵¹³

502. *Id.*, U.S. Dist. LEXIS 22196, at *15.

503. *Id.*

504. *Chiuminatta*, 145 F.3d at 1307, 46 U.S.P.Q.2d (BNA) at 1755.

505. *See Chiuminatta*, 1996 U.S. Dist. LEXIS 22196, at *28 (granting plaintiff's motion for summary judgment on the literal infringement claim).

506. *See Chiuminatta*, 145 F.3d at 1307, 46 U.S.P.Q.2d (BNA) at 1755 (restating Cardinal's argument that the means limitation should be construed to correspond only to the skid plate and equivalent structures).

507. *See id.*, 46 U.S.P.Q.2d (BNA) at 1755.

508. *See id.*, 46 U.S.P.Q.2d (BNA) at 1755 (reciting Chiuminatta's counter-argument that "the limitation was properly construed as being broader").

509. *See id.* at 1308-09, 46 U.S.P.Q.2d (BNA) at 1756 (disagreeing with the district court's conclusion that "support surface" is a sufficient identification).

510. *See id.*, 46 U.S.P.Q.2d (BNA) at 1756.

511. *See id.* at 1309, 46 U.S.P.Q.2d (BNA) at 1756-57 (explaining that "the proper test is whether the differences between the structure in the accused device and any disclosed in the specification are insubstantial").

512. *See id.*, 46 U.S.P.Q.2d (BNA) at 1757 (addressing Cardinal's assertion that the wheels on its device were not equivalent).

513. *See id.*, 46 U.S.P.Q.2d (BNA) at 1757 (arguing that the wheels were rotatably mounted and thus substantially different from the skid plate).

Persuaded by these arguments, the Federal Circuit held that the differences between the plate and the wheels were substantial.⁵¹⁴ The court pointed both to the differences in physical characteristics and the differences in mode of movement.⁵¹⁵ The court also rejected Chiuminatta's argument that the wheels were equivalent to the plate because the two were interchangeable.⁵¹⁶ Finally, the court discussed the interplay between a means-plus-function analysis and an analysis under the doctrine of equivalents.⁵¹⁷ The court noted that a technological advancement developed after the patent was issued may constitute patent infringement under the doctrine of equivalents, yet may not be considered equivalent under a means-plus-function analysis unless the advancement was disclosed in the patent.⁵¹⁸

H. Inventorship

A patent application may only be made or authorized to be made by the inventor.⁵¹⁹ Failure to properly name the inventor or failure to name all of the true inventors violates the inventorship requirement of 35 U.S.C. § 102(f) and is grounds for invalidating a patent.⁵²⁰

In *Pannu v. Iolab Corp.*,⁵²¹ the Federal Circuit reversed the district court's decision, that Iolab failed to invalidate the patent at issue on the ground of improper inventorship.⁵²² Pannu sued Iolab for infringement of its patent related to intraocular plastic lenses.⁵²³ The patent at issue addressed two improvements over the prior art: (1) the reduction of snagging on the eye tissue caused by the lens during insertion,⁵²⁴ and (2) a one-piece construction of the lens that makes its manufacture easier.⁵²⁵

514. *See id.*, 46 U.S.P.Q.2d (BNA) at 1757 (concluding that no reasonable jury could find other than that the wheels and the skid plate were substantially different).

515. *See id.*, 46 U.S.P.Q.2d (BNA) at 1757.

516. *See id.*, 46 U.S.P.Q.2d (BNA) at 1757. The court recognized that known interchangeability is an important factor when one determines equivalence. The court noted, however, that this factor is not dispositive and that interchangeability is common among structures that perform the same function. *See id.*, 46 U.S.P.Q.2d (BNA) at 1757.

517. *See id.* at 1310, 46 U.S.P.Q.2d (BNA) at 1757 (comparing analysis under 35 U.S.C. § 112, ¶6 and the doctrine of equivalents).

518. *See id.* at 1310-11, 46 U.S.P.Q.2d (BNA) at 1757-58.

519. *See* 35 U.S.C. § 111 (1994).

520. *See* 35 U.S.C. § 102(f) (1994) ("A person shall be entitled to a patent unless—(f) he did not himself invent the subject matter sought to be patented.").

521. 155 F.3d 1344, 47 U.S.P.Q.2d (BNA) 1657 (Fed. Cir. 1998).

522. *See id.* at 1345, 47 U.S.P.Q.2d (BNA) at 1658 (noting that the district court granted judgment as a matter of law).

523. *See id.* at 1347, 47 U.S.P.Q.2d (BNA) at 1659.

524. *See id.*, 47 U.S.P.Q.2d (BNA) at 1659.

525. *See id.* at 1346-47, 47 U.S.P.Q.2d (BNA) at 1659-60 (detailing the new manufacturing parameters).

In defense to Pannu's infringement charge, Iolab argued that the patent was invalid under 35 U.S.C. § 102(f) for failure to name the true inventor.⁵²⁶ Iolab asserted that one of its own employees developed the idea of one-piece construction during conversations with the plaintiff and that the plaintiff failed to list the employee as a co-inventor.⁵²⁷ Furthermore, Iolab asserted that even if Pannu corrected the inventorship,⁵²⁸ the patent still would be invalid for failure to disclose the inventor's best mode⁵²⁹ of making the claimed one-piece lenses.⁵³⁰

The Federal Circuit explained that proof of non-joinder of an actual inventor by clear and convincing evidence renders a patent invalid unless the patentee can demonstrate that inventorship can be corrected under 35 U.S.C. § 256.⁵³¹ Section 256 is a saving provision under which a patentee can correct inventorship and avoid invalidation if the patentee can show that the error occurred without any deceptive intent on the part of the named inventor.⁵³²

In *Pannu*, the Federal Circuit first examined the requirements for joint inventor status.⁵³³ The requirements are that the joint inventor:

- (1) contribute in some significant manner to the conception or reduction to practice of the invention, (2) make a contribution to the claimed invention that is not insignificant in quality . . . and
- (3) do more than merely explain to the real inventors well-known concepts and/or the current state of the art.⁵³⁴

The court then considered Pannu's discussion with Iolab about the invention and noted that it was undisputed that the Iolab employee was the first person to suggest a one-piece construction.⁵³⁵ Thus, the court held that a reasonable jury could find that Iolab's employee was a co-inventor and should have been listed as such on the patent.⁵³⁶

526. *See Pannu*, 155 F.3d at 1348-51, 47 U.S.P.Q.2d (BNA) at 1660-63.

527. *See id.* at 1348, 47 U.S.P.Q.2d (BNA) at 1660-61 (explaining Iolab's assertion that the employee's contribution to the design of the snag-resistant lens qualified the employee as a co-inventor).

528. *See* 35 U.S.C. § 256 (1994) (permitting the Commissioner, "on application of all the parties and assignees, with proof of the facts and such other requirements as may be imposed [to] issue a certificate correcting such error").

529. 35 U.S.C. § 112 requires a patentee to set forth the best mode contemplated by the inventor of carrying out his invention. *See supra* Part II.F.

530. *See Pannu*, 155 F.3d at 1348, 47 U.S.P.Q.2d (BNA) at 1661.

531. *See id.* at 1350, 47 U.S.P.Q.2d (BNA) at 1662 (stating that "in cases of misjoinder and non-joinder the operation of [35 U.S.C. §] 102(f) is ameliorated by section 256").

532. *See id.* at 1351, 47 U.S.P.Q.2d (BNA) at 1662 (describing the saving provision of § 256 and stating that, if correctable, the district court must order correction).

533. *See id.*, 47 U.S.P.Q.2d (BNA) at 1663.

534. *Id.*, 47 U.S.P.Q.2d (BNA) at 1663.

535. *See id.*, 47 U.S.P.Q.2d (BNA) at 1663 (applying the test and concluding that a reasonable jury could find that the Iolab employee is a co-inventor).

536. *See id.*, 47 U.S.P.Q.2d (BNA) at 1663.

Accordingly, the district court's grant of judgment as a matter of law against Iolab was improper.⁵³⁷

The issue of correct inventorship also may appear in the context of an interference.⁵³⁸ In *Schulze v. Green*,⁵³⁹ the PTO declared an interference between a patent application, naming Schulze and Sherman as inventors, and U.S. Patent No. 5,156,315 ("the 315 patent"), issued to Green.⁵⁴⁰ Three months after the interference was declared, the applicants, Schulze and Sherman, filed a motion to correct inventorship on their application.⁵⁴¹ Green opposed the motion for failure to comply with the filing requirements of 37 C.F.R. §§ 1.48 and 1.639 and then requested a period of testimony, which the applicants opposed.⁵⁴² The administrative patent judge ("APJ") dismissed the applicants' motion to correct inventorship without prejudice, stating that the motion to correct may be filed or refiled at any appropriate time in an interference.⁵⁴³ Despite the opportunity to refile their motion to correct during the interference, the applicants failed to do so.⁵⁴⁴

During the administrative proceeding, Green could not show priority of inventorship. Schulze and Sherman, initially believing that Green would be able to prove priority, offered to renew their motion to correct inventorship, but elected not to do so. They believed Green did not have standing to attack inventorship once the court found against him on the issue of priority.⁵⁴⁵ Thus, the applicants preferred to wait until after judgment on the interference issue and a return to the *ex parte* examination to refile the motion.⁵⁴⁶ Green, however, filed another motion for judgment under 35 U.S.C. § 102(f) and argued that the count's subject matter was unpatentable because

537. *See id.*, 47 U.S.P.Q.2d (BNA) at 1663.

538. The purpose of an interference is not to resolve the question of priority of invention when more than one person seeks ownership of substantially the same invention. *See* 35 U.S.C. § 135 (1994).

539. 136 F.3d 786, 45 U.S.P.Q.2d (BNA) 1769 (Fed. Cir. 1998).

540. *See id.* at 788, 45 U.S.P.Q.2d (BNA) at 1771.

541. In their motion, the applicants stated that the counts at issue were invented by Schulze alone, rather than by both Schulze and Sherman. *See id.*, 45 U.S.P.Q.2d (BNA) at 1771.

542. *See id.*, 45 U.S.P.Q.2d (BNA) at 1771; *see also* 37 C.F.R. § 1.48(a) (1999). Section 1.48(a) states in part:

correction of inventorship require[s]: 1. Diligence, 2. A statement of facts verified by the original named inventors establishing when and how the error occurred without deceptive intent; 3. An oath or declaration by each actual inventor as required by 1.63; 4. The fee set forth in 1.17(h); and 5. The written consent of the assignee.

Id.

543. *Schulze*, 136 F.3d at 788, 45 U.S.P.Q.2d (BNA) at 1771.

544. *See id.*, 45 U.S.P.Q.2d (BNA) at 1771.

545. *See id.*, 45 U.S.P.Q.2d (BNA) at 1771.

546. *See id.*, 45 U.S.P.Q.2d (BNA) at 1772.

of the applicants' failure to recite the correct inventorship in the application.⁵⁴⁷ After the APJ deferred decision, the Board entered a judgment against Green for lack of priority and against the applicants for "failure to diligently correct inventorship."⁵⁴⁸

On appeal to the Federal Circuit, the applicants argued their entitlement to correct inventorship upon resumption of the *ex parte* examination.⁵⁴⁹ The court held that because the applicants fairly placed correct inventorship at issue, and possessed the necessary facts, the inventorship issue should have been decided *inter partes* during the interference.⁵⁵⁰ In explaining its holding, the court noted that for the inventorship issue to be appealable to the Board it must have been "fully developed" before the Board.⁵⁵¹ The court further noted that Congress intended the Board to hear matters that Congress "fairly place[d] at issue in the proceeding."⁵⁵² The court then reasoned that filing a motion to correct inventorship during the interference proceeding fairly placed the issue of the inventorship in the interference and thus was appealable to the Board.⁵⁵³

Once fairly raised during an interference proceeding, the facts relating to the inventorship issue must be developed fully to ensure proper adjudication.⁵⁵⁴ In *Schulze*, the applicants argued that the APJ's denial of Green's second motion for testimony with respect to the inventorship issue, as well as the Board's decision to vacate Green's earlier testimony order, prevented the facts from being fully developed and thus could not be properly adjudicated during the interference.⁵⁵⁵ The court found no merit in the applicants' argument that the Board erred when it decided the inventorship issue. The court reasoned that because the applicants were aware of all the facts necessary to support a change in inventorship and could have presented these facts in a proper motion, their failure to do so was insufficient to preclude the Board from deciding the issue.⁵⁵⁶

547. *See id.* at 789, 45 U.S.P.Q.2d (BNA) at 1772.

548. *Id.*, 45 U.S.P.Q.2d (BNA) at 1772.

549. *See id.*, 45 U.S.P.Q.2d (BNA) at 1772 (explaining that because Green did not prevail on the issue of priority of invention, he had "no assertable legal interest in any impact of correct inventorship on the patentability of application claims").

550. *See id.* at 790-92, 45 U.S.P.Q.2d (BNA) at 1773-75 (stating that issues that are fully developed before the Board should be addressed by the Board, but where an issue is "fairly placed at issue" in a proceeding, it should be decided).

551. *See id.*, 45 U.S.P.Q.2d (BNA) at 1773.

552. *Id.*, 45 U.S.P.Q.2d (BNA) at 1773 (quoting *Perkins v. Kwon*, 886 F.2d 325, 328, 12 U.S.P.Q.2d (BNA) 1308, 1311 (Fed. Cir. 1989)).

553. *See id.*, 45 U.S.P.Q.2d (BNA) at 1773 ("The very filing of this motion fairly placed the issue of the inventorship of Appellant's application in the interference.").

554. *See id.*, 45 U.S.P.Q.2d (BNA) at 1773.

555. *See id.*, 45 U.S.P.Q.2d (BNA) at 1773.

556. *See id.*, 45 U.S.P.Q.2d (BNA) at 1773 (adding that appellants should not have the

The court then held that a patentability question fairly raised and capable of being fully presented must be resolved *inter partes*.⁵⁵⁷ The court noted that the Manual of Patent Examining Procedure ("MPEP") places patent practitioners on notice that the Board will decide all issues fairly raised and fully developed in the interference, including issues that relate to patentability, pursuant to the 1984 Amendments.⁵⁵⁸ Therefore, the applicants should have known that they had to file a motion to correct inventorship during the interference.⁵⁵⁹ The APJ, however, unintentionally indicated that the applicants could wait until return to *ex parte* proceedings to refile.⁵⁶⁰ Thus, while proper procedure dictated that the applicants should have corrected inventorship during the interference, the court held that the parties were not given adequate notice of this fact and were actually mistakenly misled by the APJ into believing that they could wait.⁵⁶¹ Accordingly, the Federal Circuit remanded to the Board with instructions to allow Schulze and Sherman to reform and refile their motion within a set period of time.⁵⁶²

The Federal Circuit also examined the related doctrine of inventor's rights in *Ethicon, Inc. v. United States Surgical Corp.*⁵⁶³ In *Ethicon*, the Federal Circuit affirmed the dismissal of an infringement suit on the ground that the newly added co-inventor did not consent to the suit.⁵⁶⁴ Yoon, the patentee, and Ethicon Inc., his exclusive licensee, owned U.S. Patent No. 4,535,773 ("the '773 patent"), which related to trocars, a surgical instrument that makes small incisions in the wall of a body cavity to admit endoscopic instruments.⁵⁶⁵

Yoon and Ethicon sued United States Surgical Corp. for infringement of the '773 patent.⁵⁶⁶ While the suit was still pending,

opportunity to manipulate the interference process through such conduct in order to evade a more rigorous *inter partes* proceeding).

557. See *id.* at 791, 45 U.S.P.Q.2d (BNA) at 1774.

558. See Patent Law Amendments Act of 1984, Pub. L. No. 98-622, §§ 201-207, 98 Stat. 3383, 3386-89 (1984) (codified as amended at 35 U.S.C. § 135(a) (1994)); see also 130 CONG. REC. 28,065, 28,072 (1984), reprinted in 1984 U.S.C.C.A.N. 5827, 5836-37 (stating that by combining the two boards, "all issues of patentability and priority which arise in an interference can be decided in a single proceeding rather than in a series of complicated *inter partes* or *ex partes* proceedings").

559. See *Schulze*, 136 F.3d at 791, 45 U.S.P.Q.2d (BNA) at 1774.

560. See *id.* at 788, 45 U.S.P.Q.2d (BNA) at 1772 (noting the APJ's statement concerning refiling in his dismissal of the motion to correct inventorship).

561. See *id.* at 791, 45 U.S.P.Q.2d (BNA) at 1774 (acknowledging that the APJ contributed to the confusion by not clearly stating appellants' obligation to correct inventorship *inter partes*).

562. See *id.*, 45 U.S.P.Q.2d (BNA) at 1774.

563. 135 F.3d 1456, 45 U.S.P.Q.2d (BNA) 1545 (Fed. Cir.), cert. denied, 119 S. Ct. 278 (1998); see also *infra* Part VI.F (discussing the licensing aspects of *Ethicon*).

564. See *id.* at 1460, 45 U.S.P.Q.2d (BNA) at 1547.

565. See *id.* at 1459, 45 U.S.P.Q.2d (BNA) at 1546-47.

566. See *Ethicon, Inc. v. United States Surgical Corp.*, 954 F. Supp. 51 (D. Conn. 1997), *aff'd*,

U.S. Surgical became aware of an associate of Yoon's, Mr. Choi, who worked on portions of the patented trocars and claimed to have contributed to the '773 invention.⁵⁶⁷ Mr. Choi had not been named as an inventor, but had granted U.S. Surgical a "retroactive license" to practice his "trocar related inventions."⁵⁶⁸ U.S. Surgical then moved to correct inventorship under 35 U.S.C. § 256, claiming that Choi was a co-inventor.⁵⁶⁹ U.S. Surgical next moved to dismiss the infringement suit, and asserted that Choi, as a joint owner of the patent, had granted U.S. Surgical a valid license under the patent.⁵⁷⁰

For a person to be considered a joint inventor, it is not necessary for him to "make the same type or amount of contribution" to the invention as the other inventor(s).⁵⁷¹ A co-inventor does not need to make a contribution to every claim; a contribution to one claim is enough.⁵⁷² Furthermore, each co-inventor needs only to perform a part of the task producing the invention.⁵⁷³ One does not qualify as a joint inventor, however, by merely assisting the actual inventor after conception of the claimed invention.⁵⁷⁴ Finally, "one of ordinary skill in the art who simply reduced the inventor's idea to practice is not necessarily a joint inventor."⁵⁷⁵

Applying the above principles to the case, the district court dismissed the suit because it found that Choi was in fact a joint inventor of the '773 patent and that he had granted U.S. Surgical a license to practice the entire invention disclosed in the '773 patent.⁵⁷⁶ The fact that Choi only had contributed to two of the fifty-five claims disclosed in the '773 patent was irrelevant.⁵⁷⁷

On appeal, the Federal Circuit began by explaining that "[t]o show

135 F.3d 1456, 45 U.S.P.Q.2d (BNA) 1545 (Fed. Cir.), *cert. denied*, 119 S. Ct. 278 (1998).

567. *See Ethicon*, 135 F.3d at 1459, 45 U.S.P.Q.2d (BNA) at 1547.

568. *See id.*, 45 U.S.P.Q.2d (BNA) at 1547.

569. *See id.*, 45 U.S.P.Q.2d (BNA) at 1547.

570. *See id.*, 45 U.S.P.Q.2d (BNA) at 1547.

571. *See* 35 U.S.C. § 116 (1994) (stating in part that "[i]nventors may apply for a patent jointly even though . . . (2) each did not make the same type or amount of contribution . . .").

572. *See id.* (providing that "[i]nventors may apply for a patent jointly even though . . . (3) each did not make a contribution to the subject matter of every claim of the patent"); *see also Ethicon*, 135 F.3d at 1460, 45 U.S.P.Q.2d (BNA) at 1548 (stating that one can qualify as a co-inventor by performing "only part of the task which produces the invention," but one cannot qualify by only offering assistance to the actual inventor following the conception of the invention).

573. *See Ethicon*, 135 F.3d at 1460, 45 U.S.P.Q.2d (BNA) at 1548 (citing 35 U.S.C. § 116 (1994)).

574. *See id.*, 45 U.S.P.Q.2d (BNA) at 1548 (emphasizing that the critical factor is who conceived the subject matter of the disputed claims).

575. *Id.*, 45 U.S.P.Q.2d (BNA) at 1548.

576. *See Ethicon, Inc. v. United States Surgical Corp.*, 954 F. Supp. 51, 54 (D. Conn. 1997).

577. *See id.* at 52-53 (citing the informal partnership agreement, among other reasons, in reaching its conclusion that Choi contributed to the subject matter of two of the '773 claims).

co-inventorship . . . an alleged co-inventor or co-inventors must prove their contribution to the conception of the claims by clear and convincing evidence.⁵⁷⁸ An alleged co-inventor must also supply evidence that corroborates his testimony, which the court evaluates under a “rule of reason” standard.⁵⁷⁹

The court determined that Choi’s testimony, corroborated by contemporaneous sketches he made of the trocars, proved his contribution to at least certain portions of the asserted claims.⁵⁸⁰ For example, with respect to claim 33, the Federal Circuit agreed that Choi conceived of locating a blunt probe in a shaft and allowing it to pass through an aperture in a blade surface.⁵⁸¹ In addition, the Federal Circuit agreed that the district court justifiably discounted Yoon’s testimony because the record supported the conclusion that Yoon altered and backdrafted documents to make it appear that he independently invented the trocars.⁵⁸² Thus, the court held that Choi demonstrated that he was entitled to co-inventor status and thus was entitled to grant U.S. Surgical a license to practice the invention.⁵⁸³

Of particular note in *Ethicon* was Judge Newman’s dissent. Judge Newman disagreed with the majority’s conclusion that co-inventorship of one claim entitles one to co-ownership of the patent as a whole.⁵⁸⁴ In particular, Judge Newman determined that the 1984 amendments,⁵⁸⁵ which eased the requirements for naming inventors, did not affect the more stringent law on ownership.⁵⁸⁶

I. *Inequitable Conduct*

Any person conducting business before the PTO has a duty to disclose to the PTO all information of which he or she is aware of

578. *Ethicon*, 135 F.3d at 1461, 45 U.S.P.Q.2d (BNA) at 1548.

579. *See id.* at 1461, 1464, 45 U.S.P.Q.2d (BNA) at 1548, 1551; *see also* Holmwood v. Sugavanam, 948 F.2d 1236, 1238-39, 20 U.S.P.Q.2d (BNA) at 1712, 1714 (Fed. Cir. 1991) (defining the “rule or reason” analysis in the context of patent and trademark cases as “requiring the Patent and Trademark Office to examine, analyze, and evaluate reasonably all pertinent evidence when weighing the credibility of an inventor’s story”) (citations omitted).

580. *See Ethicon*, 135 F.3d at 1464, 45 U.S.P.Q.2d (BNA) at 1551 (declining to reevaluate the district court’s conclusion that adequate corroboration existed to satisfy the “rule of reason”).

581. *See id.* at 1462, 45 U.S.P.Q.2d (BNA) at 1549 (agreeing with the district court that Choi’s testimony was more credible and affirming the finding that Choi conceived part of the claim 33 invention).

582. *See id.*, 45 U.S.P.Q.2d (BNA) at 1549.

583. *See id.* at 1465, 45 U.S.P.Q.2d (BNA) at 1551-52.

584. *See id.* at 1468-69, 45 U.S.P.Q.2d (BNA) at 1555 (Newman, J., dissenting).

585. *See* The Patent Law Amendments Act of 1984, Pub. L. No. 98-622, title I, § 104(a), 98 Stat. 3384 (codified at 35 U.S.C. § 116 (1994)). This provision amended the first paragraph of § 116 by adding a sentence stating that inventors may apply jointly for a patent even though each did not contribute to every claim of the patent. *See id.*

586. *See Ethicon*, 135 F.3d at 1469, 45 U.S.P.Q.2d (BNA) at 1555.

that is material to the patent application process.⁵⁸⁷ Applicants also have a duty to refrain from misrepresenting facts.⁵⁸⁸ A person violating this duty is guilty of “inequitable conduct” which renders the patent unenforceable.⁵⁸⁹ That is, a patent may be unenforceable due to inequitable conduct if the applicant, with intent to deceive the PTO, withheld or submitted false material information.⁵⁹⁰

In *Goodyear Tire & Rubber Co. v. Hercules Tire & Rubber Co.*,⁵⁹¹ the Federal Circuit reviewed the lower court’s decision that Goodyear had not committed inequitable conduct.⁵⁹² In *Goodyear Tire & Rubber Co.*, the plaintiff alleged that Goodyear did not disclose, with the intent to deceive the examiner, a prior tire design that was material.⁵⁹³ Although the trial court found that the prior art was material based on Goodyear’s admission that the prior art tire was the market leader and the inventor’s purpose was to design a tire to compete with it, the court did not find evidence of an intent to deceive.⁵⁹⁴ Without providing much reasoning, the Federal Circuit noted that trial courts are in the best position to weigh evidence that involves credibility determinations, and thus reviewing courts should afford substantial deference to such decisions. Accordingly, because the Federal Circuit was not presented with clear and convincing evidence of intent to deceive the examiner, it affirmed the lower court’s finding of no inequitable conduct.⁵⁹⁵

The Federal Circuit, in *Key Pharmaceuticals, Inc. v. Hercon Laboratories Corp.*,⁵⁹⁶ affirmed the enforceability of a patent owned by Key Pharmaceuticals, Inc.⁵⁹⁷ Key’s patent, U.S. Patent No. 5,186,938 (“the ‘938 patent”), covered an adhesive nitroglycerin transdermal patch for the treatment of coronary heart disease.⁵⁹⁸ The claim at issue required that the patch deliver to the skin “a pharmaceutically effective amount” of nitroglycerin over a twenty-four hour time

587. 37 C.F.R. § 1.56.

588. *Id.*

589. *Id.*

590. *See* *Goodyear Tire & Rubber Co. v. Hercules Tire & Rubber Co.*, 162 F.3d 1113, 1122, 48 U.S.P.Q.2d (BNA) 1767, 1772 (Fed. Cir. 1998) (stating that both materiality and intent to deceive must be proven by clear and convincing evidence).

591. 162 F.3d 1113, 48 U.S.P.Q.2d (BNA) 1767 (Fed. Cir. 1998).

592. *See id.* at 1114, 48 U.S.P.Q.2d (BNA) at 1767.

593. *See id.*, 48 U.S.P.Q.2d (BNA) at 1772.

594. *See id.*, 48 U.S.P.Q.2d (BNA) at 1772 (noting that the district court is in the best position to make the materiality determination).

595. *See id.*, 48 U.S.P.Q.2d (BNA) at 1772.

596. 161 F.3d 709, 48 U.S.P.Q.2d (BNA) 1911 (Fed. Cir. 1998), *reh’g denied*, Nos. 98-1067, 98-1180, 1999 U.S. App. LEXIS 1725 (Fed. Cir. Jan. 8, 1999).

597. *See id.* at 711, 48 U.S.P.Q.2d (BNA) at 1912.

598. *See id.*, 48 U.S.P.Q.2d (BNA) at 1912.

interval.⁵⁹⁹ Hercon Laboratories, Corp. sought approval by the Food and Drug Administration ("FDA") for a generic version of Key's patent.⁶⁰⁰ As a result, Key sued Hercon, alleging that Hercon infringed the '938 patent by submitting applications for its generic version to the FDA for approval.⁶⁰¹

Hercon argued, in response to the allegation of infringement, that Key committed inequitable conduct when it submitted to the examiner only the English translation of the abstract of a highly pertinent Japanese patent application, rather than the English translation of the complete patent application.⁶⁰² The Japanese abstract disclosed an adhesive transdermal patch with a solvent drug, but did not mention any specific drug.⁶⁰³ Hercon argued that Key committed inequitable conduct when it failed to submit the full disclosure of the Japanese prior art, which did disclose nitroglycerin as one suitable drug.⁶⁰⁴

The Federal Circuit⁶⁰⁵ first reiterated that the party alleging inequitable conduct must prove the requisite elements of materiality and intent by clear and convincing evidence.⁶⁰⁶ At trial, the court found that Hercon failed to produce such evidence on either issue.⁶⁰⁷ On appeal, the Federal Circuit explained that although this was a close case, the court must defer to the district court's determination because the intent issue depended heavily on the trial court's assessment of witness credibility.⁶⁰⁸ Thus, without deciding the materiality issue, the Federal Circuit affirmed the lower court's finding of no inequitable conduct.⁶⁰⁹

J. Other Patentability Procedures

Aside from the general patentability requirements of 35 U.S.C. §§ 101, 102, and 103, there are several patentability procedures that can affect the scope and validity of a patent. The following section focuses on three of these patentability procedures.

599. *See id.*, 48 U.S.P.Q.2d (BNA) at 1912.

600. *See id.*, 48 U.S.P.Q.2d (BNA) at 1912.

601. *See id.*, 48 U.S.P.Q.2d (BNA) at 1912.

602. *See id.* at 712-13, 48 U.S.P.Q.2d (BNA) at 1913-14.

603. *See id.* at 712, 48 U.S.P.Q.2d (BNA) at 1913-14.

604. *See id.* at 712-13, 48 U.S.P.Q.2d (BNA) at 1913-14.

605. *See id.* at 719, 48 U.S.P.Q.2d (BNA) at 1919 (citing *Glaverbel Societe Anonyme v. Northlake Mktg. & Supply, Inc.*, 45 F.3d 1550, 1556-57, 33 U.S.P.Q.2d (BNA) 1496, 1500 (Fed. Cir. 1995), which held that materiality and intent must be analyzed in light of all the circumstances of the case).

606. *See id.*, 48 U.S.P.Q.2d (BNA) at 1919.

607. *See id.*, 48 U.S.P.Q.2d (BNA) at 1919.

608. *See id.*, 48 U.S.P.Q.2d (BNA) at 1919.

609. *See id.*, 48 U.S.P.Q.2d (BNA) at 1919.

1. *Reissue*

The reissuance of a patent is a procedure available to patent owners by which a patent that has already issued may be corrected for errors made without deceptive intent.⁶¹⁰ The error must be one that causes the patent to be wholly or partly inoperative or invalid by reason of a defective specification or drawing, or by reason of the patentee claiming more or less than he is entitled to.⁶¹¹ A reissue is a particularly powerful tool because it can be used to broaden the claims of the patent so long as the application for reissue is made within two years from the grant of the original patent.⁶¹²

In *Vectra Fitness, Inc. v. TNWK Corp.*,⁶¹³ the Federal Circuit held that invalidated claims which were narrower than the claims originally contained in the original patent, but broader than the claims remaining in the patent after a disclaimer,⁶¹⁴ impermissibly enlarged the scope of the claims.⁶¹⁵

After Vectra was issued U.S. Patent No. 4,089,972 (“the ‘972 patent”), Vectra submitted a disclaimer to the PTO to overcome some previously unknown prior art.⁶¹⁶ After the PTO received the disclaimer, it mishandled the disclaimer and neither entered the disclaimer on the wrapper⁶¹⁷ nor published it in the *Official Gazette*.⁶¹⁸ More than two years after the issuance of the patent, Vectra filed a reissue application.⁶¹⁹ The reissue application contained new claims, which were narrower in scope than those originally contained in the ‘972 patent, but broader than the claims remaining in the patent after the disclaimer.⁶²⁰ The Federal Circuit framed the issue as whether a reissue application filed after the grant of the original patent “is bounded by the claims originally contained in the patent or by the claims remaining in the patent after a disclaimer is filed.”⁶²¹

610. 35 U.S.C. § 251 (1994).

611. *Id.*

612. *Id.*

613. 162 F.3d 1379, 49 U.S.P.Q.2d (BNA) 1144 (Fed. Cir. 1998), *cert. denied*, 119 S. Ct. 2051 (1999).

614. A disclaimer is a device by which a procedural patentee may disclaim or dedicate to the public any part of a patent for any reason. A patentee may use a disclaimer to disclaim one or more invalid claims in a patent to ensure the survival of the remaining claims. *See* 35 U.S.C. § 253.

615. *See id.* at 1380-81, 49 U.S.P.Q.2d (BNA) at 1145.

616. *See id.* at 1381, 49 U.S.P.Q.2d (BNA) at 1145 (explaining that the disclaimer canceled eight claims contained in the ‘972 patent, thereby limiting its scope).

617. *See id.*, 49 U.S.P.Q.2d (BNA) at 1145.

618. *See id.*, 49 U.S.P.Q.2d (BNA) at 1145 (explaining that the PTO also neglected to publish the disclaimer in the *Official Gazette* as PTO regulations require).

619. *See id.*, 49 U.S.P.Q.2d (BNA) at 1145.

620. *See id.* at 1380, 49 U.S.P.Q.2d (BNA) at 1145.

621. *Id.* at 1382, 49 U.S.P.Q.2d (BNA) at 1145-46.

Vectra argued that the mishandling of the disclaimer prevented it from being recorded as required by 35 U.S.C. § 253.⁶²² The Federal Circuit rejected this argument and found that the statute did not require any PTO action for a disclaimer to be considered “recorded.”⁶²³ In addition, Vectra argued that the phrase “claims of the original patent”⁶²⁴ in the statute refers to the claims contained in the patent when it is issued.⁶²⁵ Conversely, TNWK Corp. asserted that Vectra modified the original patent when it submitted the disclaimer, thereby excluding the disclaimed material.⁶²⁶ The Federal Circuit agreed with TNWK’s argument and concluded that the decision urged by Vectra would be contrary to both statutory law and relevant case law.⁶²⁷ Thus, the court affirmed the lower court’s grant of summary judgment and refused to allow Vectra to claim the disclaimed subject matter to overcome potential prior art rejections.⁶²⁸

In *Hester Industries v. Stein, Inc.*,⁶²⁹ the Federal Circuit addressed the “error” and “original patent” requirements for reissue patents.⁶³⁰ The decision in *Hester Industries* extends earlier Federal Circuit jurisprudence with respect to what constitutes surrender of subject matter for the purposes of the error/recapture rule of reissue patents.⁶³¹ The recapture rule prevents a patentee from regaining through reissue subject matter that he surrendered in an effort to

622. See 35 U.S.C. § 253 (1994) (requiring that “[s]uch disclaimer shall be in writing, and recorded in the Patent and Trademark Office, and it shall thereafter be considered as part of the original patent”); *Vectra*, 162 F.3d at 1382, 49 U.S.P.Q.2d (BNA) at 1146 (detailing Vectra’s position that the disclaimer should not be considered part of the original patent and that because the PTO did not properly record the disclaimer the court should look to the broad scope of the original patent, which would allow for the new claims).

623. See *Vectra*, 162 F.3d at 1382, 49 U.S.P.Q.2d (BNA) at 1146 (stating that “the recording of a disclaimer is not dependent upon actions taken by the PTO”).

624. 35 U.S.C. § 253 (1994).

625. See *Vectra*, 162 F.3d at 1382, 49 U.S.P.Q.2d (BNA) at 1146 (discussing Vectra’s contention that the statutory language should be interpreted as referring to the original patent and not any disclaimers).

626. See *id.* at 1383, 49 U.S.P.Q.2d (BNA) at 1147.

627. See *id.* at 1384, 49 U.S.P.Q.2d (BNA) at 1147-48 (interpreting 35 U.S.C. § 253 to state that a disclaimer effectively eliminates the disclaimed language from the patent). The court cited three cases to support its holding: *Guinn v. Kopf*, 96 F.3d 1419, 1422, 40 U.S.P.Q.2d 1157, 1160 (Fed. Cir. 1996); *United Savings Ass’n v. Timbers of Inwood Forest Ass’ns*, 484 U.S. 365 (1988); and *Altoona Publix Theatres, Inc. v. American Tri-Ergon Corp.*, 294 U.S. 477, 492 (1935).

628. See *Vectra*, 162 F.3d at 1384, 49 U.S.P.Q.2d (BNA) at 1148.

629. 142 F.3d 1472, 46 U.S.P.Q.2d (BNA) 1641 (Fed. Cir.), *cert. denied*, 119 S. Ct. 372 (1998).

630. See 35 U.S.C. § 251, ¶ 1 (“whenever any patent is through error . . . deemed wholly or partly . . . invalid, . . . Commissioner shall . . . reissue the patent for the invention disclosed in the original patent”).

631. See *Hester Indus.*, 142 F.3d at 1481, 46 U.S.P.Q.2d (BNA) at 1648 (holding that a surrender can be established based on arguments, whereas previously the court held that a surrender could be established only with arguments and a claim amendment).

obtain allowance of the original claims.⁶³²

At issue in *Hester Industries* were two reissue patents of the original patent, U.S. Patent 4,582,047 (“the ‘047 patent”).⁶³³ The reissue patents, like the original patent, pertained to high humidity steam cookers with continuous running conveyor belts.⁶³⁴ The reissue claims differed from the original patent in that they claimed a different source of heat for cooking.⁶³⁵

During prosecution of the ‘047 patent, the creator continually stressed two limitations of the claimed invention.⁶³⁶ These limitations were that the cooker used only steam to cook and that there were two sources of steam, one internal and the other external.⁶³⁷ After significant argument with respect to an obviousness rejection, the Board of Patent Appeals and Interferences agreed with the applicant that the limitations rendered the claimed invention non-obvious. Accordingly, the ‘047 patent was issued.⁶³⁸

Two years later, Hester learned that Stein was developing competing technology and applied for two reissue patents pursuant to 35 U.S.C. § 251.⁶³⁹ Both reissue applications claimed that attorney error had limited unnecessarily the scope of the claims in the ‘047 patent.⁶⁴⁰ Specifically, the reissue applications sought the removal of the “cook solely with steam” and “two steam source” limitations.⁶⁴¹ The applications were subsequently approved, and reissue patents were granted without the two limitations.⁶⁴² Subsequently, Hester sued Stein for infringement.⁶⁴³

Stein moved for summary judgment on invalidity and alleged that the two reissue patents failed to meet two statutory requirements.⁶⁴⁴ First, Stein claimed that the inclusion of the “solely with steam” and “two sources of steam” language was deliberate and not the result of

632. *See In re Clement*, 131 F.3d 1464, 1468 (Fed. Cir. 1997).

633. *See id.* at 1474, 46 U.S.P.Q.2d (BNA) at 1642 (describing the reissue patents).

634. *See id.*, 46 U.S.P.Q.2d (BNA) at 1642.

635. *See id.* at 1474-76, 46 U.S.P.Q.2d (BNA) at 1642-44.

636. *See id.* at 1475, 46 U.S.P.Q.2d (BNA) at 1642-44 (noting the inventor’s assertions that his product could be distinguished from prior art because of two limitations: (1) it functioned “solely with steam,” and (2) used “two sources of steam”).

637. *See id.*, 46 U.S.P.Q.2d (BNA) at 1643.

638. *See id.* at 1476, 46 U.S.P.Q.2d (BNA) at 1644 (stating the Board’s conclusion that no combination of prior art would suggest to one skilled in the art to combine the elements in the manner claimed in the ‘047 patent).

639. *See id.* at 1477, 46 U.S.P.Q.2d (BNA) at 1644.

640. *See id.* at 1476-77, 46 U.S.P.Q.2d (BNA) at 1644 (noting the inventor’s argument that his attorney did not “appreciate the full scope of his invention”).

641. *See id.*, 46 U.S.P.Q.2d (BNA) at 1645 (explaining the inventor’s argument that the original patent’s two limitations rendered it too narrow in scope).

642. *See id.*, 46 U.S.P.Q.2d (BNA) at 1645.

643. *See id.*, 46 U.S.P.Q.2d (BNA) at 1645.

644. *See id.* at 1478, 46 U.S.P.Q.2d (BNA) at 1646.

error.⁶⁴⁵ Second, Stein argued that Hester violated the “original patent” requirement because the original patent did not contain an objective intent to claim the invention sought in the reissue applications.⁶⁴⁶ The district court agreed with Stein’s arguments and found the reissue patents invalid.⁶⁴⁷

The Federal Circuit shared the lower court’s “discomfort” with the inconsistent positions taken by Hester during prosecution of the original and reissue patents.⁶⁴⁸ Nevertheless, the Federal Circuit also noted that none of its prior decisions addressed the issue of whether an applicant could surrender subject matter during prosecution for the purposes of recapture where claims had not been amended or canceled.⁶⁴⁹ The court then held for the first time that surrender could occur through arguments alone,⁶⁵⁰ and found this holding consistent with the public policy underlying the recapture rule.⁶⁵¹

In its application of the new recapture rule in *Hester Industries*, the court observed that Hester made numerous arguments that the “solely with steam” and “two sources of steam” limitations distinguished the original claims from prior art.⁶⁵² Because Hester eliminated the claim limitations without narrowing the claims in other ways, the Federal Circuit held that the reissue patents recaptured previously surrendered material.⁶⁵³ Thus, the court held that no genuine issues of material fact were in dispute and the claims in the reissue patents were invalid as a matter of law.⁶⁵⁴

The Federal Circuit also briefly addressed the district court’s

645. *See id.*, 46 U.S.P.Q.2d (BNA) at 1646.

646. *See id.*, 46 U.S.P.Q.2d (BNA) at 1646.

647. *See id.*, 46 U.S.P.Q.2d (BNA) at 1646.

648. *See id.*, 46 U.S.P.Q.2d (BNA) at 1648 (“We share the district court’s discomfort with [the inventor’s] attempt to remove, through reissue, the ‘solely with steam’ and ‘two sources of steam’ limitations after having relied so heavily on those limitations to obtain allowance of the original patent claims over the prior art.”).

649. *See id.* at 1481, 46 U.S.P.Q.2d (BNA) at 1648 (noting that prior cases in this area involved impermissible recapture of claim amendments or cancellations).

650. *See id.* at 1482, 46 U.S.P.Q.2d (BNA) at 1649 (holding that the inventor effectively surrendered a claim scope that would not be limited by the “solely with steam” or “two sources of steam” phrases by repeatedly arguing that these limitations distinguished his invention from prior art).

651. *See id.* at 1478, 46 U.S.P.Q.2d (BNA) at 1646 (explaining that the court’s holding is also consistent with the doctrine of prosecution history estoppel). *See infra* Part V.D (discussing prosecution history estoppel).

652. *See id.* at 1482, 46 U.S.P.Q.2d (BNA) at 1649 (noting that the “solely with steam” limitation appeared at least 27 times in the file wrapper, while the “two sources of steam” limitation appeared at least 15 times).

653. *See id.* at 1483, 46 U.S.P.Q.2d (BNA) at 1650 (acknowledging an exception to the recapture rule by allowing patentee to find “scope of protection to which he is rightfully entitled,” by broadening the claims in certain aspects and simultaneously narrowing other aspects of the claim).

654. *See id.* at 1484, 46 U.S.P.Q.2d (BNA) at 1651.

decision with respect to the “original patent” clause.⁶⁵⁵ The lower court examined the patent at issue for an objective intent to cover ovens that utilize heat sources other than steam and that have less than two steam sources.⁶⁵⁶ On appeal, however, the Federal Circuit rejected the lower court’s approach and explained that an earlier decision⁶⁵⁷ disavowed an objective intent to claim requirement.⁶⁵⁸ Rather, the focus taken by the earlier decision was similar to that of the written description requirement of 35 U.S.C. § 112: whether one skilled in the art could identify the subject matter claimed in the reissue application in the specification of the original application.⁶⁵⁹ Thus, the Federal Circuit found the district court’s determination on the original patent issue erroneous, using the objective intent approach.⁶⁶⁰

2. *Reexamination*

Another post-patent issuance procedure is reexamination.⁶⁶¹ In a reexamination procedure, any person, including the patent owner, may request reexamination by the PTO of any claim of a patent on the basis of any prior art.⁶⁶² The PTO will reexamine the issued patent only if there is a new question of patentability based on the prior art cited by the person requesting reexamination.⁶⁶³ However, no proposed or amended new claim enlarging the scope of a claim of the patent is permitted during a reexamination.⁶⁶⁴

In *Anderson v. International Engineering & Manufacturing, Inc.*,⁶⁶⁵ the Federal Circuit held that the owners of a patent impermissibly broadened the patent’s claims upon reexamination.⁶⁶⁶ At trial, the district court focused on whether the owners materially enlarged one claim during reexamination as compared with the original text of the

655. *See id.*, 46 U.S.P.Q.2d (BNA) at 1651.

656. *See id.*, 46 U.S.P.Q.2d (BNA) at 1651.

657. *See In re Amos*, 953 F.2d 613, 616, 21 U.S.P.Q.2d (BNA) 1271, 1273 (Fed. Cir. 1991) (holding that the objective intent of patentees could not solely form the basis for denial of reissue claims).

658. *See Hester Indus.*, 142 F.3d at 1484, 46 U.S.P.Q.2d (BNA) at 1651 (stating that “the *Amos* court held that § 251 does not include a separate requirement of an objective intent to claim”).

659. *See id.* at 1485, 46 U.S.P.Q.2d (BNA) at 1651 (stating that “the district court’s conclusion that the ‘original patent’ clause of [35 U.S.C.] § 251 was not satisfied based on an ‘objective intent to claim’ requirement was an error”).

660. *See id.*, 46 U.S.P.Q.2d (BNA) at 1651.

661. 35 U.S.C. §§ 301, 302 (1994).

662. *See id.* § 302.

663. *See id.* § 301.

664. *See* 35 U.S.C. § 305 (1994).

665. 160 F.3d 1345, 48 U.S.P.Q.2d (BNA) 1631 (Fed. Cir. 1998).

666. *See id.* at 1346, 48 U.S.P.Q.2d (BNA) at 1632.

claim.⁶⁶⁷ The district court found the claim to be invalid because the description of the stud, which included the phrase “with the tool engaging said head surfaces,” was not included in the scope of the original claim.⁶⁶⁸

Anderson, the owner of the patent, argued that the claim was not broadened impermissibly upon reexamination.⁶⁶⁹ Instead, the owner stated that the changes made in the reexamination claim clarified the scope of the claim originally granted.⁶⁷⁰ In its decision, the Federal Circuit first noted that, under the reexamination statute, the scope of the patent claim cannot be enlarged.⁶⁷¹ Furthermore, the court observed that in previous decisions involving reexamination, the court examined the claim as a whole, rather than simply the differences in the wording of the claim, to determine whether the owner impermissibly enlarged the claim.⁶⁷² Upon examination of the record, the Federal Circuit concluded that the original claims were directed only to automatic disengagement.⁶⁷³ Thus, the original claim was not generic to systems where the tool remains engaged until manually disengaged as claimed by the patent owner.⁶⁷⁴ Because the owner argued that the reexamined claims possessed this broader meaning, the Federal Circuit affirmed the district court’s determination that the reexamined claims were invalid for failure to comply with the reexamination statute by impermissibly broadening the scope of the claim.⁶⁷⁵

In *Laitram Corp. v. NEC Corp.*,⁶⁷⁶ the Federal Circuit reviewed a determination that a patent owner’s reexamined claims and original claims were identical in scope.⁶⁷⁷ Before addressing the facts of the case, the court explained that if the reexamined claims of a patent are deemed “identical” to the original claims, the owner of the

667. *See id.* at 1348, 48 U.S.P.Q.2d (BNA) at 1633 (noting that the phrases “in a direction away from” the tool and “with the tool engaging said head surfaces” had been added to the original description of the “snowmobile stud” in claim one).

668. *See id.*, 48 U.S.P.Q.2d (BNA) at 1633.

669. *See id.*, 48 U.S.P.Q.2d (BNA) at 1633 (discussing the owner’s argument that the phrases added to the claim were encompassed by the original claim).

670. *See id.*, 48 U.S.P.Q.2d (BNA) at 1633.

671. *See id.* at 1349, 48 U.S.P.Q.2d (BNA) at 1634 (discussing the application of 35 U.S.C. § 305 which provides that “no proposed amended or new claim enlarging the scope of a claim of the patent will be permitted in a reexamination proceeding”).

672. *See id.*, 48 U.S.P.Q.2d (BNA) at 1634 (citing *Meritor Corp. v. Coloplast, Inc.*, 998 F.2d 992, 996, 27 U.S.P.Q.2d (BNA) 1521, 1525 (Fed. Cir. 1993)).

673. *See id.* at 1350, 48 U.S.P.Q.2d (BNA) at 1635 (concluding that “the original claim is limited to systems wherein the stud head is automatically disengaged from the tool”).

674. *See id.*, 48 U.S.P.Q.2d (BNA) at 1635.

675. *See id.*, 48 U.S.P.Q.2d (BNA) at 1635.

676. 163 F.3d 1342, 49 U.S.P.Q.2d (BNA) 1199 (Fed. Cir. 1998).

677. *See id.* at 1346-47, 49 U.S.P.Q.2d (BNA) at 1202-03 (explaining that the lower court’s decision would be reviewed without deference).

reexamined patent may be awarded damages for the period between the dates of issuance of the claims.⁶⁷⁸ The Federal Circuit further stated that reexamined claims are “identical” if they are “without substantive change.”⁶⁷⁹ To determine whether the claims are “without substantive change,” the court considers whether the scope of the claims is different, not whether the words used are different.⁶⁸⁰ If the court finds that substantive changes were made, the patentee is entitled only to infringement damages for the period following the issuance of the reexamination certificate.⁶⁸¹

In *Laitram*, NEC argued that the scope of the original claims was substantively changed because a limitation was added to overcome a prior art rejection.⁶⁸² In addition, NEC argued that, in holding that the limitation was implicitly contained in the original claims, the district court improperly used the written description to read limitations into the claims.⁶⁸³ *Laitram* argued, in response, that the original claims, when viewed in light of the written description, prosecution history, and language of the claims themselves, implicitly contained the “type quality” limitation.⁶⁸⁴ The Federal Circuit agreed with NEC, however, holding that the claims had been substantively changed because the reissued claims and the original claims differed substantively in scope.⁶⁸⁵ The court found very persuasive the fact that the addition of the limitation resulted in the allowance of claims that had been previously rejected.⁶⁸⁶ The Federal Circuit thus noted that it would be very difficult to argue that the scope of a rejected claim that was later allowed after amendment was not substantially

678. *See id.* at 1346, 49 U.S.P.Q.2d (BNA) at 1202 (citing 35 U.S.C. §§ 252, 307(b) (1994)); *Tennant Co. v. Hako Minuteman, Inc.*, 878 F.2d 1413, 1417, 11 U.S.P.Q.2d (BNA) 1303, 1306 (Fed. Cir. 1989).

679. *See Laitram Corp.*, 163 F.3d at 1346, 49 U.S.P.Q.2d (BNA) at 1202.

680. *See id.*, 49 U.S.P.Q.2d (BNA) at 1202 (explaining that to determine whether the claims are substantively different the court must examine their full scope).

681. *See id.*, 49 U.S.P.Q.2d (BNA) at 1202-03; *see also* 35 U.S.C. § 307(a) (1994) (defining a reexamination certificate as a certificate published by the Commissioner when the time for appeal has expired or any appeal proceeding has terminated, which cancels any claim of the patent finally determined to be unpatentable, confirms any patent claim deemed patentable, and incorporates any amended or new patentable claim into the patent).

682. *See Laitram Corp.*, 163 F.3d at 1346, 49 U.S.P.Q.2d (BNA) at 1203 (detailing NEC’s position that the inclusion of the “type quality” description in the reexamined claims serves to change the scope of the original claims substantively).

683. *See id.*, 49 U.S.P.Q.2d (BNA) at 1203 (holding that the district court improperly read the “type quality” limitation in the original claims, so that when the patent owner added this limitation during reexamination, the claims were narrowed, which substantively changed their scope).

684. *See id.*, 49 U.S.P.Q.2d (BNA) at 1203.

685. *See id.* at 1348, 49 U.S.P.Q.2d (BNA) at 1203 (holding that the addition of the “type quality” limitation effectively narrowed the original claims, thus substantively changing the claims).

686. *See id.*, 49 U.S.P.Q.2d (BNA) at 1203.

changed.⁶⁸⁷

3. Fees

In order for a patent to issue, an applicant must, in addition to paying a patent application fee, pay a patent issuance fee.⁶⁸⁸ The failure to pay the proper amount due is grounds for holding a patent invalid.⁶⁸⁹ Accordingly, practitioners are advised to stay current on the ever-changing fee structure at the PTO. In particular, for reasons detailed in the following section, a practitioner should be careful in claiming "small entity status,"⁶⁹⁰ for the purpose of reducing the required fees.

In a case of first impression, the Federal Circuit in *DH Technology, Inc. v. Synergystex International, Inc.*⁶⁹¹ held that erroneously paid small entity fees could be corrected provided they were not paid fraudulently.⁶⁹²

In the process of purchasing a business, DH Technology acquired U.S. Patent No. 5,115,493 ("the '493 patent").⁶⁹³ When prosecuting the patent, the original owner claimed small entity status and thus paid reduced fees.⁶⁹⁴ Subsequently, DH Technology filed a patent infringement suit against Synergystex alleging that Synergystex had willfully infringed, contributorily infringed, or induced infringement of the '493 patent.⁶⁹⁵ In defense, Synergystex alleged that "the patent was invalid and unenforceable because DH Technology intentionally deceived the PTO by paying a small entity fee"⁶⁹⁶ despite the fact DH Technology did not qualify as a small entity.⁶⁹⁷ The district court agreed with Synergystex's argument.⁶⁹⁸ The district court reasoned that it was too late to correct the error⁶⁹⁹ even if DH Technology paid the small-entity fee in good faith.⁷⁰⁰ Thus, the district court granted

687. See *id.*, 49 U.S.P.Q.2d (BNA) at 1203.

688. 35 U.S.C. § 41 (1994).

689. See *id.*

690. A small entity is defined as an individual inventor, a small business having no more than 500 employees, and nonprofit institutions and universities. See 37 C.F.R. §§ 1.9(c)(d)(e); 1.27(b)(c)(d).

691. 154 F.3d 1333, 47 U.S.P.Q.2d (BNA) 1865 (Fed. Cir. 1998).

692. See *id.* at 1342, 47 U.S.P.Q.2d (BNA) at 1873.

693. See *id.* at 1335, 47 U.S.P.Q.2d (BNA) at 1866.

694. See *id.*, 47 U.S.P.Q.2d (BNA) at 1866.

695. See *id.*, 47 U.S.P.Q.2d (BNA) at 1866-67.

696. *Id.* at 1338, 47 U.S.P.Q.2d (BNA) at 1867.

697. See *id.* at 1336, 47 U.S.P.Q.2d (BNA) at 1867.

698. See *id.* at 1337-38, 47 U.S.P.Q.2d (BNA) at 1868-69 (noting that DH Technology was not eligible for small-entity status because the company had over 500 employees, and, therefore, DH Technology's payment of the lesser fee was not "unavoidable").

699. See *id.* at 1338, 47 U.S.P.Q.2d (BNA) at 1868-69.

700. See *id.* at 1338, 47 U.S.P.Q.2d (BNA) at 1868-69.

Synergystex's motion for summary judgment.⁷⁰¹

On appeal, the Federal Circuit ruled that correction of an erroneous small-entity status payment is governed solely by 37 C.F.R. § 1.28(c).⁷⁰² In addition, the Federal Circuit found that 35 U.S.C. § 151 and 37 C.F.R. § 1.317 do not apply⁷⁰³ to the erroneous payment of a small-entity issue fee.⁷⁰⁴ Because only 37 C.F.R. § 1.28(c) is applicable and it fails to limit the time during which such an error may be corrected, the only limitation is that the error must have been made in good faith.⁷⁰⁵ Thus, the Federal Circuit overturned the district court's determination that the '493 patent lapsed and remanded the case with instructions that the district court determine whether DH Technology acted in good faith.⁷⁰⁶

III. INFRINGEMENT

Infringement is the unauthorized making, use, sale or offer for sale of any patented invention within the United States during the term of the patent.⁷⁰⁷ Generally, determining infringement requires a two-step analysis. First the claim must be properly interpreted to determine its scope and meaning.⁷⁰⁸ Second, the properly construed claim must be compared to the accused product.⁷⁰⁹

A. Claim Construction

The interpretation and construction of patent claims is a matter of law that is to be determined exclusively by the court.⁷¹⁰ A fundamental maxim in considering the language of claims is that "words in a claim should be given their ordinary and accustomed

701. *See id.* at 1337-38, 47 U.S.P.Q.2d (BNA) at 1868-69.

702. *See id.* at 1342, 47 U.S.P.Q.2d (BNA) at 1872 (holding that "this regulation is the sole provision governing the time for correction of the erroneous payment of the issue fee as a small entity").

703. *See id.* at 1342, 47 U.S.P.Q.2d (BNA) at 1872 (finding no support for the application of the provisions to the erroneous payment of the small entity issue fee).

704. *See id.* at 1341, 47 U.S.P.Q.2d (BNA) at 1872 (explaining that the two inapplicable provisions apply in situations where the delay in payment was unavoidable, but that in this case DT Technology concedes that the delay was avoidable).

705. *See id.* at 1342-43, 47 U.S.P.Q.2d (BNA) at 1873 (noting that where a company makes an "honest mistake" in paying the small-entity fee the company will not be punished).

706. *See id.* at 1343, 47 U.S.P.Q.2d (BNA) at 1873.

707. 35 U.S.C. § 271 (1994).

708. *Carroll Touch, Inc. v. Electro Mechanical Sys., Inc.*, 15 F.3d 1573, 1776, 27 U.S.P.Q.2d (BNA) 1863, 1866 (Fed. Cir. 1993).

709. *Lemelson v. General Mills, Inc.*, 968 F.2d 1202, 1206, 23 U.S.P.Q.2d (BNA) 1284, 1287 (Fed. Cir. 1992).

710. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979, 34 U.S.P.Q.2d (BNA) 1321, 1329 (Fed. Cir. 1995) (en banc), *aff'd*, 116 S. Ct. 1384 (1996).

meaning, unless it appears that the inventor used them differently.”⁷¹¹ Accordingly, if the ordinary meaning of the claim language is not dispositive on the issue of claim construction, the claims should also be interpreted in light of the patent’s specification, the patents prosecution history, and other claims in the patent from the perspective of one with ordinary skill of art.⁷¹² The prosecution history limits the interpretation of the claims because claims cannot be interpreted in a manner that was “disclaimed or disavowed during the prosecution in order to obtain claim allowance.”⁷¹³ In this regard, claims cannot be interpreted “one way in order to obtain their allowance and in a different way against accused infringers.”⁷¹⁴ Claims must be given the same interpretation for purposes of both validity and infringement.⁷¹⁵

In *Phonometrics, Inc. v. Northern Telecom, Inc.*,⁷¹⁶ the Federal Circuit examined the claim language, the written description, and the prosecution history in an effort to evaluate the proper scope of the claims at issue.⁷¹⁷ In its evaluation of the claim language, the Federal Circuit found that the language “call cost register” had two separate and equal functions and that both functions were claimed explicitly in Phonometric’s ‘463 patent at issue.⁷¹⁸ The two functions were described as: (1) providing the caller with “real time, accurate information” about the cost of the call during the call, and (2) reflecting the total cost of the call after the call. The most important evidence considered by the Federal Circuit was the claim language itself that called for the “substantially instantaneous” display of information.⁷¹⁹ Thus, the first function required by the claim was established primarily by reference to the claim language. The patentee, Phonometrics, conceded that the second function was

711. *Envirotech Corp. v. Al George Inc.*, 730 F.2d 753, 759, 221 U.S.P.Q. (BNA) 473, 479 (Fed. Cir. 1984).

712. *SmithKline Diagnostics, Inc. v. Helena Lab. Corp.*, 859 F.2d 878, 882, 8 U.S.P.Q.2d (BNA) 1468, 1472 (Fed. Cir. 1988); *Markman*, 52 F.3d at 979-80, 34 U.S.P.Q.2d (BNA) at 1329-30; *Minnesota Mining & Mfg. Co. v. Johnson & Johnson Orthopedics, Inc.*, 976 F.2d 1559, 1576-77, 24 U.S.P.Q.2d (BNA) 1321, 1337 (Fed. Cir. 1992).

713. *Jonsson v. Stanley Works*, 903 F.2d 812, 818 (Fed. Cir. 1990) (quoting *Standard Oil Co. v. American Cyanamid Co.*, 774 F.2d 448, 452, 227 U.S.P.Q. (BNA) 293, 297 (Fed. Cir. 1985)); *Southwall Techs., Inc. v. Cardinal IG Co.*, 54 F.3d 1570, 1576, 34 U.S.P.Q.2d (BNA) 1673, 1678 (Fed. Cir.), *cert. denied*, 116 S. Ct. 515 (1995).

714. *Southwall Techs.*, 54 F.3d at 1576, 34 U.S.P.Q.2d (BNA) at 1678.

715. *SmithKline Diagnostics*, 857 F.2d at 882, 8 U.S.P.Q.2d (BNA) at 1472.

716. 133 F.3d 1459, 45 U.S.P.Q.2d (BNA) 1421 (Fed. Cir. 1998).

717. *See id.* at 1464, 45 U.S.P.Q.2d (BNA) at 1425 (citing *Vitronics Corp. v. Conceptoronic, Inc.*, 90 F.3d 1576, 1582, 39 U.S.P.Q.2d (BNA) 1573, 1576 (Fed. Cir. 1996)).

718. *See id.* at 1465-66, 45 U.S.P.Q.2d (BNA) at 1427.

719. *See id.*, 45 U.S.P.Q.2d (BNA) at 1427.

implicit in the language of claim one.⁷²⁰ The Federal Circuit also analyzed the written description and found that it supported the construction obtained from the review of the claim language and that when considered as a whole the patent was limited to a device that displays the cost of long distance during the call and after the call.⁷²¹ Once the Federal Circuit construed the claims, the court compared the “accused devices” with the construed claims and held that the accused products did not infringe the ‘463 patent because the accused devices only performed one of the functions of the patented device.⁷²² Thus, the Federal Circuit found the district court’s grant of summary judgment in favor of the alleged infringers proper.⁷²³

The Federal Circuit also reviewed a grant of non-infringement based on claim construction on summary judgment in *Gentry Gallery, Inc. v. Berklinc Corp.*⁷²⁴ The Federal Circuit held that the proper construction of claims is based on the claim language, the written description, the prosecution history, and, if necessary, extrinsic evidence.⁷²⁵ Upon review of the interpretation of the terms “fixed” and “console,” and in particular, reliance on the patent’s specification, the Federal Circuit determined that Berklinc’s accused sofas did not meet both of the limitations of Gentry’s patent.⁷²⁶ In this case, the Federal Circuit found it particularly compelling that the specification only disclosed the console as a possible location of certain controls.⁷²⁷ Thus, the accused device did not literally infringe Gentry’s patent. Therefore, the Federal Circuit affirmed the lower court’s grant of summary judgment on non-infringement grounds.⁷²⁸

720. See *id.* at 1465, 45 U.S.P.Q.2d (BNA) at 1427.

721. See *id.* at 1466, 45 U.S.P.Q.2d (BNA) at 1427 (holding that although the claim itself did not contain the phrase “in progress,” the district court correctly inferred that that function of displaying the mounting cost of a call in progress was a part of the claim).

722. See *id.* at 1467, 45 U.S.P.Q.2d (BNA) at 1428.

723. See *id.*, 45 U.S.P.Q.2d (BNA) at 1429 (stating that there cannot be infringement as a matter of law where the described functions of a patented device are not the same as those of the accused device).

724. 134 F.3d 1473, 45 U.S.P.Q.2d (BNA) 1498 (Fed. Cir. 1998) (reh’g denied).

725. See *id.* at 1476, 45 U.S.P.Q.2d (BNA) at 1501 (stating that the court must look to extrinsic evidence only to enable it to construct the proper claim). The court adopted the definition of extrinsic evidence used in *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 980, 34 U.S.P.Q.2d 1321, 1330 (Fed. Cir. 1995) (en banc), *aff’d*, 517 U.S. 370, 38 U.S.P.Q.2d (BNA) 1461 (1996), which includes expert and inventor testimony, dictionaries, and learned treatises.

726. See *Gallery, Inc.*, 134 F.3d at 1477, 45 U.S.P.Q.2d (BNA) at 1501 (holding that although the accused device met the “fixed” limitation, it did not have a “console” and was required to result in an infringement on the patent).

727. See *id.* at 1479, 45 U.S.P.Q.2d (BNA) at 1503.

728. See *id.*, 45 U.S.P.Q.2d (BNA) at 1501 (affirming the district court’s judgment on the infringement of the patent, but holding that the district court erred in finding that the patent did not limit the location of the recliner controls).

In *Cybor Corp. v. FAS Technologies, Inc.*,⁷²⁹ the Federal Circuit also considered the issue of the proper standard of review for a district court's claim construction.⁷³⁰ The Federal Circuit explained that claim construction is a question of law for the court.⁷³¹ The Federal Circuit noted discrepancies in the standard of review that courts had applied to claim constructions since its decision in *Markman v. Westview Instruments, Inc.* ("*Markman I*").⁷³² Some courts had employed a *de novo* standard of review while others used a clearly erroneous standard.⁷³³ In an effort to resolve the confusion over the proper standard of review, the Federal Circuit expressly rejected any language in previous opinions that suggested the proper standard of review for a district court's claim construction was anything other than *de novo*.⁷³⁴

In *Key Pharmaceuticals Inc. v. Hercon Laboratories Corp.*,⁷³⁵ the Federal Circuit reviewed the district court's claim construction of Key's U.S. Patent No. 5,186,938 ("the '938 patent"). The lower court construed the claims to mean a does capable of a patent with 2.5-15 mg of nitroglycerin per day plus an excess to assure delivery of the desired amount.

Despite the fact that the standard of review of claim construction by the Federal Circuit is independent review,⁷³⁶ the court began with a careful consideration of the district court's analysis.⁷³⁷ The Federal Circuit noted that when the district court construed the disputed claim clause, it adopted Hercon's claim construction based on testimony of Hercon's technical expert, Dr. Richard Guy.⁷³⁸ The trial

729. 138 F.3d 1448, 46 U.S.P.Q.2d (BNA) 1169 (Fed. Cir. 1998) (en banc).

730. See *id.* at 1451, 46 U.S.P.Q.2d (BNA) at 1171 (concluding that claim construction is subject to *de novo* appellate review).

731. See *id.* at 1455, 46 U.S.P.Q.2d (BNA) at 1173 (emphasizing that claim construction does not involve questions of fact but questions of law).

732. See *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979-81, 34 U.S.P.Q.2d 1321, 1329-31 (Fed. Cir. 1995) (holding that claim construction is a legal determination to be made by the judge).

733. See *Cybor Corp.*, 138 F.3d at 1455, 46 U.S.P.Q.2d (BNA) at 1173 (noting the differing standards of review that courts have employed).

734. See *id.* at 1456, 46 U.S.P.Q.2d (BNA) at 1174 (holding that the Supreme Court's decision in *Markman II* did not change the standard of review established in *Markman I* and thus, claim construction can be reviewed *de novo* on appeal).

735. 161 F.3d 709, 48 U.S.P.Q.2d (BNA) 1911 (Fed. Cir. 1998).

736. See *id.* at 712, 48 U.S.P.Q.2d (BNA) at 1914 (stating that the Federal Circuit previously established the standard of review for claim constructions); *Cybor Corp. v. FAS Tech., Inc.*, 138 F.3d 1448, 1456, 46 U.S.P.Q.2d (BNA) 1169, 1174 (Fed. Cir. 1998) (en banc) (reaffirming that the Federal Circuit conducts independent review of claim construction on appeal).

737. See *Key Pharm.*, 161 F.3d at 713, 48 U.S.P.Q.2d (BNA) at 1914 (observing that appellate courts "do not start from scratch" when hearing reviews but instead look to trial records for guidance); *Cybor Corp.*, 138 F.3d at 1462, 46 U.S.P.Q.2d (BNA) at 1180 (Plager, J., concurring) (stating that the Federal Circuit benefits from the trial judge's considered view).

738. See *Key Pharm.*, 161 F.3d at 713, 48 U.S.P.Q.2d (BNA) at 1914.

court construed this clause to imply that Key's adhesive transdermal patch would provide a patient with an FDA conditionally approved amount of nitroglycerin (2.5-15 mg per day) along with an additional amount to ensure delivery of the drug.⁷³⁹ On appeal, however, Hercon asserted that the trial court erred when it adopted this claim construction.⁷⁴⁰

The Federal Circuit looked with "extreme disfavor" on Hercon's assertion,⁷⁴¹ and stated: "[t]he impropriety of asserting a position which the trial court adopts and then complaining about it on appeal should be obvious on its face, and litigants hardly need warning not to engage in such conduct."⁷⁴² The court, however, did not previously issue an opinion that publicly condemned this behavior and Key did not object to Hercon's conduct.⁷⁴³ For these reasons, the Federal Circuit reviewed the correctness of the district court's claim construction out of "an abundance of fairness."⁷⁴⁴

Hercon's primary objection to the claim construction was the district court's heavy reliance on extrinsic evidence, namely the testimony of its own expert.⁷⁴⁵ The Federal Circuit noted that it previously issued "strong cautionary statements on the proper use of extrinsic evidence . . . which might be misread by some members of the bar as restricting a trial court's ability to hear such evidence."⁷⁴⁶ The court stated, however, that it did not entertain any such intention.⁷⁴⁷ Rather, the court emphasized that trial courts can hear expert testimony as background and educational information on the technology at issue.⁷⁴⁸ Nor did the Federal Circuit independently find

739. See *Key Pharm., Inc. v. Hercon Lab. Corp.*, 981 F. Supp. 299, 310 (D. Del. 1997), *aff'd*, 161 F.3d 696, 48 U.S.P.Q.2d (BNA) 1911 (Fed. Cir. 1998).

740. See *Key Pharm.*, 161 F.3d at 713, 48 U.S.P.Q.2d (BNA) at 1914.

741. See *id.* at 715, 48 U.S.P.Q.2d (BNA) at 1915 (stating that to allow a party to assert as "error" a position it advocated at trial would lead to "mischief and judicial inefficiency").

742. *Id.*, 48 U.S.P.Q.2d (BNA) at 1916. The court justified its refusal to entertain Hercon's appeal because of the company's disingenuous conduct. At trial, Hercon's expert witness (Dr. Guy) testified as to the purported dosage of nitroglycerin (2.5-15 mg) Key's patch would provide a patient daily. The trial court accepted this testimony as the claim construction. On appeal, however, Hercon sought to assert a lower dosage (1.5 mg) as the claims construction and disavow their previous claim. As the appellate court found no reasonable justification for this shift, it believed that the law barred Hercon from fundamentally changing its trial argument. See *id.*, 48 U.S.P.Q.2d (BNA) at 1916.

743. See *id.* at 715-16, 48 U.S.P.Q.2d (BNA) at 1916.

744. See *id.* at 716, 48 U.S.P.Q.2d (BNA) at 1916.

745. See *id.*, 48 U.S.P.Q.2d (BNA) at 1916-17.

746. *Id.*, 48 U.S.P.Q.2d (BNA) at 1917. The court referred to its decision in *Vitronics Corp. v. Conceptorics, Inc.*, 90 F.3d 1576, 39 U.S.P.Q.2d (BNA) 1573 (Fed. Cir. 1996), in which the court stated that review of intrinsic evidence alone "in most situations" is sufficient to resolve a dispute surrounding a claim and reliance on extrinsic evidence would be improper. See *id.* at 1583, 39 U.S.P.Q.2d (BNA) at 1577.

747. See *Key Pharm.*, 161 F.3d at 716, 48 U.S.P.Q.2d (BNA) at 1917.

748. See *id.*, 48 U.S.P.Q.2d (BNA) at 1917.

any such evidence. According to the court, “a trial court is quite correct in hearing and relying on expert testimony on an ultimate claim construction question in cases in which the intrinsic evidence (i.e., the patent and its file history—the ‘patent record’) does not answer the question.”⁷⁴⁹ The Federal Circuit, therefore, concluded that it was entirely appropriate for the district court to use extrinsic evidence in this case and that the use of the FDA’s data, in particular, was “sensible.”⁷⁵⁰

Moreover, in the present case, neither Hercon nor Key identified intrinsic evidence that established the numerical range of amounts represented by the term “pharmaceutically effective amount.”⁷⁵¹

In *Personalized Media Communications, LLC v. United States International Trade Commission*,⁷⁵² the Federal Circuit reviewed an interpretation of the claim limitation “digital detector for”⁷⁵³ In an administrative proceeding, an ALJ construed this limitation as a means-plus-function limitation, which he interpreted to be a functional phrase that was not limited to a particular structure.⁷⁵⁴

On appeal, the Federal Circuit considered the applicability of ¶ 6 of 35 U.S.C. § 112 to the claims at issue.⁷⁵⁵ The Federal Circuit noted that ¶ 6 of § 112 restricts claim limitations drafted in functional language to those disclosed structures that perform the claimed function.⁷⁵⁶ The use of the word “means” in the claim language creates a rebuttable presumption that § 112, ¶ 6 is applicable.⁷⁵⁷ Specifically, “the focus remains on whether the claim as properly construed recites sufficiently definite structure to avoid the ambit of [§] 112, [¶] 6.”⁷⁵⁸ Thus, in *Personalized Media Communications*, the Federal Circuit determined that the “digital detector” limitation does not use the word “means” and therefore, is presumed not to invoke § 112, ¶ 6.⁷⁵⁹ After much factual analysis, the Federal Circuit

749. *Id.* at 716, 48 U.S.P.Q.2d (BNA) at 1917 (citing *Vitronics*, 90 F.3d at 1584, 39 U.S.P.Q.2d (BNA) at 1578).

750. *See id.* at 718, 48 U.S.P.Q.2d (BNA) at 1918 (noting that such use allowed a trial judge to determine the “pharmaceutically effective amount”).

751. *See id.*, 48 U.S.P.Q.2d (BNA) at 1918.

752. 161 F.3d 696, 48 U.S.P.Q.2d (BNA) 1880 (Fed. Cir. 1998).

753. *See id.* at 700, 48 U.S.P.Q.2d (BNA) at 1883.

754. *See id.*, 48 U.S.P.Q.2d (BNA) at 1884 (holding that the claim must be construed in accordance with 35 U.S.C. § 112, ¶ 6).

755. *See id.* at 703, 48 U.S.P.Q.2d (BNA) at 1886.

756. *See id.*, 48 U.S.P.Q.2d (BNA) at 1886 (interpreting 35 U.S.C. § 112, ¶ 6 (1994)).

757. *See id.*, 48 U.S.P.Q.2d (BNA) at 1886 (explaining that the presumption can be rebutted with intrinsic or other relevant evidence).

758. *Id.* at 704, 48 U.S.P.Q.2d (BNA) at 1887 (citing *Sage Prods. v. Devon Indus., Inc.*, 126 F.3d 1420, 1427-28, 44 U.S.P.Q.2d (BNA) 1103, 1109 (Fed. Cir. 1997)).

759. *See id.*, 48 U.S.P.Q.2d (BNA) at 1887 (noting that “detector” has a specific definition that prevents it from being a generic structural term).

concluded “that the term ‘detector’ is a sufficiently definite structural term” to preclude application of § 112, ¶ 6.⁷⁶⁰ Regardless of the particular fact pattern at hand, however, the emphasis remains on whether sufficient structure is disclosed in the claim to avoid application of § 112, ¶ 6.

In *Litton Systems, Inc. v. Honeywell, Inc.*,⁷⁶¹ the Federal Circuit interpreted the scope of a claim in a reissued patent that had been amended during prosecution.⁷⁶² Specifically, the patentee claimed that the term “Kaufman-type ion beam guns” encompassed any broad-beam, multi-apertured, gridded ion beam source.⁷⁶³ The Federal Circuit reviewed statements made by the patentee during the prosecution of the patent and focused upon specific written statements by the patentee during the prosecution that would limit the interpretation of the phrase to only ion beam guns composed of the exact same components of a “kaufman-type” gun.⁷⁶⁴ Specifically during prosecution, the patentee defined “ion beam source” to mean only the Kaufman type.⁷⁶⁵ Because the patentee’s proposed construction was inconsistent with the prosecution history of the reissued patent, the court held that the term “ion beam source” in the original claims could not be “properly construed to refer to another ion beam gun,” other than the Kaufman gun.⁷⁶⁶

The central issue in *Mantech Environmental Corp. v. Hudson Environmental Services, Inc.*⁷⁶⁷ was the claim construction of the term “well.”⁷⁶⁸ In *Mantech Environmental Corp.*, Mantech brought a suit for patent infringement and other causes of action. The only issue on appeal was the correctness of the claim construction.⁷⁶⁹ The trial court held, based on intrinsic evidence, that a “well” was “a structure which enabled both monitoring and injecting of groundwater.”⁷⁷⁰ The lower court reached this determination even after it heard expert testimony that stated a well, as the term is commonly

760. *See id.*, 48 U.S.P.Q.2d (BNA) at 1887.

761. 140 F.3d 1449, 46 U.S.P.Q.2d (BNA) 1321 (Fed. Cir. 1998).

762. *See id.* at 1453-54, 46 U.S.P.Q.2d (BNA) at 1323-24.

763. *See id.* at 1453, 46 U.S.P.Q.2d (BNA) at 1323 (explaining that a “Kaufman-type ion beam source” is used to apply optical materials to a substrate that is then used in the construction of ring-laser gyroscopes).

764. *See id.* at 1454, 46 U.S.P.Q.2d (BNA) at 1324 (holding the definition of “Kaufman-type ion beam source” to be any ion beam gun containing a hot-wire cathode, an anode, grids, and magnets).

765. *Id.* at 1453, 46 U.S.P.Q.2d (BNA) at 1324.

766. *Id.*, 46 U.S.P.Q.2d (BNA) at 1324.

767. 152 F.3d 1368, 47 U.S.P.Q.2d (BNA) 1732 (Fed. Cir. 1998).

768. *See id.* at 1370, 47 U.S.P.Q.2d (BNA) at 1732.

769. *See id.* at 1370, 47 U.S.P.Q.2d (BNA) at 1734.

770. *Id.* at 1369, 47 U.S.P.Q.2d (BNA) at 1734.

understood, is not required to perform both functions.⁷⁷¹ In support of its construction the district court stated that it relied only on the patent, and consulted expert testimony for background information only.⁷⁷² On appeal, Mantech argued that the court erred in its construction because the expert witnesses of both sides agreed upon the common meaning of the term “well,” which Mantech argued neither the claims nor the specification expressly modified.⁷⁷³

The Federal Circuit reversed the district court’s claim construction, but not on the grounds urged by Mantech.⁷⁷⁴ First, the Federal Circuit noted that when construing a claim, a court should primarily consult the evidence intrinsic to the patent, including the claims, written description, and any relevant prosecution history.⁷⁷⁵ The Federal Circuit agreed with the lower court’s limitation of the claim construction to the intrinsic evidence when a clear definition can be ascertained from within the patent itself.⁷⁷⁶ Second, the Federal Circuit acknowledged that a court may rely on expert testimony for the purpose of obtaining information on the technology without having to accept the testimony for purposes of claim construction.⁷⁷⁷ It re-emphasized that extrinsic evidence in general, and expert testimony in particular, may be used only to help the court come to the proper understanding of the claims. Extrinsic evidence could not be used to vary or contradict the claim language itself.⁷⁷⁸ Although the Federal Circuit found that the lower court utilized the proper analysis, it still held the result incorrect.⁷⁷⁹

The Federal Circuit noted that the lower court failed to properly interpret the language of the claims themselves.⁷⁸⁰ In particular, the Federal Circuit stated that the lower court erred by incorporating from the preferred embodiment into the claims a narrow definition

771. *See id.*, 47 U.S.P.Q.2d (BNA) at 1734.

772. *See id.* at 1370, 47 U.S.P.Q.2d (BNA) at 1736.

773. *See id.* at 1373, 47 U.S.P.Q.2d (BNA) at 1737.

774. *See id.* at 1375, 47 U.S.P.Q.2d (BNA) at 1738 (dismissing Mantech’s argument because steps of claim must be performed in the order provided and not in any order or simultaneously as Mantel argued).

775. *See id.* at 1371, 47 U.S.P.Q.2d (BNA) at 1735 (citing *Vitronics Corp. v. Conceptronc, Inc.*, 90 F.3d 1576, 1582-83, 39 U.S.P.Q.2d (BNA) 1573, 1174 (Fed. Cir. 1996)).

776. *See id.* at 1373, 47 U.S.P.Q.2d (BNA) at 1736-37.

777. *See id.*, 47 U.S.P.Q.2d (BNA) at 1736-37.

778. *See id.*, 47 U.S.P.Q.2d (BNA) at 1736-37.

779. *See id.* at 1375, 47 U.S.P.Q.2d (BNA) at 1738 (overturning the lower court’s summary judgment of noninfringement, and finding its claim construction too narrow).

780. *See id.*, 47 U.S.P.Q.2d (BNA) at 1738 (explaining that the lower court “erred because it . . . incorporated from the preferred embodiment into the claims a narrow definition for the claim term ‘well,’ as a structure used *both* for monitoring *and* injecting groundwater”) (emphasis in original). The written description and the claims as a whole, however, indicate that “well” is a structure that can *either* monitor *or* inject, but it need not do both. *See id.*, 47 U.S.P.Q.2d (BNA) at 1738.

when the claim itself did not invite such a definition.⁷⁸¹ In support of this argument, the Federal Circuit relied on the following claim language: “[i]t will be appreciated that a monitoring flow can be withdrawn from the well, as can a treating or test flow be injected via the well into the groundwater.”⁷⁸² The Federal Circuit held that use of the word “can” in the claim allowed for a well that could either monitor, inject or do both.⁷⁸³ Accordingly, the Federal Circuit reversed the lower court’s ruling that the term “well” required the presence of both activities simultaneously.⁷⁸⁴

In *Goodyear Tire & Rubber Co. v. Hercules Tire & Rubber Co.*,⁷⁸⁵ Goodyear brought suit against Hercules for infringement of its patent. Hercules counterclaimed that the patent was unenforceable for inequitable conduct.⁷⁸⁶ The Federal Circuit court agreed with the district court and held that, although the patent was not unenforceable for inequitable conduct, the patent was not infringed.⁷⁸⁷

On appeal to the Federal Circuit, Goodyear argued that the district court erred in its claim construction by limiting “tire” to only truck tires.⁷⁸⁸ As a preliminary matter, the Federal Circuit noted that its claim construction analysis announced in its *Markman* decision also applied to construing design patent claims.⁷⁸⁹ Goodyear argued that the meaning of the word “tire” should be defined as any type of tire.⁷⁹⁰ The Federal Circuit agreed that the design patent was not limited to truck tires because no such limitation existed either on the face of the patent or from the prosecution history.⁷⁹¹

In *Comark Communications, Inc. v. Harris Corp.*,⁷⁹² the Federal Circuit affirmed the decision holding the defendants liable for willful infringement of U.S. Patent No. 5,198,904 (“the ‘904 patent”).⁷⁹³ The Federal Circuit found that the jury’s finding was supported by

781. *See id.*, 47 U.S.P.Q.2d (BNA) at 1738.

782. *Id.* at 1374, 47 U.S.P.Q.2d (BNA) at 1738.

783. *See id.* at 1375, 47 U.S.P.Q.2d (BNA) at 1738 (interpreting the written description and the claims as having a more inclusive meaning than was given to it by the lower court).

784. *See id.* at 1376, 47 U.S.P.Q.2d (BNA) at 1739-40.

785. 162 F.3d 1113, 48 U.S.P.Q.2d (BNA) 1767 (Fed. Cir. 1998).

786. *See id.* at 1115, 48 U.S.P.Q.2d (BNA) at 1767.

787. *See id.*, 48 U.S.P.Q.2d (BNA) at 1767.

788. *See id.* at 1116, 48 U.S.P.Q.2d (BNA) at 1768.

789. *See id.* at 1116, 48 U.S.P.Q.2d (BNA) at 1768.

790. *See id.*, 48 U.S.P.Q.2d (BNA) at 1778.

791. *See id.*, 48 U.S.P.Q.2d (BNA) at 1778-79 (explaining that “deception concerning the patented design is determined from the viewpoint of the person who is the ordinary purchaser of the article charged to be an infringement”).

792. 156 F.3d 1182, 48 U.S.P.Q.2d (BNA) 1001 (Fed. Cir. 1998).

793. *See id.* at 1183, 48 U.S.P.Q.2d (BNA) at 1002 (affirming the district court’s holding of willful infringement based on the substantial evidence present in the record).

substantial evidence of willful infringement. Thus, the court upheld the lower court's denial of both Harris's motion for a new trial and motion for judgment as a matter of law.⁷⁹⁴

The patent at issue in *Comark Communications*, related to a common amplification television transmission technique that combined video and audio signals before amplification so that a single amplification tube can amplify both the video and the audio signals.⁷⁹⁵ Prior art single amplification techniques caused cross-modulation problems that disrupted the audio signals.⁷⁹⁶ In contrast, the '904 patent taught a circuit that cancelled the affects of cross-modulation.⁷⁹⁷ Comark alleged that Harris's aural carrier correction circuit infringed claims one and fourteen of the '904 patent.⁷⁹⁸

The Federal Circuit analyzed the meaning of the claim element "video delay circuit for receiving and delaying the video signal to provide a delayed video signal."⁷⁹⁹ Harris argued that the Federal Circuit should read this element in light of the specification to compensate for the delay introduced to the video signal by an IF vision modulator.⁸⁰⁰ The Federal Circuit refused to limit the term "video delay circuit" to its functional purpose,⁸⁰¹ however, because the specification should not trump the "clear and well-defined meaning" of "video delay circuit."⁸⁰² The court also noted that if it adopted Harris's construction, it would violate the doctrine of claim differentiation and render claim two superfluous and redundant of claim one.⁸⁰³

In *Digital Biometrics, Inc. v. Identix, Inc.*,⁸⁰⁴ the court performed *de novo* claim construction on patentee Digital's U.S. Patent No. 4,933,976 ("the '976 patent").⁸⁰⁵ The relevant technology concerned

794. See *id.* at 1193, 48 U.S.P.Q.2d (BNA) at 1010 (affirming the lower court's decision that Harris willfully infringed the patent, and affirming the court's decision not to grant Harris' motions).

795. See *id.* at 1183-84, 48 U.S.P.Q.2d (BNA) at 1002.

796. See *id.* at 1184, 48 U.S.P.Q.2d (BNA) at 1002 (explaining the difficulties of the common amplification technique).

797. See *id.*, 48 U.S.P.Q.2d (BNA) at 1003.

798. See *id.* at 1186, 48 U.S.P.Q.2d (BNA) at 1004.

799. *Id.*, 48 U.S.P.Q.2d (BNA) at 1004.

800. See *id.*, 48 U.S.P.Q.2d (BNA) at 1004.

801. See *id.*, 48 U.S.P.Q.2d (BNA) at 1004 (explaining Harris' argument that as disclosed in the preferred embodiment, "video delay circuit" should be limited to its functional purpose).

802. See *id.* at 1187, 48 U.S.P.Q.2d (BNA) at 1005.

803. See *id.*, 48 U.S.P.Q.2d (BNA) at 1005 (stating that although there is not a "hard and fast rule of construction" in claim differentiation, there is a "presumption that each claim in a patent has a different scope").

804. 149 F.3d 1335, 47 U.S.P.Q.2d (BNA) 1418 (Fed. Cir. 1998).

805. See *id.* at 1343-44, 47 U.S.P.Q.2d (BNA) at 1424 (stating that courts must construe patent claims as a matter of law, not as a matter of fact).

computerized fingerprinting systems.⁸⁰⁶ The district court interpreted the claims to require a “data structure in memory capable of storing digital data representing a two-dimensional array.”⁸⁰⁷ Specifically, the district court found that the data had to be digital and stored in memory.⁸⁰⁸ The district court then used this construction of the claim to determine that the patent was not infringed upon.

On appeal, the Federal Circuit first focused on the meaning of the term “array.”⁸⁰⁹ The court found the application of “array” in the context of claim 16 dispositive because it modified two forms of data structure, namely slice data and a composite array.⁸¹⁰ Judge Plager, writing for the court, further observed that if any doubt remained after consideration of the intrinsic evidence as to the exact meaning of the claim terms, consideration of extrinsic evidence may be necessary to determine the proper construction. If a claim falls into this latter category, however, another claim construction canon comes into play. The court observed that, because a patent applicant bears the burden of particularly pointing out and distinctly claiming the subject matter of the invention under § 112, ¶ 2, “if the claim is susceptible to a broader and a narrowing meaning, and the narrower one is clearly supported by the intrinsic evidence while the broader one raises questions of enablement under § 112, ¶ 2, we will adopt the narrower of the two.”⁸¹¹ Thus, the court held that the claim language supported the district court’s narrow claim construction.⁸¹² Furthermore, the court found that the patent’s written description supported the lower court’s construction.⁸¹³

The Federal Circuit summarily dismissed Digital’s argument that the dictionary definition of “array” did not require the data to be digital.⁸¹⁴ The court found that the specification clearly distinguished between analog “frames” and digital “arrays,” which made the inconsistent dictionary definition of little import.⁸¹⁵

The court also focused on the meaning of “slice data” when it construed the claims at issue.⁸¹⁶ Identix argued that the term “slice

806. *See id.* at 1337, 47 U.S.P.Q.2d (BNA) at 1420 (stating that this technology uses computer imaging to capture, store, and display fingerprint images).

807. *Id.* at 1343, 47 U.S.P.Q.2d (BNA) at 1423.

808. *See id.*, 47 U.S.P.Q.2d (BNA) at 1423.

809. *See id.* at 1345, 47 U.S.P.Q.2d (BNA) at 1425.

810. *See id.*, 47 U.S.P.Q.2d (BNA) at 1425.

811. *Id.* at 1344, 47 U.S.P.Q.2d (BNA) 1424.

812. *See id.* at 1345, 47 U.S.P.Q.2d (BNA) at 1425.

813. *See id.*, 47 U.S.P.Q.2d (BNA) at 1425.

814. *See id.* at 1346, 47 U.S.P.Q.2d (BNA) at 1426.

815. *See id.*, 47 U.S.P.Q.2d (BNA) at 1426.

816. *See id.*, 47 U.S.P.Q.2d (BNA) at 1426 (stating that Identix asserted that the proper construction of “slice data” also supported the district court’s grant of summary judgment).

data” is synonymous with “active area.”⁸¹⁷ The court agreed with Identix and identified two instances in the written description of the invention where the two terms were used synonymously.⁸¹⁸ Digital attempted to support its proposed interpretation of “slice data” and “active area” with references to other claims that also used the term “active area,” thereby indicating that the term “active area” possessed a meaning different from the meaning of “slice data.”⁸¹⁹ The court rejected Digital’s argument, and noted that words used in different claims can have application elsewhere in the patent.⁸²⁰

The court also relied on the prosecution history (i.e. preliminary amendments, amended claims, etc.) to strengthen its claim construction of the patent.⁸²¹ The court specifically pointed to an amendment responding to an anticipation rejection under of 35 U.S.C. § 102(b). Digital altered the claims to refer specifically to “slice data.”⁸²² Further, in an accompanying discussion of its claims, Digital separately referred to “active area,”⁸²³ and Digital distinguished a prior art reference by demonstrating that the reference did not teach a system that identified “active portions” of a fingerprint image. Digital asked the court to limit the remarks in its remarks to claims in which “active area” explicitly appeared. The court declined to do so, stating that the remarks were made without reference to a particular claim. Instead, the court found that the remarks were made to distinguish all of the pending claims that stood rejected over the prior art reference.⁸²⁴ Thus, the Federal Circuit found that absent an obvious qualifying remark, “arguments made to obtain the allowance of one claim are relevant to interpreting other claims in the same patent.”⁸²⁵

In *Laitram Corp. v. Morehouse Industries*,⁸²⁶ the Federal Circuit affirmed a grant of summary judgment of noninfringement of certain

817. *See id.*, 47 U.S.P.Q.2d (BNA) at 1426 (comparing Identix’s argument to Digital’s argument that the term “slice data” is more broadly defined than the term “active area”).

818. *See id.*, 47 U.S.P.Q.2d (BNA) at 1426.

819. *See id.* at 1347, 47 U.S.P.Q.2d (BNA) at 1426 (holding that Digital’s argument has no force because none of the claims that contain the term “active area” depend on the claim in question).

820. *See id.*, 47 U.S.P.Q.2d (BNA) at 1426 (finding that “[j]ust because certain words are used in different claims does not mean that those terms cannot have application elsewhere in the patent”) (citing *Tandom Corp. v. United States Int’l Trade Comm’n*, 831 F.2d 1017, 1024, 4 U.S.P.Q.2d (BNA) 1283, 1288 (Fed. Cir. 1989)).

821. *See id.*, 47 U.S.P.Q.2d (BNA) at 1426-27 (looking to the prosecution history as definitive statements made during the patent prosecution process).

822. *See id.*, 47 U.S.P.Q.2d (BNA) at 1427.

823. *See id.*, 47 U.S.P.Q.2d (BNA) at 1427.

824. *See id.*, 47 U.S.P.Q.2d (BNA) at 1427.

825. *Id.*, 47 U.S.P.Q.2d (BNA) at 1427.

826. 143 F.3d 1456, 46 U.S.P.Q.2d (BNA) 1609 (Fed. Cir. 1998).

claims of two of Laitram's patents.⁸²⁷ Laitram owned U.S. Patents B1 4,934,518 ("the '518 patent") and B1 4,886,158 ("the '158 patent"), which both issued from the same parent application.⁸²⁸ The subject matter of the patents was a "plastic 'module' connectable to other like modules to form a conveyor belt."⁸²⁹ Laitram brought a suit claiming that KVP, which produced the "All-In-One" and "Fluid Flo" modules, infringed various claims of the '518 and '158 patents.⁸³⁰ KVP moved for summary judgment of noninfringement and invalidity and the district court granted the defendant's motion.⁸³¹

The district court construed two claim limitations. First, the district court construed "driving surface" as limiting the claim to "angled, planar driving surfaces."⁸³² Second, the district court interpreted "sprocket recess" as requiring "opposing transverse elements, each of which contains a driving surface capable of mating with the corresponding side of a single sprocket tooth."⁸³³ Based on this claim construction, the district court found summary judgment of non-infringement appropriate because it was undisputed that the defendant's products contained curved driving surfaces and that "the 'All-In-One' module had only a single transverse element and accordingly did not meet the 'sprocket recess' limitation."⁸³⁴

At issue on appeal to the Federal Circuit were the claim limitations "driving surface" and "sprocket recess."⁸³⁵ The Federal Circuit addressed Laitram's asserted errors with respect to the district court's claim construction before it performed its own *de novo* claim construction.⁸³⁶ The court rejected Laitram's assertion that the district court erred in its construction of the "driving surface" limitation.⁸³⁷

First, Laitram insisted that the district court erroneously read the limitations of the disclosed embodiments contained in the specification into the claims.⁸³⁸ The Federal Circuit rejected this

827. *See id.* at 1458, 46 U.S.P.Q.2d (BNA) at 1611.

828. *See id.*, 46 U.S.P.Q.2d (BNA) at 1611.

829. *Id.*, 46 U.S.P.Q.2d (BNA) at 1611.

830. *See id.* at 1459, 46 U.S.P.Q.2d (BNA) at 1611 (explaining that KVP was one of several defendants sued by Laitram on the '518 and '158 patents).

831. *See id.* at 1461, 46 U.S.P.Q.2d (BNA) at 1613.

832. *See id.* at 1460, 46 U.S.P.Q.2d (BNA) at 1612 (explaining the district court's conclusion that a "driving surface" limitation was limited to "angled, planar" driving surfaces as it was distinguished in the patent application).

833. *Id.*, 46 U.S.P.Q.2d (BNA) at 1612.

834. *Id.* at 1461, 46 U.S.P.Q.2d (BNA) at 1613.

835. *See id.* at 1462-63, 46 U.S.P.Q.2d (BNA) at 1613-15.

836. *See id.*, 46 U.S.P.Q.2d (BNA) at 1613.

837. *See id.* at 1462, 46 U.S.P.Q.2d (BNA) at 1614 (rejecting Laitram's five arguments regarding the construction of the "driving surface" limitation as unpersuasive).

838. *See id.*, 46 U.S.P.Q.2d (BNA) at 1614.

contention, noting that the district court used the written description merely as a starting point for its claim interpretation and that this approach is permissible under Federal Circuit precedent.⁸³⁹

Second, Laitram argued that the district court incorrectly relied upon a statement made by Laitram during prosecution.⁸⁴⁰ In an attempt to distinguish its invention from prior art that disclosed curved driving surfaces, Laitram had stated that “the cylindrically shaped wall of the drive link of the chain of Palmaer . . . does not and could not provide the module of the instant invention having . . . a driving surface . . . that extends downwardly toward the bottom surface and in the direction of travel.”⁸⁴¹ Laitram insisted that because the examiner did not rely upon the statement in allowing the claims, the statement should play no role in claim construction.⁸⁴² The Federal Circuit rejected the argument that the degree to which an examiner relies on a statement made during prosecution is irrelevant to its role in claim construction.⁸⁴³

Third, Laitram asserted that because the Palmaer patent and its curved driving surfaces were cited as prior art during the prosecution of the ‘158 patent, it mandated the conclusion that the curved surfaces were covered by the claims.⁸⁴⁴ The Federal Circuit found that the Palmaer patent was used as a basis of rejection unrelated to the “driving surface” limitation at issue and therefore, was irrelevant.⁸⁴⁵

Fourth, Laitram argued that during the course of its requested reexamination of the ‘158 patent, KVP admitted that its claims were broad enough to include curved driving surfaces.⁸⁴⁶ The court reminded Laitram that it is the statements of the applicant, and not the reexamination requested, that “potentially shed light on the construction of the claims.”⁸⁴⁷ Thus, the statements from a person

839. *See id.*, 46 U.S.P.Q.2d (BNA) at 1614.

840. *See id.*, 46 U.S.P.Q.2d (BNA) at 1614 (noting that Laitram made the statements with specific reference to the ‘831 patent issued to Palmaer).

841. *Id.* at 1462, 46 U.S.P.Q.2d (BNA) at 1613-14.

842. *See id.*, 46 U.S.P.Q.2d (BNA) at 1614.

843. *See id.*, 46 U.S.P.Q.2d (BNA) at 1614 (“The fact that an examiner placed no reliance on an applicant’s statement distinguishing prior art does not mean that the statement is inconsequential for the purposes of claim construction.”) (citing *E.I. du Pont de Nemours & Co. v. Phillips Petroleum Co.*, 849 F.2d 1430, 1438, 7 U.S.P.Q.2d (BNA) 1129, 1136 (Fed. Cir. 1988)).

844. *See id.*, 46 U.S.P.Q.2d (BNA) at 1614.

845. *See id.*, 46 U.S.P.Q.2d (BNA) at 1614 (stating that when “Palmaer was cited as a ground for rejection of the claims, the examiner suggested to the applicant that his claims would be allowed if they were limited to multiple driving surfaces across the width of the module”).

846. *See id.*, 46 U.S.P.Q.2d (BNA) at 1614 (“KVP when requesting reexamination of the ‘158 patent, ‘admitted’ that the claims encompassed curved surfaces.”).

847. *Id.* at 1462-63, 46 U.S.P.Q.2d (BNA) at 1614 (citing *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1587, 39 U.S.P.Q.2d (BNA) 1573, 1576 (Fed. Cir. 1996)).

other than the patentee made during prosecution cannot be used to limit the claims of the patent.⁸⁴⁸

Fifth, Laitram attempted to use the doctrine of claim differentiation to argue that the asserted claims were not limited to flat driving surfaces.⁸⁴⁹ Claim 85 of the '518 patent was specifically limited to planar driving surfaces.⁸⁵⁰ Laitram asserted that this warranted a finding that the other claims were not so limited.⁸⁵¹ The Federal Circuit found this argument unpersuasive, noting that the doctrine of claim differentiation was limited by the caveat that "if a claim will bear only one interpretation, similarity [with another claim] will have to be tolerated."⁸⁵²

After rejecting Laitman's five principal arguments, the Federal Circuit concluded that the claim limitation would "bear only one interpretation: that the 'driving surface' is limited to flat driving surfaces."⁸⁵³ In reaching this conclusion, the court relied primarily on the written description.⁸⁵⁴ The court noted that nothing in the description suggested that the surfaces could be anything but flat, citing those benefits as disclosed in the written description.⁸⁵⁵ The court also relied on the prosecution history.⁸⁵⁶ In particular, it found that statements made by Laitram, in an effort to distinguish its claims from the Palmaer patent, compelled the conclusion that the "driving surface" limitation excludes curved surfaces like that on the accused devices.⁸⁵⁷

Laitram also argued on appeal that the trial court erred when it interpreted the second claim limitation, "sprocket recess,"⁸⁵⁸ which defined the claims as requiring "opposing transverse elements."⁸⁵⁹

848. *Id.*, 46 U.S.P.Q.2d (BNA) at 1614.

849. *See id.* at 1462, 46 U.S.P.Q.2d (BNA) at 1614 (stating that Laitram's final argument, that claim differentiation warrants the conclusion that the asserted claims are not limited to flat driving surfaces, was unpersuasive).

850. *See id.*, 46 U.S.P.Q.2d (BNA) at 1614 (noting claim 85 of the '518 patent is limited to flat driving surfaces).

851. *See id.*, 46 U.S.P.Q.2d (BNA) at 1614 (explaining Laitram's argument that the district court erred in construing the patent's written description to include only flat driving surfaces).

852. *Id.* at 1463, 46 U.S.P.Q.2d (BNA) at 1614 (quoting *Laitram Corp. v. Rexnird, Inc.*, 939 F.2d 1533, 1538, 19 U.S.P.Q.2d (BNA) 1367, 1371 (Fed. Cir. 1991)).

853. *Id.*, 46 U.S.P.Q.2d (BNA) at 1614.

854. *See id.*, 46 U.S.P.Q.2d (BNA) at 1613-14 (construing the language of the patent's written description which states, "each of said driving surfaces extending downwardly . . . and in direction of intended travel" to include only "angled, planar" driving surfaces).

855. *See id.*, 46 U.S.P.Q.2d (BNA) at 1614.

856. *See id.*, 46 U.S.P.Q.2d (BNA) at 1615 (stating that the prosecution history confirms the fact that Laitram distinguished his invention from the respondent's cylindrical walls).

857. *See id.*, 46 U.S.P.Q.2d (BNA) at 1615.

858. *See id.* at 1463-64, 46 U.S.P.Q.2d (BNA) at 1614-15.

859. *See id.*, 46 U.S.P.Q.2d (BNA) at 1615 (affirming the district court's holding that the "sprocket recess" limitation requires at least two opposing transverse elements capable of

Laitram asserted that the claims required multiple transverse elements.⁸⁶⁰ The Federal Circuit, however, agreed with the district court's analysis.⁸⁶¹ The court also cited portions of the written description for additional support that the limitation required "two opposing transverse elements capable of mating with a corresponding sprocket tooth."⁸⁶² Accordingly, because the "All-In-One" module possessed a single transverse element it did not contain "sprocket recesses" within the meaning of Laitram's patent, thereby precluding a finding of literal infringement.⁸⁶³

B. *Literal Infringement*

An accused device or process can infringe a claim either literally or under the doctrine of equivalents. To establish literal infringement, a plaintiff must show by preponderance of the evidence that every limitation of the claim is literally met by the accused device or process.⁸⁶⁴ Literal infringement requires that the accused device or process contain each limitation of the claim exactly. Accordingly, any deviation from the claim precludes a finding of literal infringement.⁸⁶⁵

In *Multiform Desiccants, Inc. v. Medzam, Ltd.*,⁸⁶⁶ the Federal Circuit reviewed a judgment of non-infringement and made a *de novo* determination of the correct construction of the claims at issue.⁸⁶⁷ The claims in the '266 patent recited a packet that was a combination of a degradable envelope, an absorbing material, and a treating material.⁸⁶⁸ The district court determined that the meaning of "degradable" in the '266 patent did not include the mode of

mating with corresponding sprocket tooth).

860. *See id.*, 46 U.S.P.Q.2d (BNA) at 1615 (explaining Laitram's argument that "the reason the claims require multiple transverse elements is because the claimed module requires multiple sprocket recesses across the width of the module, each requiring a single transverse element").

861. *See id.*, 46 U.S.P.Q.2d (BNA) at 1615 (rejecting Laitram's argument and agreeing with district court's conclusion that two opposing transverse elements were required to define the sprocket recesses).

862. *Id.* at 1464, 46 U.S.P.Q.2d (BNA) at 1615.

863. *See id.* at 1463, 46 U.S.P.Q.2d (BNA) at 1615.

864. *Kahn v. General Motors Corp.*, 45 U.S.P.Q.2d 1608, 1610 (Fed. Cir. 1998).

865. *Litton Systems*, 46 U.S.P.Q.2d at 1324.

866. 133 F.3d 1473, 45 U.S.P.Q.2d (BNA) 1429 (Fed. Cir. 1998).

867. *See id.* at 1476, 45 U.S.P.Q.2d (BNA) at 1431. The Federal Circuit stated that:

[S]ince a full and complete understanding of the scope of the claims is requisite to determining whether the patent is infringed, technical terms or words of art or special usages in the claims, if in dispute, are construed or clarified by the court before the construed claims are applied to the accused device.

Id.

868. *See id.*, 45 U.S.P.Q.2d (BNA) at 1431 (discussing the key features of the patented device and noting the distinctions between the patented and accused devices).

operation of the Medzam packet, which functioned by bursting open after expansion of the contents.⁸⁶⁹

On appeal, the Federal Circuit considered the specification and the prosecution history and determined that “the meaning of ‘degradable’ in claims 1 and 6 . . . is limited to the dissolution/degradation of the envelope as described in the specification.”⁸⁷⁰ The court also construed several claims that did not include the limitation “degradable,” but were written in “means-for” format.⁸⁷¹ The court explained that “[a] claim containing a functional limitation written in means-for form is literally infringed when the accused device performs the function stated in the claim, by means of structure, material, or acts described in the specification or equivalents thereof.”⁸⁷² In determining literal infringement under § 112, ¶ 6, the court determined the meaning of the words used to describe the claimed function.⁸⁷³ The district court found that the function described in these claims did not embrace all envelopes that release their contents upon contact with liquid.⁸⁷⁴ The Federal Circuit concluded that the district court’s interpretation of the words used in the claims was correct and dismissed Multiform’s argument that the doctrine of claim differentiation⁸⁷⁵ requires claims eleven through fifteen to be viewed as separate and distinct from claims one and six.⁸⁷⁶

In *Johns Hopkins University v. CellPro, Inc.*,⁸⁷⁷ Hopkins charged CellPro with infringement on two of its patents directed at relatively pure suspensions of immature blood cells and monoclonal antibodies

869. *See id.*, 45 U.S.P.Q.2d (BNA) at 1431.

870. *Id.* at 1478, 45 U.S.P.Q.2d (BNA) at 1434.

871. *See id.* at 1479, 45 U.S.P.Q.2d (BNA) at 1435. *See generally* 35 U.S.C. § 112 (1994) (noting a “means-for” format claim is infringed when “the accused device performs the function stated in the claim, by means of structure, material, or acts described in the specifications or equivalents thereof”).

872. *Multiform Desiccants*, 133 F.3d at 1479, 45 U.S.P.Q.2d (BNA) at 1434.

873. *See id.*, 45 U.S.P.Q.2d (BNA) at 1434 (citing 35 U.S.C. § 112, ¶ 6); *see also* 35 U.S.C. § 112, ¶ 6 (1994) (“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 claims shall be construed to cover the corresponding structure, material, or acts described in the specifications and equivalents thereof.”).

874. *See Multiform Desiccants*, 133 F.3d at 1479, 45 U.S.P.Q.2d (BNA) at 1434 (reviewing the district court’s interpretation of the function of the claims at issue).

875. *See id.*, 45 U.S.P.Q.2d (BNA) at 1434 (stating that the doctrine of claim differentiation “presumes that there is a difference in scope among the claims of a patent”) (citing *Tandon Corp. v. United States Int’l Trade Comm’n*, 831 F.2d 1017, 4 U.S.P.Q.2d (BNA) 1283 (Fed. Cir. 1987)).

876. *See id.* at 1480, 45 U.S.P.Q.2d (BNA) at 1434 (stating that the doctrine of claim differentiation cannot be used to broaden claims beyond their correct scope).

877. 152 F.3d 1342, 47 U.S.P.Q.2d (BNA) 1705 (Fed. Cir. 1998).

used to produce such suspensions.⁸⁷⁸ CellPro appealed, claiming that the district court erred in granting judgment as a matter of law in favor of Hopkins, as well as in excluding certain evidence relevant to the obviousness issue.⁸⁷⁹ CellPro also challenged the district court's grant of summary judgment in favor of Hopkins on CellPro's enablement and written description defense and the court's upholding of the jury's verdict of willful infringement and treble damages.⁸⁸⁰ Finally, CellPro challenged the district court's repatriation order requiring the return to the United States, and subsequent destruction of, certain vials of CellPro's product.⁸⁸¹

On the issue of infringement, the district court granted Hopkins' motion for judgment as a matter of law in light of the jury's verdict finding all of the asserted claims invalid for obviousness and lack of enablement.⁸⁸² Furthermore, the district court found that none of the asserted claims were infringed.⁸⁸³ The district court held that the jury improperly constructed the term "substantially free" in the claim at issue and that a proper construction would not only show that the claims were valid, but would also establish CellPro's infringement.⁸⁸⁴

The Federal Circuit upheld this decision by noting that the jury's initial construction would not have encompassed a single embodiment in the written description.⁸⁸⁵ The Federal Circuit noted that a claim construction that does not encompass a disclosed embodiment is "rarely, if ever, correct and would require highly persuasive evidentiary support."⁸⁸⁶ Thus, the Federal Circuit agreed that the term "substantially free" required no more than ten percent of the substance sought to be excluded.⁸⁸⁷ Because it was undisputed that the defendant's product had not more than ten percent of the excluded substance, the Federal Circuit agreed with the district court that the defendant literally infringed the patent.

In *Goodyear Tire & Rubber Co.*,⁸⁸⁸ the Federal Circuit also upheld the district court's ruling that a design patent was not infringed.⁸⁸⁹ The

878. *See id.*, 47 U.S.P.Q.2d (BNA) at 1706.

879. *See id.* at 1346, 47 U.S.P.Q.2d (BNA) at 1706-07.

880. *See id.*, 47 U.S.P.Q.2d (BNA) at 1706-07.

881. *See id.*, 47 U.S.P.Q.2d (BNA) at 1706-07.

882. *See Johns Hopkins Univ. v. CellPro*, 931 F. Supp. 303, 307 (D. Del. 1996).

883. *See id.*

884. *See CellPro*, 152 F.3d at 1349, 47 U.S.P.Q.2d (BNA) at 1709.

885. *See id.* at 1355, 47 U.S.P.Q.2d (BNA) at 1714 ("A patent claim should be construed to encompass at least one disclosed embodiment in the written description portion of the patent specification.")

886. *See id.*, 47 U.S.P.Q.2d (BNA) at 1714.

887. *See id.*, 47 U.S.P.Q.2d (BNA) at 1714.

888. 162 F.3d 1113, 48 U.S.P.Q.2d (BNA) 1767 (Fed. Cir. 1998).

889. *See id.* at 1121, 48 U.S.P.Q.2d (BNA) at 1772 (affirming the district court's holding of

court explained that infringement of a design patent is “the unauthorized manufacture, use, or sale of the article embodying the patented design or any colorable imitation of the design.”⁸⁹⁰ The Federal Circuit then explained that such infringement occurs when there “is deception of an ordinary observer, when such person gives the design the attention usually given by a purchaser of the item bearing the patented design.”⁸⁹¹ If an ordinary observer is deceived into thinking that two designs are substantially the same, thereby inducing such observer to purchase one supposing it to be the other, the first design patented is infringed by the other.⁸⁹² The measure of similarity of two designs should not be from the viewpoint of experts in design, rather it should be measured from the viewpoint of ordinary, principal purchasers.⁸⁹³

The test for infringement of a design patent is two-pronged: “(1) the designs must have the same general visual appearance, such that the purchaser would be deceived into confusing the design of the accused article with the patented design; and (2) the accused design must also contain substantially the same points of novelty that distinguished the patented design from prior art.”⁸⁹⁴ In this case, the Federal Circuit found that there were several significant points of novelty in the appellant’s design patent that did not appear in Hercules’ tire.⁸⁹⁵ Furthermore, the Federal Circuit noted that a trucker, as an ordinary observer, would recognize that the two designs were not colorably the same, thereby precluding infringement.⁸⁹⁶

In *Kahn v. General Motors Corp.*,⁸⁹⁷ the Federal Circuit affirmed a decision of non-infringement of two means-plus-function claims,⁸⁹⁸

non-infringement).

890. *Id.* at 1116-17, 48 U.S.P.Q.2d (BNA) at 1769.

891. *Id.* at 1117, 48 U.S.P.Q.2d (BNA) at 1769.

892. *See id.*, 48 U.S.P.Q.2d (BNA) at 1769.

893. *See id.*, 48 U.S.P.Q.2d (BNA) at 1769 (finding that the loss of an advantage in the market, which the patent was given to secure, is the result of mislead purchasers and not experts in design).

894. *See id.*, 48 U.S.P.Q.2d (BNA) at 1770 (outlining the test for infringement of a design patent).

895. *See id.* at 1121, 48 U.S.P.Q.2d (BNA) at 1772 (determining that the district court did not err “in finding, as the essential points of novelty of the ‘080 design, the very minor design aspects of the narrow decoupling grooves of the shoulder ribs, the minute details of the square block design, and the offsets on the shoulders”).

896. *See id.* at 1475, 48 U.S.P.Q.2d (BNA) at 1772 (affirming the district court’s finding of non-infringement).

897. 135 F.3d 1122, 45 U.S.P.Q.2d (BNA) 1608 (Fed. Cir.), *cert. denied*, 119 S. Ct. 177 (1998).

898. *See generally* 35 U.S.C. § 112, ¶ 6 (1994). The code states that:

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, materials, or acts in support thereof, and such claim shall be construed to cover the corresponding

but reversed the lower court's holding that the two claims were invalid for obviousness.⁸⁹⁹ Kahn owned U.S. Patent No. 4,018,994 ("the '944 patent"), which addressed the problem of minimizing distortion within an AM stereophonic receiver.⁹⁰⁰ Kahn sued GM for allegedly infringing two means-plus-function claims of the '994 patent.⁹⁰¹

The Federal Circuit first explained that "claims written in means-plus-function form are interpreted to cover the structure set forth in the specification and its equivalents."⁹⁰² The claim limitation at issue required a "means for deriving a distortion cancellation component from the stereo sum signal component."⁹⁰³ The Federal Circuit identified the structure in the specification and drawings corresponding to the claimed means to include an electronic amplifier, summer, and frequency doublers.⁹⁰⁴

To establish literal infringement, a plaintiff must demonstrate by preponderance of the evidence⁹⁰⁵ that "every limitation in the claim is met literally by the accused device."⁹⁰⁶ Kahn argued that a feedback circuit used in the GM receiver was equivalent to the disclosed structure and therefore literally infringed.⁹⁰⁷ The feedback circuit used in the GM receiver consisted of an envelope detector, a comparator, and an inverse modulator.⁹⁰⁸ The court also found significant differences between this structure and the structure disclosed in the '944 patent.⁹⁰⁹ For example, the court found that the frequency doubler in the '944 patent had no equivalent counterpart in the GM receiver to perform a similar function.⁹¹⁰ It also found no equivalent counterpart in the GM circuit to the summer in the '944 patent.⁹¹¹ In addition, the court found that the GM comparator was not equivalent to the disclosed amplifier, frequency doubler, summer

structure, material, or acts described in the specification and equivalents thereof.

899. *See Kahn*, 135 F.3d at 1477, 1480, 45 U.S.P.Q.2d (BNA) at 1612, 1614 (finding that there was no aspect of the invention described in appellant's claim 53 that was obvious to someone who has ordinary skill in the art).

900. *See id.* at 1475, 45 U.S.P.Q.2d (BNA) at 1610.

901. *See id.* at 1474, 45 U.S.P.Q.2d (BNA) at 1609.

902. *Id.* at 1476, 45 U.S.P.Q.2d (BNA) at 1610 (interpreting 35 U.S.C. § 112, ¶ 6).

903. *Id.* at 1476, 45 U.S.P.Q.2d (BNA) at 1611 (citations omitted).

904. *See id.* at 1476-77, 45 U.S.P.Q.2d (BNA) at 1611 (basing its determination on the parameters of the structure identified by Kahn).

905. *See id.*, 45 U.S.P.Q.2d (BNA) at 1611 (citing *Envirotech Corp. v. Al George, Inc.*, 730 F.2d 753, 758, 221 U.S.P.Q.2d (BNA) 473, 477 (Fed. Cir. 1984)).

906. *Id.* at 1476, 45 U.S.P.Q.2d (BNA) at 1610 (citing *Intellicall, Inc. v. Phonometrics, Inc.*, 952 F.2d 1384, 1388-89, 21 U.S.P.Q.2d (BNA) 1383, 1387 (Fed. Cir. 1992)).

907. *See id.* at 1477, 45 U.S.P.Q.2d (BNA) at 1611.

908. *See id.*, 45 U.S.P.Q.2d (BNA) at 1611.

909. *See id.*, 45 U.S.P.Q.2d (BNA) at 1612.

910. *See id.*, 45 U.S.P.Q.2d (BNA) at 1612.

911. *See id.*, 45 U.S.P.Q.2d (BNA) at 1612.

combination in the '944 specification because these "two circuits utilize very different structures for very different purposes."⁹¹² Thus, because the "means for deriving a distortion cancellation component from the stereo sum signal component" limitation was not met by the accused device, the court held the two means-plus-function claims were not literally infringed.⁹¹³

In *Digital Biometrics, Inc. v. Identix, Inc.*,⁹¹⁴ the Federal Circuit affirmed the district court's grant of summary judgment that certain products made by Identix did not infringe Digital's U.S. Patent No. 4,933,976 ("the '976 patent"), either literally or under the doctrine of equivalents.

Digital's '976 patent was directed to a system (and method) for capturing, storing, and displaying fingerprint images. Unlike conventional systems, which used paper and ink, Digital's claims were directed to a computer controlled imaging and retrieval system. By digitally representing a fingerprint image, the claimed system could automate fingerprint storage, retrieval, and most importantly, searching.

After construing the relevant claims,⁹¹⁵ the court next considered whether the properly construed claims read on the accused devices.⁹¹⁶ Digital asserted that two Identix devices infringed the '976 patent; the focus on appeal was the TP-600. The court examined the TP-600 and found that the data generated by the product's imaging device was not digital data, but rather analog.⁹¹⁷ Furthermore, the court found that the generated data was not slice data, but was in fact a complete image, because all of the image data in the TP-600 was merged directly into the composite array instead of generating arrays of slice data as required by the patent.⁹¹⁸ Alternatively, Digital argued that the TP-600 infringed because even if the court construed the term "array" to require digital data, the TP-600's A/D converter converted the analog data to a digital form thereby meeting the requirements of the claim. The court also disagreed with this analysis because the term "array" also required that the "two dimensional image" be produced, however, the converted signal in the TP-600 only

912. *Id.*, 45 U.S.P.Q.2d (BNA) at 1612.

913. *See id.*, 45 U.S.P.Q.2d (BNA) at 1612.

914. 149 F.3d 1335, 47 U.S.P.Q.2d (BNA) 1418 (Fed. Cir. 1998).

915. *See supra* Part III.A (providing detailed discussion of the Federal Circuit's claim construction review).

916. *See Digital Biometrics*, 149 F.3d at 1348, 47 U.S.P.Q.2d (BNA) at 1427.

917. *See id.*, 47 U.S.P.Q.2d (BNA) at 1427.

918. *See id.*, 47 U.S.P.Q.2d (BNA) at 1427.

produced a single value.⁹¹⁹ Thus, the accused device lacked two of the limitations in Digital's patent.⁹²⁰

C. Doctrine of Equivalents

As mentioned in the previous section, an accused device or process can infringe a claim either literally or under the doctrine of equivalents. The doctrine of equivalents allows infringement to be found even if the accused device or process does not literally infringe upon the express terms of a patent claim, as long as there is "equivalence" between the elements of the accused device or process and the claimed elements of the patented invention.⁹²¹

In *Multiform Dessicants, Inc. v. Medzam, Ltd.*,⁹²² Multiform argued that even if there was no literal infringement, Medzam's packet infringed under the doctrine of equivalents.⁹²³ A finding of infringement under the doctrine of equivalents requires a determination that the accused device performs substantially the same function, in the same way as the original device, to achieve the same result.⁹²⁴ Multiform argued that the interchangeability of Medzam's envelopes and the patented envelopes favored a finding of infringement.⁹²⁵ The Federal Circuit, however, found that the two products would not have been recognized as interchangeable by one reasonably skilled in the art.⁹²⁶ Thus, the Federal Circuit held that the district court's finding of no infringement under the doctrine of equivalents was not clearly erroneous.⁹²⁷

In *Dawn Equipment Co. v. Kentucky Farms Inc.*,⁹²⁸ the Federal Circuit reviewed the district court's denial of Kentucky Farms' motion for judgment as a matter of law.⁹²⁹ The Federal Circuit reviews legal standards given to a jury without deference, whereas a jury's resolution of factual disputes are reviewed to determine whether

919. *See id.*, 47 U.S.P.Q.2d (BNA) at 1427.

920. *See id.*, 47 U.S.P.Q.2d (BNA) at 1427.

921. *Kahn v. General Motors Corp.*, 135 F.3d 1472, 1478, 45 U.S.P.Q.2d (BNA) 1608, 1612 (Fed. Cir. 1998); *see also* *Warner-Jenkinson v. Hilton-Davis Chem. Co.*, 520 U.S. 17, 40 (1997) (determining if an equivalent exists by asking if the element of the accused device "plays a role substantially different from the claimed element.").

922. *Multiform Dessicants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 45 U.S.P.Q.2d (BNA) 1429 (Fed. Cir. 1998).

923. *See id.* at 1480, 45 U.S.P.Q.2d (BNA) at 1435.

924. *See id.*, 45 U.S.P.Q.2d (BNA) at 1435.

925. *See id.*, 45 U.S.P.Q.2d (BNA) at 1435 (discussing the role of interchangeability of products in a doctrine of equivalents determination).

926. *See id.* at 1481, 45 U.S.P.Q.2d (BNA) at 1435.

927. *See id.*, 45 U.S.P.Q.2d (BNA) at 1435.

928. 140 F.3d 1009, 46 U.S.P.Q.2d (BNA) 1109 (Fed. Cir. 1998).

929. *See id.* at 1012-13, 46 U.S.P.Q.2d (BNA) at 1111.

there is substantial evidence to support its finding.⁹³⁰

Determining infringement is a two step process.⁹³¹ First, the court must construe the claims. Second, the construed claims must be compared to the allegedly infringing device.⁹³² In *Dawn Equipment*, however, the Federal Circuit did not resolve the issue of claim construction, but instead immediately proceeded to the second step and applied the construed claim to the accused device.⁹³³

In *Dawn Equipment*, the Federal Circuit determined that the two mechanisms were structurally dissimilar and therefore, operated differently.⁹³⁴ In addition, the Federal Circuit found that the mechanisms on both the patented and the accused devices did not accomplish the same results.⁹³⁵ As a result, there was no infringement under the doctrine of equivalents.⁹³⁶ Thus, the Federal Circuit determined that the jury's verdict was not supported by substantial evidence,⁹³⁷ reversed the district court's decision, and ordered judgment for the defendant.⁹³⁸

In *Ethicon Endo-Surgery, Inc. v. United States Surgical Corp.*,⁹³⁹ the court affirmed a grant of summary judgment for the defendant, U.S. Surgical, on the grounds that U.S. Surgical did not infringe under the doctrine of equivalents. Ethicon possessed the '244 patent for a lockout mechanism used in linear cutter staplers.⁹⁴⁰ These staplers allow a surgeon to make an incision in tissue while stapling each side of the incision to prevent excessive bleeding.⁹⁴¹ The lockout mechanism prevents the firing apparatus from being used after the cartridge has been spent,⁹⁴² thus, preventing a surgeon from using the stapler unless an unused cartridge is inserted into the linear cutter stapler.⁹⁴³

U.S. Surgical also possessed a patent, issued after Ethicon's, for a

930. *See id.* at 1014, 46 U.S.P.Q.2d (BNA) at 1112.

931. *See id.*, 46 U.S.P.Q.2d (BNA) at 1112.

932. *See id.*, 46 U.S.P.Q.2d (BNA) at 1112.

933. *See id.*, 46 U.S.P.Q.2d (BNA) at 1112 (explaining that the claim construction was sufficient to determine infringement, and not objected to by the parties, or found to contain errors by the court).

934. *See id.* at 1016, 46 U.S.P.Q.2d (BNA) at 1113.

935. *See id.* at 1017, 46 U.S.P.Q.2d (BNA) at 1114.

936. *See id.*, 46 U.S.P.Q.2d (BNA) at 1114 (concluding that no reasonable jury could have found infringement).

937. *See id.*, 46 U.S.P.Q.2d (BNA) at 1114.

938. *See id.* at 1018, 46 U.S.P.Q.2d (BNA) at 1115.

939. 149 F.3d 1309, 47 U.S.P.Q.2d (BNA) 1272 (Fed. Cir. 1998).

940. *See id.* at 1311, 47 U.S.P.Q.2d (BNA) at 1273.

941. *See id.*, 47 U.S.P.Q.2d (BNA) at 1273.

942. *See id.*, 47 U.S.P.Q.2d (BNA) at 1273.

943. *See id.*, 47 U.S.P.Q.2d (BNA) at 1273 (explaining that the objective of the lockout mechanism is to prevent the apparatus in the stapler from firing after the cartridge has been used).

lockout mechanism for a linear cutter stapler.⁹⁴⁴ Both the district court in *Ethicon I*⁹⁴⁵ and the Federal Circuit in *Ethicon II*⁹⁴⁶ determined that U.S. Surgical's device did not literally infringe claims six and twenty-four of Ethicon's patent.⁹⁴⁷ In *Ethicon II*, however, the Federal Circuit remanded the case to the lower court to determine if U.S. Surgical infringed under the doctrine of equivalents.⁹⁴⁸ On remand, the district court determined that there was no infringement under the doctrine of equivalents, and granted summary judgment to U.S. Surgical for both claims.⁹⁴⁹

The district court determined that U.S. Surgical did not infringe claim six under the doctrine of equivalents because U.S. Surgical's lockout mechanism "differs substantially from the 'connected to said longitudinal slots' limitation."⁹⁵⁰ The district court relied on several Federal Circuit opinions⁹⁵¹ for its decision, explaining that "the doctrine of equivalents is not a license to ignore claim limitations."⁹⁵² In other words, the court found that the claim limitations in effect specifically excluded all other subject matter.⁹⁵³

Ethicon argued that the district court's reliance on the above-mentioned cases was misplaced because these cases were factually distinguishable from the instant case.⁹⁵⁴ Specifically, Ethicon argued that its claim did not address or directly exclude a lockout positioned as is U.S. Surgical's staplers.⁹⁵⁵ Ethicon also argued that all three cited cases were inconsistent with *Corning Glass Works v. Sumitomo Elec. U.S.A.*,⁹⁵⁶ in which the "all elements" rule was not strictly applied because the court found that a simultaneous substitution of two reciprocal limitations met the established tests for equivalence.⁹⁵⁷

U.S. Surgical urged the Federal Circuit to affirm the district court's finding that its lockout's structure was excluded specifically from the

944. *See id.* at 1313, 47 U.S.P.Q.2d (BNA) at 1274.

945. 900 F. Supp. 172, 38 U.S.P.Q.2d (BNA) 1385 (S.D. Ohio 1995).

946. 98 F.3d 1572, 40 U.S.P.Q.2d (BNA) 1019 (Fed. Cir. 1996).

947. *See id.* at 1316-21, 47 U.S.P.Q.2d (BNA) at 1276-80.

948. *See id.* at 1315, 47 U.S.P.Q.2d (BNA) at 1275.

949. *See id.* at 1315, 47 U.S.P.Q.2d (BNA) at 1275.

950. *Id.* at 1316, 47 U.S.P.Q.2d (BNA) at 1276.

951. *See Dolly v. Spaulding & Evenflo*, 16 F.3d 394, 29 U.S.P.Q.2d (BNA) 1767 (Fed. Cir. 1994); *Wierner v. NEC Electronics*, 102 F.3d 534, 41 U.S.P.Q.2d (BNA) 1023 (Fed. Cir. 1996); *Sage Prods. v. Devon Indus.*, 126 F.3d 1420, 44 U.S.P.Q.2d (BNA) 1103 (Fed. Cir. 1997).

952. *Ethicon*, 149 F.3d at 1316, 47 U.S.P.Q.2d (BNA) at 1276.

953. *See id.*, 47 U.S.P.Q.2d (BNA) at 1276.

954. *See id.* at 1316, 47 U.S.P.Q.2d (BNA) at 1276.

955. *See id.*, 47 U.S.P.Q.2d (BNA) at 1276.

956. 868 F.2d 1251, 9 U.S.P.Q.2d (BNA) 1962 (Fed. Cir. 1989).

957. *See Ethicon*, 149 F.3d at 1319, 47 U.S.P.Q.2d (BNA) at 1279; *see also* 47 U.S.P.Q.2d at 1277.

coverage of Ethicon's claim six.⁹⁵⁸

The Federal Circuit agreed with Ethicon that U.S. Surgical's arguments "would force the All Elements rule to swallow the doctrine of equivalents, reducing the application of the doctrine to nothing more than a repeated analysis of literal infringement."⁹⁵⁹ The doctrine of equivalents, by necessity, contemplates subject matter that is not included in the literal scope of a claim.⁹⁶⁰ "Such subject matter is not necessarily 'specifically excluded' from coverage under the doctrine unless its inclusion is somehow inconsistent with the language of the claim."⁹⁶¹ The Federal Circuit then explained its factually-based decisions in *Dolly*, *Wiener*, and *Sage*, and expressed the following: "on the facts presented, no reasonable finder of fact could have found infringement by equivalents because the differences between the allegedly infringing devices and the claimed inventions were plainly not insubstantial."⁹⁶² The Federal Circuit, finding that *Corning Glass Works* was consistent with the district court's decision, explained that "[a]s with all infringement questions, it was decided on its facts."⁹⁶³

The Federal Circuit applied, as the appropriate law of the case, the claim construction previously used when the parties were before it in *Ethicon II*. The Federal Circuit noted that U.S. Surgical's lockout was not even close to the longitudinal slots as required by claim six.⁹⁶⁴ Similarly, claim six's "in a staple cartridge" limitation was not met by an equivalent.⁹⁶⁵ The court found that no reasonable jury could have found that the difference between the location of the U.S. lockout and the location of the claimed lockout was insubstantial. Thus, U.S. Surgical did not infringe claim six under the doctrine of equivalents.

In *Hughes Aircraft Co. v. United States*,⁹⁶⁶ the Federal Circuit addressed the "all-elements" or "all-limitations" rule enunciated in *Warner-Jenkinson v. Hilton Davis Chemical Co.*⁹⁶⁷ The Federal Circuit

958. *See id.* at 1317, 47 U.S.P.Q.2d (BNA) at 1277.

959. *See id.*, 47 U.S.P.Q.2d (BNA) at 1277.

960. *See id.*, 47 U.S.P.Q.2d (BNA) at 1277.

961. *Id.*, 47 U.S.P.Q.2d (BNA) at 1277.

962. *Id.* at 1318, 47 U.S.P.Q.2d (BNA) at 1278.

963. *Id.* at 1319, 47 U.S.P.Q.2d (BNA) at 1279.

964. *See Ethicon*, 149 F.3d at 1319, 47 U.S.P.Q.2d (BNA) at 1279 (undercutting Ethicon's argument that mere disconnect between lockout and longitudinal device was insufficient to conclude non-infringement).

965. *See id.*, 47 U.S.P.Q.2d (BNA) at 1279 (acknowledging that U.S. Surgical's lockout is not positioned anywhere near the cartridge).

966. 140 F.3d 1470, 46 U.S.P.Q.2d (BNA) 1285 (Fed. Cir. 1998).

967. *See id.* at 1474, 46 U.S.P.Q.2d (BNA) at 1288 (articulating the Supreme Court's clarification of the doctrine of equivalents in *Warner-Jenkinson v. Hilton Davis Chem. Co.*, 520 U.S. 17 (1997)).

recognized the U.S. Supreme Court's mandate in *Warner-Jenkinson* that the doctrine of equivalents be applied to individual elements of the claim and not to the invention as a whole.⁹⁶⁸ Accordingly, courts should analyze the role played by each element in the context of the specific patent claim where the focus is on whether a substitute element matches the function, way, and result of the claimed element and not the entire invention as a whole.⁹⁶⁹ The Federal Circuit found that the lower court properly performed the all-elements analysis as stated in *Warner-Jenkinson* and, therefore, re-affirmed the lower court's decision.⁹⁷⁰

Of significance in *Hughes Aircraft* is the Federal Circuit's reliance on the "doctrine of later-developed technology."⁹⁷¹ Under this doctrine, the significance of a claim's limitation is lessened where a subsequent change in the state of the art creates a modern day equivalent to the limitation.⁹⁷² The Federal Circuit noted that although the element at issue in the accused device performed the same function and achieved the same result in a different way, the difference in the way was obfuscated by the "doctrine of later developed technology."⁹⁷³ Thus, while the accused device may not contain an element or limitation found in the patent claim, the accused device still can be found to infringe if it contains an equivalent element, which is unknown at the time of the invention, that substantially achieves the same result and performs the same function.⁹⁷⁴

In *Vehicular Technologies Corp. v. Titan Wheel International, Inc.*,⁹⁷⁵ the plaintiff accused the defendant's automatic locking differential of infringing upon its patent.⁹⁷⁶ The Federal Circuit proceeded to perform a two-step infringement analysis, which construed the scope of the claims and then compared the properly construed claims to the accused device.⁹⁷⁷ The plaintiff conceded that there was no literal

968. *See id.*, 46 U.S.P.Q.2d (BNA) at 1288 (declaring that each element of a patent claim is material to the definition of scope of patented invention).

969. *See id.*, 46 U.S.P.Q.2d (BNA) at 1288.

970. *See id.* at 1475, 46 U.S.P.Q.2d (BNA) at 1288 (determining that the lower court correctly concluded that the elements equivalently met claim limitations).

971. *See id.*, 46 U.S.P.Q.2d (BNA) at 1289 (noting that equivalency evaluation should occur at the time of infringement, not at the time the patent is issued).

972. *See id.*, 46 U.S.P.Q.2d (BNA) at 1289.

973. *See id.*, 46 U.S.P.Q.2d (BNA) at 1289.

974. *See id.*, 46 U.S.P.Q.2d (BNA) at 1289 (applying the doctrine of later-developed technology to equivalency analysis).

975. 141 F.3d 1084, 46 U.S.P.Q.2d (BNA) 1257 (Fed. Cir. 1998).

976. *See id.* at 1087, 46 U.S.P.Q.2d (BNA) at 1259.

977. *See id.* at 1088, 46 U.S.P.Q.2d (BNA) at 1260 (demonstrating the determination of whether all limitations are present).

infringement because the accused device lacked a concentric spring assembly limitation. The plaintiff argued, however, that the defendant's spring and plug assembly was a system equivalent to the patent's concentric spring system.⁹⁷⁸ Therefore, the issue facing the Federal Circuit was whether under the doctrine of equivalents the defendant's product was a substantial equivalent to the plaintiff's invention.⁹⁷⁹

In performing its doctrine of equivalents analysis, the Federal Circuit noted that "[e]ach element contained in a patent claim is deemed material to defining the scope of the patented invention, and thus the doctrine of equivalents must be applied to individual elements of the claim, not to the invention as a whole."⁹⁸⁰ Accordingly, the court first focused on the claim limitation that was literally absent from the accused device. The court then proceeded to interpret the scope of the limitation by reviewing the "role" played by the claim limitation. The court noted that if the accused device could not play that "role" it could not be found to infringe under the doctrine of equivalents.⁹⁸¹

The court focused on the claim language and the explanation of such claim found in the written description of the patent.⁹⁸² The court noted that the patent's written description repeatedly emphasized a particular benefit of the limitation at issue.⁹⁸³ The particular benefit was the ability of the limitation to serve as a back-up or redundancy to another part.⁹⁸⁴ The court then analyzed the accused device to determine if it could perform this back-up role and found that it could not.⁹⁸⁵ The court found that the written description identified and clarified a function of an element in the claim that was not addressed by the district court when it found the patentee had a reasonable likelihood of success in establishing infringement under the doctrine of equivalents.⁹⁸⁶ Thus, the Federal Circuit concluded that the district court's finding was wrong because it was based on an error concerning the functions performed by a

978. *See id.*, 46 U.S.P.Q.2d (BNA) at 1260.

979. *See id.*, 46 U.S.P.Q.2d (BNA) at 1260.

980. *Id.* at 1089, 46 U.S.P.Q.2d (BNA) at 1267 (quoting *Warner-Jenkinson v. Hilton Davis Chem. Co.*, 520 U.S. 17, 29 (1997)).

981. *See id.* at 1090, 46 U.S.P.Q.2d (BNA) at 1261.

982. *See id.*, 46 U.S.P.Q.2d (BNA) at 1261 (investigating the patent's written description to determine the applicability of limitations).

983. *See id.*, 46 U.S.P.Q.2d (BNA) at 1262 (establishing that the written description clearly discusses a function not addressed previously by the district court).

984. *See id.*, 46 U.S.P.Q.2d (BNA) at 1262.

985. *See id.* at 1091, 46 U.S.P.Q.2d (BNA) at 1262.

986. *See id.*, 46 U.S.P.Q.2d (BNA) at 1262.

claim limitation, and “it thus misapprehended the possible range of equivalents available to the patentee.”⁹⁸⁷

In a sharp dissent, Judge Newman criticized the court for imposing a new rule of law that “bars liability for infringement by an equivalent device if the equivalent does not possess the *unclaimed* advantages or functions described in the specification.”⁹⁸⁸ The dissent concluded that this identical-function rule directly contradicted the established rule of claim construction, which bars the importing of limitations into the claims from the specification.⁹⁸⁹

In *Insituform Technologies Inc. v. CAT Contracting, Inc.*,⁹⁹⁰ defendant appealed from the district court’s holding that it infringed U.S. Patent No. 4,336,012 (“the ‘012 patent”) owned by plaintiff Insituform Technologies under the doctrine of equivalents.⁹⁹¹ The Federal Circuit affirmed in part and reversed in part this portion of the district court’s decision. The court agreed that defendant’s Process 1 infringed while it reversed and found that defendant’s Process 2 did not infringe the ‘012 patent.⁹⁹²

The ‘012 patent covers a process for lining pipelines and passageways in a way that they could be repaired without removing them from the ground.⁹⁹³ The claimed inventive process involves inserting a flexible liner, including an impermeable plastic layer and a felt layer impregnated with a thermosetting resin, in a pipe with the impregnated felt layer positioned between the inner wall of the pipe and the impermeable plastic layer.⁹⁹⁴ The defendants used two processes for impregnating a liner with resin: (1) the “multiple cup process,” which used four to six cups to draw the vacuum; and (2) the “multiple needle process,” which used metal tubes or needles inserted through the wall of the liner.⁹⁹⁵ The ‘012 patent further directed the application of a vacuum to the inside of the liner by attaching a cup to the liner and the other end of the cup to a vacuum source.⁹⁹⁶

The Federal Circuit reviewed the district court’s analysis of

987. *See id.*, 46 U.S.P.Q.2d (BNA) at 1263.

988. *Id.* at 1093, 46 U.S.P.Q.2d (BNA) at 1263 (Newman, C.J., dissenting).

989. *See id.*, 46 U.S.P.Q.2d (BNA) at 1264 (criticizing the majority for limiting the fact-finders’ abilities).

990. 161 F.3d 688, 48 U.S.P.Q.2d (BNA) 1610, *cert. denied*, 119 S. Ct. 1254 (1999).

991. *See id.* at 689, 48 U.S.P.Q.2d (BNA) at 1611.

992. *See id.*, 48 U.S.P.Q.2d (BNA) at 1611.

993. *See id.* at 689-90, 48 U.S.P.Q.2d (BNA) at 1612.

994. *See id.*, 48 U.S.P.Q.2d (BNA) at 1612.

995. *See id.*, 48 U.S.P.Q.2d (BNA) at 1612.

996. *See id.* at 692, 48 U.S.P.Q.2d (BNA) at 1613.

infringement under the doctrine of equivalents.⁹⁹⁷ In deciding whether infringement occurred, the court compared the accused products or processes to determine the similarity between their functions, ways, or results.⁹⁹⁸ The court found no clear error in the district court's analysis of the multiple cup process and dismissed as irrelevant the defendant's argument that its multiple cup method was more efficient.⁹⁹⁹

The Federal Circuit did find clear error, however, with the lower court's ruling that the multiple needle method infringed the '012 patent.¹⁰⁰⁰ The court held that the district court's examination, based on the function-way-result analysis, involved too much overlapping and was unduly broad.¹⁰⁰¹ The court also noted that the '012 patent inventor had tried using a needle instead of a cup while developing the claimed method, but the application made no mention of using a needle.¹⁰⁰² From this, the court inferred that the inventor was unable to practice the claimed method using a needle.¹⁰⁰³

In *Comark Communications, Inc. v. Harris Corp.*,¹⁰⁰⁴ the Federal Circuit affirmed the district court's decision finding Harris liable for willful infringement of U.S. Patent No. 5,198,904 ("the '904 patent").¹⁰⁰⁵ The Federal Circuit found substantial evidence to support the jury's finding of willful infringement and upheld the lower court's denial of both Harris's motion for a new trial and motion for JMOL.¹⁰⁰⁶

The '904 patent related to a common amplification television transmission technique that combined video and audio signals before amplification. This process allowed a single amplification tube to amplify both the video and the audio signals. Prior art single amplification techniques caused cross-modulation problems that disrupt the audio signals.¹⁰⁰⁷ Comark's '904 patent, however, taught a circuit that cancelled the effects of cross-modulation.¹⁰⁰⁸ Plaintiff Comark alleged that Harris's aural carrier correction circuit infringed claims one and fourteen of the '904 patent.¹⁰⁰⁹

997. *See id.*, 48 U.S.P.Q.2d (BNA) at 1613.

998. *See id.*, 48 U.S.P.Q.2d (BNA) at 1613.

999. *See id.* at 692-93, 48 U.S.P.Q.2d (BNA) at 1613-14 (asserting that more efficient does not mean substantial difference).

1000. *See id.* at 694, 48 U.S.P.Q.2d (BNA) at 1615.

1001. *See id.* at 693, 48 U.S.P.Q.2d (BNA) at 1614.

1002. *See id.* at 694, 48 U.S.P.Q.2d (BNA) at 1615.

1003. *See id.*, 48 U.S.P.Q.2d (BNA) at 1615.

1004. 156 F.3d 1182, 48 U.S.P.Q.2d (BNA) 1001 (Fed. Cir. 1998).

1005. *See id.* at 1182, 48 U.S.P.Q.2d (BNA) at 1002.

1006. *See id.* at 1186, 48 U.S.P.Q.2d (BNA) at 1004.

1007. *See id.*, 48 U.S.P.Q.2d (BNA) at 1002.

1008. *See id.*, 48 U.S.P.Q.2d (BNA) at 1002-03.

1009. *See id.*, 48 U.S.P.Q.2d (BNA) at 1003.

The Federal Circuit rejected Harris's contention that insufficient evidence existed on the record to support a jury finding of infringement under the doctrine of equivalents.

In *Chiuminatta Concrete Concepts, Inc. v. Cardinal Industries, Inc.*,¹⁰¹⁰ the Federal Circuit examined the interplay between the equivalency analysis under 35 U.S.C. § 112, ¶ 6 and the doctrine of equivalents.¹⁰¹¹ Significantly, the court noted the similarities between the two analyses but discovered a key difference between the chronological foci of the two doctrines.¹⁰¹²

Chiuminatta's U.S. Patent No. 5,056,499 ("the '499 patent") claimed an apparatus for cutting concrete prior to it reaching a final, hardened stage.¹⁰¹³ Chiuminatta sued Cardinal for infringement of its '499 patent by marketing a similar concrete cutting tool.¹⁰¹⁴ The district court granted Chiuminatta's summary judgment motion for literal infringement and Cardinal subsequently appealed.¹⁰¹⁵ The Federal Circuit reversed the summary judgment order, finding that the district court's conclusions were based on an erroneous claim construction of a means-plus-function limitation.¹⁰¹⁶

The decision is more interesting in this regard for its discussion of Chiuminatta's alternative argument in support of the district court's summary judgment ruling. Chiuminatta argued that the lower court's finding of literal infringement could still be affirmed under the doctrine of equivalents.¹⁰¹⁷ Chiuminatta pointed to the "undisputed evidence," which established that "the wheels of the accused device differ from the patented invention only insubstantially."¹⁰¹⁸ The court disagreed, stating that its analysis of the devices in the context of the means-plus-function limitation precluded a finding of equivalence.¹⁰¹⁹

The Federal Circuit noted that although an "equivalence analysis under section 112, paragraph 6, and the doctrine of equivalents are not coextensive . . . and have different origins and purposes, their tests for equivalence are closely related."¹⁰²⁰ Both tests protect "the

1010. 145 F.3d 1303, 46 U.S.P.Q.2d (BNA) 1752 (Fed. Cir. 1998).

1011. *See id.* at 1310, 46 U.S.P.Q.2d (BNA) at 1757.

1012. *See id.*, 46 U.S.P.Q.2d (BNA) at 1758 (declaring that only the doctrine of equivalents adapts to technological advances).

1013. *See id.* at 1305, 46 U.S.P.Q.2d (BNA) at 1753.

1014. *See id.* at 1306-07, 46 U.S.P.Q.2d (BNA) at 1754-55.

1015. *See id.* at 1307, 46 U.S.P.Q.2d (BNA) at 1755.

1016. *See id.*, 46 U.S.P.Q.2d (BNA) at 1755.

1017. *See id.* at 1310, 46 U.S.P.Q.2d (BNA) at 1757.

1018. *Id.*, 46 U.S.P.Q.2d (BNA) at 1757.

1019. *See id.*, 46 U.S.P.Q.2d (BNA) at 1757.

1020. *Id.*, 46 U.S.P.Q.2d (BNA) at 1757.

substance of a patentee's right to exclude by preventing mere colorable differences or slight improvements from escaping infringement . . . [and] do so by applying similar analyses of insubstantiality of the differences."¹⁰²¹ Thus, the court found that, "a finding of a lack of literal infringement for lack of equivalent structure under a means-plus-function limitation may preclude a finding of equivalence under the doctrine of equivalents."¹⁰²²

The court stressed, however, that the key difference between the two tests related to the timing of the variance in the invention.¹⁰²³ The doctrine of equivalents protects against insubstantial technological advances developed after the patent of the invention that could not have been disclosed in the patent.¹⁰²⁴ If such "an element is found . . . not equivalent to the structure disclosed in the patent, this analysis should not foreclose it from being an equivalent under the doctrine of equivalents."¹⁰²⁵

The Federal Circuit concluded, however, that this was not the situation at bar, because the technology predated the invention.¹⁰²⁶ The court held that "a finding of non-equivalence for § 112, ¶ 6 purposes should preclude a contrary finding under the doctrine of equivalents."¹⁰²⁷ The court based its holding on the theory that the patentee could have disclosed the technology in the patent and therefore, should not be permitted "two bites at the apple."¹⁰²⁸ Thus, because the wheels on the Cardinal apparatus substantially differed from the skid plate under § 112, ¶ 6, the court was precluded from finding infringement under the doctrine of equivalents.¹⁰²⁹

In *Laitram Corp. v. Morehouse Industries, Inc.*,¹⁰³⁰ the Federal Circuit affirmed the district court's grant of summary judgment on the issue of infringement under the doctrine of equivalents.¹⁰³¹ At issue were Laitram's U.S. Patent Nos. B1 4,934,518 and B1 4,886,158, covering technology related to conveyor belts.¹⁰³² Laitram's argued that the district court erroneously granted summary judgment of non-infringement under the doctrine of equivalents. The court focused

1021. *Id.*, 46 U.S.P.Q.2d (BNA) at 1757.

1022. *Id.*, 46 U.S.P.Q.2d (BNA) at 1757.

1023. *See id.*, 46 U.S.P.Q.2d (BNA) at 1758.

1024. *See id.*, 46 U.S.P.Q.2d (BNA) at 1758.

1025. *Id.*, 46 U.S.P.Q.2d (BNA) at 1758.

1026. *See id.* at 1311, 46 U.S.P.Q.2d (BNA) at 1758.

1027. *Id.*, 46 U.S.P.Q.2d (BNA) at 1758.

1028. *Id.*, 46 U.S.P.Q.2d (BNA) at 1758.

1029. *See id.*, 46 U.S.P.Q.2d (BNA) at 1758.

1030. 143 F.3d 1456, 46 U.S.P.Q.2d (BNA) 1609.

1031. *See id.* at 1458, 46 U.S.P.Q.2d (BNA) at 1611.

1032. *See id.*, 46 U.S.P.Q.2d (BNA) at 1611.

on two critical claim limitations in rejecting Laitram's argument.

With regard to the first or "driving surface" limitation, the court found infringement under the doctrine of equivalents precluded by statements made during prosecution. During prosecution, Laitram used the "driving surface" limitation to distinguish the invention from those with cylindrical shaped driving surfaces.¹⁰³³

The court also rejected Laitram's argument with respect to the second limitation, "sprocket recess."¹⁰³⁴ The single bar employed by the accused device created a module that moved only in one direction, whereas Laitram's claimed device was capable of moving in two directions.¹⁰³⁵ The court concluded that such a manifest difference prevented a "reasonable fact finder" from determining that the differences were insubstantial.¹⁰³⁶

The Federal Circuit clarified its holding in *Maxwell v. J. Baker, Inc.*¹⁰³⁷ with regards to the doctrine of equivalents when it reviewed an International Trade Commission ("ITC") decision in *YBM Magnex v. United States International Trade Commission*.¹⁰³⁸ Ultimately, the Federal Circuit refused to validate the ITC's expansive reading of its statement in *Maxwell* that "subject matter disclosed but not claimed in the a patent application is dedicated to the public."¹⁰³⁹

YBM Magnex's U.S. Patent No. 4,588,439 ("the '439 patent") claimed permanent magnet alloy compositions consisting of varying oxygen contents for increased stability in warm and humid conditions.¹⁰⁴⁰ Claim 1 expressly required that the oxygen level of the alloy fall between "6,000 to 35,000 ppm."¹⁰⁴¹ YBM asserted that several companies infringed the '439 patent when they imported certain magnets.¹⁰⁴² Three of the companies entered into a Consent Order and agreed to cease the importation and marketing of magnets that infringed Claims 1 through 3 of the '439 patent.¹⁰⁴³ The ALJ hearing the dispute ultimately found infringement under literal infringement

1033. *See id.* at 1463, 46 U.S.P.Q.2d (BNA) at 1615.

1034. *See id.*, 46 U.S.P.Q.2d (BNA) at 1615.

1035. *See id.*, 46 U.S.P.Q.2d (BNA) at 1615.

1036. *See id.*, 46 U.S.P.Q.2d (BNA) at 1615.

1037. 86 F.3d 1098, 39 U.P.S.Q.2d (BNA) 1001 (Fed. Cir. 1996), *cert. denied*, 520 U.S. 1115 (1997).

1038. 145 F.3d 1317, 46 U.S.P.Q.2d (BNA) 1843 (Fed. Cir. 1998).

1039. *See id.* at 1319, 46 U.S.P.Q.2d (BNA) at 1845 (quoting *Maxwell*, 86 F.3d at 1106, 39 U.S.P.Q.2d (BNA) at 1006).

1040. *See id.* at 1318, 46 U.S.P.Q.2d (BNA) at 1844.

1041. *See id.*, 46 U.S.P.Q.2d (BNA) at 1844.

1042. *See id.*, 46 U.S.P.Q.2d (BNA) at 1844 (asserting literal infringement and doctrine of equivalents infringement).

1043. *See id.*, 46 U.S.P.Q.2d (BNA) at 1844.

and the doctrine of equivalents.¹⁰⁴⁴ Specifically, the ALJ “found that the magnet alloys having an oxygen content between 5,450 ppm and 6,000 ppm infringed under the doctrine.”¹⁰⁴⁵

YBM subsequently filed an enforcement complaint asserting that the three companies subject to the Consent Order continued to import products that infringed upon the ‘439 patent.¹⁰⁴⁶ The accused companies asserted that the Federal Circuit’s holding in *Maxwell* precluded the application of the doctrine of equivalents to the ‘439 patent.¹⁰⁴⁷ Specifically, the three companies argued that the oxygen content relied upon by the ALJ in defining an infringing product was disclosed but not claimed in the patent.¹⁰⁴⁸ Under the court’s rationale in *Maxwell*, this range of oxygen content was dedicated to the public and cannot be asserted by the patentee under an equivalency theory.¹⁰⁴⁹

The ALJ ruled that *Maxwell* did not prevent, as a matter of law, the application of the doctrine of equivalents using the oxygen content range. The ALJ found that *Maxwell* was fact specific and needed to be read in conjunction with Supreme Court and Federal Circuit precedent.¹⁰⁵⁰ This precedent indicated that subject matter not claimed but disclosed could be the basis for a finding of equivalency.¹⁰⁵¹ Thus, the ALJ held that the three accused companies had violated the Consent Order.

The ITC rejected the ALJ’s interpretation of *Maxwell*. The ITC found that *Maxwell* had “established a new rule of law, and that the doctrine of equivalents can no longer be applied to reach subject matter that is disclosed in the patent but not claimed.”¹⁰⁵² Accordingly, the ITC ruled that magnet alloys below 6,000 ppm could not infringe the ‘439 patent and that the Consent Order did not prevent the importation of such magnets.¹⁰⁵³ YBM then appealed the ITC’s interpretation of *Maxwell* to the Federal Circuit.

On appeal, the Federal Circuit reversed the ITC’s decision. The court stressed that *Maxwell* must be read in light “of precedent and its

1044. *See id.*, 46 U.S.P.Q.2d (BNA) at 1844.

1045. *Id.*, 46 U.S.P.Q.2d (BNA) at 1844.

1046. *See id.*, 46 U.S.P.Q.2d (BNA) at 1845.

1047. *See id.*, 46 U.S.P.Q.2d (BNA) at 1845 (attempting to persuade the court that magnets are now a public matter).

1048. *See id.* at 1319, 46 U.S.P.Q.2d (BNA) at 1845.

1049. *See id.*, 46 U.S.P.Q.2d (BNA) at 1845.

1050. *See id.*, 46 U.S.P.Q.2d (BNA) at 1845.

1051. *See id.* at 1319, 46 U.S.P.Q.2d (BNA) at 1845.

1052. *Id.* at 1320, 46 U.S.P.Q.2d (BNA) at 1845.

1053. *See id.*, 46 U.S.P.Q.2d (BNA) at 1846.

context.”¹⁰⁵⁴ Importantly, the ITC’s interpretation would place *Maxwell* “into conflict with Supreme Court and Federal Circuit precedent.”¹⁰⁵⁵

The Federal Circuit specifically discussed the Supreme Court’s holdings in *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*¹⁰⁵⁶ and *Graver Tank & Manufacturing Co. v. Linde Air Products Co.*¹⁰⁵⁷ The court found that these decisions “[do] not permit the blanket rule that everything disclosed but not claimed is barred from access to the doctrine of equivalents, whatever the facts, circumstances, and evidence.”¹⁰⁵⁸

For example, the Supreme Court in *Graver Tank* validated a finding of equivalence based on disclosed but unclaimed subject matter.¹⁰⁵⁹ Notably, it did so despite the specific objections raised in dissent that disclosed but unclaimed matter was dedicated to the public.¹⁰⁶⁰ Further, the court’s acknowledgement in *Warner-Jenkinson* that equivalents are not limited to disclosed materials implicitly recognizes that the equivalents may be disclosed.¹⁰⁶¹

The Federal Circuit also detailed how the Commission’s reading of *Maxwell* conflicted with its own precedent. The court cited several cases that reviewed disclosed subject matter for equivalency.¹⁰⁶² In addition, the court noted cases¹⁰⁶³ similar to *Maxwell* that deemed unclaimed subject matter as abandoned.¹⁰⁶⁴ Accordingly, the court held that *Maxwell* did not change the fundamental principles of the doctrine of equivalents.¹⁰⁶⁵ These decisions illustrate the principle that the doctrine of equivalents criteria must be applied to the specific facts of the case, thereby producing individualized results.¹⁰⁶⁶

In *Digital Biometrics, Inc. v. Identix, Inc.*,¹⁰⁶⁷ the Federal Circuit affirmed the district court’s grant of summary judgment that certain

1054. *Id.*, 46 U.S.P.Q.2d (BNA) at 1846.

1055. *Id.*, 46 U.S.P.Q.2d (BNA) at 1846.

1056. 520 U.S. 17 (1997).

1057. 339 U.S. 605 (1950).

1058. *YBM*, 145 F.3d at 1320, 46 U.S.P.Q.2d (BNA) at 1846.

1059. *See id.* at 1320, 46 U.S.P.Q.2d (BNA) at 1846.

1060. *See id.* at 1320, 46 U.S.P.Q.2d (BNA) at 1846.

1061. *See id.* at 1320, 46 U.S.P.Q.2d (BNA) at 1846.

1062. *See id.* at 1321, 46 U.S.P.Q.2d (BNA) at 1846 (providing prior decisions addressing “examples of subject matter that was included in the body of the specification but not in the claims, and that was considered for equivalency on the particular facts, with varying results as the evidence warranted”).

1063. *See Miller v. Bridgeport Brass Co.*, 104 U.S. 350 (1881); *Unique Concepts, Inc. v. Brown*, 939 F.2d 1558, 19 U.S.P.Q.2d (BNA) 1500 (Fed. Cir. 1991).

1064. *See YBM*, 145 F.3d at 1321, 46 U.S.P.Q.2d (BNA) at 1846.

1065. *See id.* at 1322, 46 U.S.P.Q.2d (BNA) at 1847.

1066. *See id.* at 1322, 46 U.S.P.Q.2d (BNA) at 1847.

1067. 149 F.3d 1335, 47 U.S.P.Q.2d (BNA) 1418.

products made by Identix did not infringe Digital's U.S. Patent No. 4,933,976 ("the '976 patent"), either literally or under the doctrine of equivalents.

Digital's '976 patent was directed to a system (and method) for capturing, storing, and displaying fingerprint images. Unlike conventional systems, which used paper and ink, Digital's claims were directed to a computer controlled imaging and retrieval system. By digitally representing a fingerprint image, the claimed system could automate fingerprint storage, retrieval, and most importantly, searching.

Having construed the claims, the court next considered whether the properly construed claims read on the accused devices.¹⁰⁶⁸ After finding no literal infringement,¹⁰⁶⁹ the court proceeded to compare the accused products and the claims of the patent at issue under the doctrine of equivalents.¹⁰⁷⁰ Digital's accused two devices of infringement, Identix's TP-600 and TP-900, however, on appeal the focus was on the TP-600.

Judge Plager emphasized that the "touchstone for determining whether an element in an accused device is equivalent to a claimed limitation is the substantiality of their differences."¹⁰⁷¹ Thus, in order for there to be infringement under the doctrine of equivalents, "the element must differ only unsubstantially from the asserted claim limitation."¹⁰⁷² Applying these principles, the court found that the TP-600 was too different from the patented invention primarily because, unlike the patented invention that required each digital data value produced to be accumulated and then stored in memory, the data value produced in the TP-600 was temporarily held in a register while that value was processed.¹⁰⁷³ Thus, the Federal Circuit held that the accused devices did not infringe under the doctrine of equivalents.¹⁰⁷⁴

D. Willful Infringement

A potential infringer with actual notice of existing patents has an affirmative duty of care to avoid infringement.¹⁰⁷⁵ Failure to exercise due care can result in a finding of willful infringement and increased

1068. See *id.* at 1348, 47 U.S.P.Q.2d (BNA) at 1427.

1069. For a full discussion of the court's literal infringement analysis, see *infra* Part III.B.

1070. See *Digital Biometrics*, 149 F.3d at 1349, 47 U.S.P.Q.2d (BNA) at 1428.

1071. *Id.*, 47 U.S.P.Q.2d (BNA) at 1428.

1072. *Id.*, 47 U.S.P.Q.2d (BNA) at 1428.

1073. See *id.*, 47 U.S.P.Q.2d (BNA) at 1428.

1074. See *id.* at 1350, 47 U.S.P.Q.2d (BNA) at 1429.

1075. See *Rolls-Royce Ltd. v. GTE Valeron Corp.*, 800 F.2d 1101, 1109, 231 U.S.P.Q. (BNA) 185, 191 (Fed. Cir. 1986).

damages.¹⁰⁷⁶ In assessing willfulness, a court must examine all the evidence and circumstances before it.¹⁰⁷⁷ A common issue in this regard is the attorney opinion of non-infringement or patent invalidity often obtained by the infringer.

In *Johns Hopkins University v. CellPro, Inc.*, the Federal Circuit examined the interplay between attorney opinions and willful infringement.¹⁰⁷⁸ CellPro and Hopkins both employed similar processes relating to the separation of stem cells from mature blood cells.¹⁰⁷⁹ Hopkins received its '680 and '204 patents covering such processes in 1987 and 1990 respectively.¹⁰⁸⁰ CellPro began using its process after the '680 and '204 patents issued and was aware of their existence.¹⁰⁸¹

Accordingly, CellPro engaged outside counsel to perform an opinion regarding the validity of the Hopkins patents. The opinions concluded that both patents were invalid and unenforceable and that CellPro's process was non-infringing.¹⁰⁸²

At trial, the district court found that CellPro had infringed Hopkins' patents.¹⁰⁸³ The jury subsequently found that infringement willful and Hopkins moved for enhanced damages pursuant to 35 U.S.C. § 284, ¶ 2.¹⁰⁸⁴ In granting the damages, the court concluded that CellPro's validity opinions were "obviously deficient," incompetent, and belated.¹⁰⁸⁵

On appeal, CellPro argued that the district court erred in failing to grant its renewed JMOL on willfulness.¹⁰⁸⁶ It argued that upon consideration of its validity opinions no jury could have concluded that its infringement was willful.¹⁰⁸⁷

The Federal Circuit disagreed. It noted that once a defendant obtains notice of a patent, it has a duty to exercise due care and determine whether it is infringing that patent.¹⁰⁸⁸ The Federal Circuit, however, reaffirmed that for an opinion to insulate a defendant from a finding of willfulness, the opinion must be

1076. *See id.*, 231 U.S.P.Q. (BNA) at 191.

1077. *See id.* at 1110, 23 U.S.P.Q. (BNA) at 192.

1078. 152 F.3d 1342, 47 U.S.P.Q.2d (BNA) 1705 (Fed. Cir. 1998).

1079. *See id.* at 1348, 47 U.S.P.Q.2d (BNA) at 1708.

1080. *See id.*, 47 U.S.P.Q.2d (BNA) at 1708.

1081. *See id.*, 47 U.S.P.Q.2d (BNA) at 1708.

1082. *See id.*, 47 U.S.P.Q.2d (BNA) at 1708.

1083. *See id.* at 1352, 47 U.S.P.Q.2d (BNA) at 1712.

1084. *See id.*, 47 U.S.P.Q.2d (BNA) at 1712.

1085. *See id.*, 47 U.S.P.Q.2d (BNA) at 1712.

1086. *See id.* at 1363, 47 U.S.P.Q.2d (BNA) at 1721.

1087. *See id.* at 1364, 47 U.S.P.Q.2d (BNA) at 1721.

1088. *See id.* at 1362, 47 U.S.P.Q.2d (BNA) at 1720.

competent.¹⁰⁸⁹ An opinion is competent if “it is thorough enough, as combined with other factors, to instill a belief in the infringer that a court might reasonably hold the patent is invalid, not infringed, or unenforceable.”¹⁰⁹⁰

The Federal Circuit held that the obtained opinion was not competent. It noted that although the opinion stated that certain claims in the patents were not infringed, it failed to mention or address the claims asserted in the infringement action.¹⁰⁹¹ The court also noted that the opinion failed to link the disclosures of the prior art references, which were relied upon to establish anticipation or obviousness, with the limitations of the claims of the patents.¹⁰⁹²

Of particular interest is the Federal Circuit’s consideration of the expertise of the person receiving the opinion of counsel. Specifically, the court acknowledged that the CellPro representative who received the opinion was a former patent examiner and a practicing patent attorney that should have noted the deficiencies in the opinions. The combination of the failure to mention the claims in the opinion, the failure to link prior art references with current limitations, and the experience of the CellPro representative in the field led the court to hold that the opinion was not competent. Thus, the Federal Circuit upheld the finding of willful infringement and treble damages.

The court addressed similar issues in *Comark Communications, Inc. v. Harris Corp.*¹⁰⁹³ In *Comark*, the jury found Harris’ infringement of Comark’s ‘904 patent to be willful. On appeal, Harris challenged the jury finding as unsupportable because Harris had obtained a legal opinion that its actions did not infringe the ‘904 patent.

The Federal Circuit’s willfulness analysis rested on whether Harris had obtained a competent opinion of counsel upon the best information known to Harris. Specifically, the analysis focused on whether Harris had deliberately withheld information in order to obtain a favorable validity opinion.¹⁰⁹⁴ Although Harris referred its attorney to an engineer, it was not the particular engineer that designed the accused circuit.¹⁰⁹⁵ In addition, the counsel’s opinion did not cover the spectrum analyzer design that Harris reverted to

1089. *See id.* at 1364, 47 U.S.P.Q.2d (BNA) at 1721.

1090. *Id.*, 47 U.S.P.Q.2d (BNA) at 1721 (quoting *Ortho Pharm. Corp. v. Smith*, 959 F.2d 936, 944, 22 U.S.P.Q.2d (BNA) 1119, 1126 (Fed. Cir. 1992)).

1091. *See id.* at 1364, 47 U.S.P.Q.2d (BNA) at 1722.

1092. *See id.* at 1364, 47 U.S.P.Q.2d (BNA) at 1721.

1093. 156 F.3d 1182, 48 U.S.P.Q.2d (BNA) 1001 (Fed. Cir. 1998).

1094. *See id.* at 1191, 48 U.S.P.Q.2d (BNA) at 1009.

1095. *See id.* at 1192, 48 U.S.P.Q.2d (BNA) at 1010.

after the opinion was completed. Accordingly, the Federal Circuit found substantial evidence upon which a reasonable jury could find, by clear and convincing evidence, that Harris willfully infringed the '904 patent.¹⁰⁹⁶

E. Induced Infringement

In *Chiuminatta Concrete Concepts, Inc. v. Cardinal Industries, Inc.*,¹⁰⁹⁷ the Federal Circuit affirmed a grant of summary judgment on induced infringement based on representations made on product advertising.¹⁰⁹⁸ Chiuminatta owned U.S. Patent No. 4,889,675 ("the '675 patent") directed to methods of cutting concrete prior to its complete hardening. Chiuminatta accused Cardinal of, among other things, induced infringement under 35 U.S.C. § 271. The district court granted summary judgment to Chiuminatta on the issue of induced infringement, and Cardinal appealed.

Cardinal argued on appeal that genuine issues of material fact existed, precluding summary judgment. Cardinal asserted that no evidence existed to show that they encouraged consumers to use their product during the claimed time period.¹⁰⁹⁹ Rather, Cardinal claimed that their advertisements suggested using the saw at a time prior to that claimed by Chiuminatta.¹¹⁰⁰

The Federal Circuit, however, rejected this argument and explained that, although the advertisements encourage use of the device at a time prior to that claimed, it nonetheless encouraged use from that time onwards. Thus, Cardinal encouraged the use of the device during the claimed time period and therefore, induced infringement.¹¹⁰¹

F. Infringement Analysis—Preliminary Injunctions

The patentee, upon an allegation of patent infringement, may receive a preliminary injunction upon a showing of: (1) a reasonable likelihood of success on the merits, (2) the irreparable harm if the preliminary relief is not granted, (3) the balance of hardships tipping in its favor, and (4) the impact of the injunction on the public sector.¹¹⁰² It is within the trial court's discretion to grant the

1096. *Id.* at 1193, 48 U.S.P.Q.2d (BNA) at 1010.

1097. 145 F.3d 1303, 46 U.S.P.Q.2d (BNA) 1752 (Fed. Cir. 1998).

1098. *See id.* at 1312, 46 U.S.P.Q.2d (BNA) at 1759.

1099. *See id.* at 1311, 46 U.S.P.Q.2d (BNA) at 1759.

1100. *See id.* at 1312, 46 U.S.P.Q.2d (BNA) at 1759.

1101. *See id.*, 46 U.S.P.Q.2d (BNA) at 1759.

1102. *See Hybritech Inc. v. Abbott Labs. Co.*, 849 F.2d 1446, 1451, 7 U.S.P.Q.2d (BNA) 1191, 1195 (Fed. Cir. 1988).

injunction.¹¹⁰³ Further, the court often engages in at least an initial construction of the claims for analysis of the first prong.¹¹⁰⁴

In *Canon Computer Systems, Inc. v. Nu-Kote International, Inc.*,¹¹⁰⁵ the Federal Circuit reviewed a district court's determination of infringement in the context of a preliminary injunction. Nu-Kote argued that Canon failed to make a strong showing that its device read on Canon's claimed product. Specifically, "Nu-Kote focuses on two limitations in the claim, asserting that (1) the groove in Nu-Kote's cartridge does not form an 'air flow passage' as required by the claim, and (2) the Nu-Kote cartridge lacks the claimed 'first chamber.'"¹¹⁰⁶

The Federal Circuit found that Nu-Kote failed to establish clear error in the district court's determination that the groove in Nu-Kote's cartridge forms an air flow passage.¹¹⁰⁷ Nu-Kote failed to do anything more than offer other conclusory statements rather than rebut the testimony of Canon's expert witness.¹¹⁰⁸ In addition, the Federal Circuit noted that Nu-Kote's claim construction-based attack on the limitation "chamber" was insufficient to constitute clear error.¹¹⁰⁹ Thus, the Federal Circuit found that the district court neither based its issuance of the preliminary injunction on clearly erroneous findings of fact nor abused its discretion in granting Canon's motion for a preliminary injunction.¹¹¹⁰

In *Vehicular Technologies Corp. v. Titan Wheel International*,¹¹¹¹ the plaintiff ("PowerTrax"), a manufacturer of automatic locking differentials for use in automotive vehicles, sought a preliminary injunction against the defendant ("Tratech"). To do so, PowerTrax had to establish its right to a preliminary injunction in light of the four above outlined factors.¹¹¹² Although the district court held that the PowerTrax was entitled to a preliminary injunction, the Federal Circuit found that PowerTrax had not shown that it was likely to succeed on the merits and reversed.¹¹¹³ Specifically, the Federal

1103. See *Reebok Int'l Ltd. v. J. Baker, Inc.*, 32 F.3d 1552, 1555, 31 U.S.P.Q.2d (BNA) 1781, 1783 (Fed. Cir. 1994).

1104. See *Hybritech*, 849 F.2d at 1455, 7 U.S.P.Q.2d (BNA) at 1198.

1105. 134 F.3d 1085, 45 U.S.P.Q.2d (BNA) 1355 (Fed. Cir. 1998).

1106. *Id.* at 1089, 45 U.S.P.Q.2d (BNA) at 1359.

1107. See *id.*, 45 U.S.P.Q.2d (BNA) at 1359.

1108. See *id.*, 45 U.S.P.Q.2d (BNA) at 1359.

1109. See *id.* at 1089-90, 45 U.S.P.Q.2d (BNA) at 1360.

1110. See *id.* at 1086, 1090, 45 U.S.P.Q.2d (BNA) at 1357, 1360.

1111. 141 F.3d 1084, 1085, 46 U.S.P.Q.2d (BNA) 1257, 1257-58 (Fed. Cir. 1998).

1112. See *id.*, 46 U.S.P.Q.2d at 1257-58.

1113. *Id.* at 1092, 46 U.S.P.Q.2d (BNA) at 1263. A plaintiff establishes likelihood of success in patent cases by showing: (1) that it is likely to prove defendant's infringement, and (2) that its patent is valid and enforceable. See *id.* at 1088, 46 U.S.P.Q.2d (BNA) at 1260.

Circuit held that PowerTrax failed to show that Tratech actually infringed.¹¹¹⁴

IV. INFRINGEMENT REMEDIES AND LIMITATIONS ON RECOVERY

A. Damages

A successful infringement action entitles the patent holder to recover damages, interest, and costs.¹¹¹⁵ While the Federal Circuit did not issue a precedential decision broadly on damages in 1998, it did examine two related issues: attorney fees and enhanced damages.

1. Attorney fees

In 1998, the Federal Circuit dealt with several reviews of denial of attorney's fees. The Federal Circuit generally reverses a refusal to grant attorney fees only if the lower court was clearly erroneous in finding that the particular circumstances were not exceptional and that denial was an abuse of discretion.¹¹¹⁶ Attorney fees will be awarded upon a finding that the case was "exceptional."¹¹¹⁷

In *Multiform Dessicants, Inc. v. Medzam, Ltd.*,¹¹¹⁸ Medzam alleged three reasons why the case was "exceptional." First, Medzam argued that Multiform admitted that Medzam's envelope was not "degradable," which was contrary to Multiform's infringement argument.¹¹¹⁹ The court held that Medzam "mischaracterize[d]" Multiform's "admission."¹¹²⁰ Second, Medzam accused Multiform of adding "means-for" claims to try and cover Medzam's product and claimed this as an additional act of bad faith.¹¹²¹ According to the Federal Circuit, however, Multiform's activities were neither illegal nor acts of bad faith. Finally, the court rejected Medzam's third argument that Multiform had provided misleading dictionary definitions to the patent examiner because Medzam failed to show how they were incorrect.¹¹²² Thus, the Federal Circuit affirmed the district court's denial of attorney fees.¹¹²³

1114. See *id.* at 1092, 46 U.S.P.Q.2d (BNA) at 1264.

1115. See 35 U.S.C. § 284 (1994).

1116. See *Multiform Desiccants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1481, 45 U.S.P.Q.2d (BNA) 1429, 1436 (Fed. Cir. 1998).

1117. See 35 U.S.C. § 285 (1994).

1118. *Id.*, 45 U.S.P.Q.2d (BNA) 1429.

1119. *Id.*, 45 U.S.P.Q.2d (BNA) 1429.

1120. See *id.* at 1482, 45 U.S.P.Q.2d (BNA) at 1436.

1121. See *id.*, 45 U.S.P.Q.2d (BNA) at 1436 (finding that "it is neither illegal nor bad faith for an applicant to amend the claims in view of a competitor's product").

1122. See *id.*, 45 U.S.P.Q.2d (BNA) at 1436.

1123. See *id.*, 45 U.S.P.Q.2d (BNA) at 1436-37 (stating that the trial judge is better suited to

In *Gentry Gallery, Inc. v. Berklene Corp.*,¹¹²⁴ the Federal Circuit denied Gentry's claim for attorney fees because Gentry was not "the prevailing party" as required by 35 U.S.C. § 284. "[T]o prevail within the meaning of section 285, Gentry must have achieved some of 'the benefits . . . sought in bringing suit,' i.e., damages or an injunction."¹¹²⁵ In the instant case, Gentry succeeded only in overcoming an inequitable conduct defense raised by Berklene and therefore, was not considered a "prevailing party."¹¹²⁶

In *Cybor Corp. v. FAS Technologies Inc.*,¹¹²⁷ the Federal Circuit affirmed the district court's denial of attorney fees under 35 U.S.C. § 285.¹¹²⁸ The Federal Circuit agreed with the district court that although ultimately unsuccessful, Cybor's arguments were not frivolous or asserted for an improper purpose and that Cybor litigated in good faith.¹¹²⁹ The court also rejected FAS's assertions that a finding of willful infringement does not require a finding that a case is exceptional.¹¹³⁰ Thus the Federal Circuit determined that the lower court's denial of exceptional status was not clearly erroneous and, therefore, FAS was not entitled to attorney fees.

2. *Enhanced damages*

A trial court's determination of increased or enhanced damages under § 284 is guided by two principles.¹¹³¹ First, the circumstances justifying an enhanced award must be demonstrated.¹¹³² This is reviewed for clear error.¹¹³³ Second, if justification is found, the increase must be warranted by the totality of the circumstances. This determination is reviewed for "clear showing of abuse of discretion."¹¹³⁴

In *Cybor Corp.*,¹¹³⁵ FAS challenged the district court's decision not to enhance the damages. Under 35 U.S.C. § 284, a court is entitled to enhance damages "up to three times the amount found or assessed."

weigh the considerations necessary for an award of attorney fees because of his closeness to the case and "other factors that may contribute to a fair allocation of the burdens of litigation as between winner and loser").

1124. 134 F.3d 1473, 45 U.S.P.Q.2d (BNA) 1498 (Fed. Cir. 1998).

1125. *Gentry Gallery*, 134 F.3d at 1480, 45 U.S.P.Q.2d (BNA) at 1504.

1126. *See id.*, 45 U.S.P.Q.2d (BNA) at 1504.

1127. 138 F.3d 1448, 46 U.S.P.Q.2d (BNA) 1169 (Fed. Cir. 1998) (en banc).

1128. *See id.* at 1457, 46 U.S.P.Q.2d (BNA) at 1171.

1129. *See id.* at 1460-61, 45 U.S.P.Q.2d (BNA) at 1178.

1130. *See id.* at 1461, 45 U.S.P.Q.2d (BNA) at 1178.

1131. *See State Indus. v. Mor-Flo Indus., Inc.*, 948 F.2d 1573, 1576, 20 U.S.P.Q.2d (BNA) 1738, 1740 (Fed. Cir. 1991).

1132. *See id.*, 20 U.S.P.Q.2d (BNA) at 1740.

1133. *See id.*, 20 U.S.P.Q.2d (BNA) at 1740.

1134. *See id.*, 20 U.S.P.Q.2d (BNA) at 1740.

1135. *See Cybor*, 138 F.3d at 1461, 46 U.S.P.Q.2d (BNA) at 1179.

In affirming the denial of enhanced damages, the Federal Circuit noted that the trial court concluded the evidence of copying and willfulness was weak.¹¹³⁶ Further, the relative merit of Cybor's arguments, although unsuccessful, marshaled against enhancing damages.¹¹³⁷ Thus, the court ruled that the district court did not abuse its discretion in denying enhanced damages.¹¹³⁸

B. Marking

A patentee or authorized party may mark a patented article to give public notice that the items are patented.¹¹³⁹ Failure to mark the products may prevent recovery in an infringement action barring notice to the infringer that he was infringing and continued to do so.¹¹⁴⁰ The patentee has the burden of proving at trial that he complied with statutory requirements and that marking substantially consistent and continuous.¹¹⁴¹

In *Nike, Inc. v. Wal-Mart Stores, Inc.*,¹¹⁴² the Federal Circuit considered the issue of whether the marking statute¹¹⁴³ applies when the remedy for infringement is obtained under the design patent infringement statute.¹¹⁴⁴ The district court opined that the marking statute, which can limit recovery for the patentee in a successful infringement action under certain scenarios for a failure to mark its patented product,¹¹⁴⁵ does not apply when the remedy is an infringer's profits.¹¹⁴⁶ Because Nike was awarded Wal-Mart's profits under § 284, the limitation of § 289 did not apply.¹¹⁴⁷

In reversing the district court's conclusion, the Federal Circuit extensively analyzed the legislative histories of both the patent marking provisions and the damages and profits provisions of Title 35.¹¹⁴⁸ The court stated that "[u]pon review of statute, legislative history, policy, and precedent, we conclude that the marking requirement, section 287(a), applies to design patents whether

1136. *See id.*, 46 U.S.P.Q.2d (BNA) at 1179.

1137. *See id.*, 46 U.S.P.Q.2d (BNA) at 1179.

1138. *See id.*, 46 U.S.P.Q.2d (BNA) at 1179.

1139. *See* 35 U.S.C. § 287(a) (1994).

1140. *See id.*; *see also* *American Med. Sys., Inc. v. Medical Eng'g Corp.*, 6 F.3d 1523, 1537, 28 U.S.P.Q.2d (BNA) 1321, 1331 (Fed. Cir. 1993) (noting that such notice is required for damages upon infringement).

1141. *See American Med. Sys.*, 6 F.3d at 1537, 28 U.S.P.Q.2d (BNA) at 1331.

1142. 138 F.3d 1437, 46 U.S.P.Q.2d (BNA) 1001 (Fed. Cir. 1998).

1143. *See* 35 U.S.C. § 287(a) (1994).

1144. *See* 35 U.S.C. § 289.

1145. *See* 35 U.S.C. § 287(a).

1146. *See Nike*, 138 F.3d at 1439, 46 U.S.P.Q.2d (BNA) at 1002-03.

1147. *See id.*, 46 U.S.P.Q.2d (BNA) at 1003.

1148. *See id.* at 1440-46, 46 U.S.P.Q.2d (BNA) at 1003-08.

remedy for infringement is sought under section 284 or section 289."¹¹⁴⁹ In particular, such a reading was commensurate with the history of marking and its role in preventing innocent infringement through notice.¹¹⁵⁰ Because a dispute arose as to whether Nike met its burden of demonstrating its compliance with the marking statute, the Federal Circuit remanded the case to the district court for further determinations on this question.¹¹⁵¹

C. Equitable Estoppel

Equitable estoppel is an equitable defense that can preclude a claim of infringement.¹¹⁵² Equitable estoppel requires the establishment of three elements.¹¹⁵³ First, the patentee, through misleading conduct, must lead the alleged infringer reasonably to believe that the patentee does not intend to enforce its patent.¹¹⁵⁴ Second, the alleged infringer must rely on the patentee's conduct.¹¹⁵⁵ Finally, this reliance must materially prejudice the alleged infringer if the patentee proceeds with its infringement claim.¹¹⁵⁶ A district court's decision on equitable estoppel is reviewed under an abuse of discretion standard.¹¹⁵⁷

In *Scholle Corp. v. Blackhawk Molding Co., Inc.*,¹¹⁵⁸ the court considered Blackhawk's claim of equitable estoppel against Scholle. The patentee, Scholle Corp., instituted a claim against Blackhawk for allegedly infringing its patent for valved bottle caps used on five-gallon water bottles.¹¹⁵⁹ In 1991, Scholle sent a cease and desist letter to Blackhawk that accused Blackhawk of infringing Scholle's patent.¹¹⁶⁰ Subsequent to the receipt of this letter, Blackhawk began work on a new valved cap design that functioned by a different mechanism than Scholle's cap.¹¹⁶¹ In 1995, Blackhawk obtained a patent on this new cap design.¹¹⁶² After the creation of this new

1149. *Id.* at 1446, 46 U.S.P.Q.2d (BNA) at 1008.

1150. *See id.*, 46 U.S.P.Q.2d (BNA) at 1008.

1151. *See id.* at 1448, 46 U.S.P.Q.2d (BNA) at 1008.

1152. *See* A.C. Aukerman Co. v. R.L. Chaides Constr. Co., 960 F.2d 1020, 1041, 22 U.S.P.Q.2d (BNA) 1325, 1335 (Fed. Cir. 1992).

1153. *See id.* at 1028, 22 U.S.P.Q.2d (BNA) at 1325.

1154. *See id.*, 22 U.S.P.Q.2d (BNA) at 1325.

1155. *See id.*, 22 U.S.P.Q.2d (BNA) at 1325.

1156. *See id.*, 22 U.S.P.Q.2d (BNA) at 1325.

1157. *See id.*, 22 U.S.P.Q.2d (BNA) at 1325.

1158. 133 F.3d 1469, 45 U.S.P.Q.2d (BNA) 1468 (Fed. Cir. 1992).

1159. *See id.* at 1470, 45 U.S.P.Q.2d (BNA) at 1469.

1160. *See id.*, 45 U.S.P.Q.2d (BNA) at 1469.

1161. *See id.*, 45 U.S.P.Q.2d (BNA) at 1469.

1162. *See id.* at 1470, 45 U.S.P.Q.2d (BNA) at 1469-70 (noting that U.S. Patent No. 5,392,939 was issued to Blackhawk on February 28, 1995).

design, Scholle and Blackhawk had numerous contacts and Blackhawk provided Scholle with samples of the new design.¹¹⁶³ In fact, the companies considered merging during the relevant time period.¹¹⁶⁴

At no point during this time did Scholle indicate that it considered Blackhawk's new design to be infringing.¹¹⁶⁵ Nevertheless, Scholle filed suit against Blackhawk in 1996.¹¹⁶⁶ The district court granted summary judgment to Blackhawk on the grounds of equitable estoppel and the Federal Circuit affirmed this decision.¹¹⁶⁷

The Federal Circuit held that Scholle failed to provide any credible evidence that refuted the district court's finding of equitable estoppel.¹¹⁶⁸ In so holding, the court recognized that, in equitable estoppel determinations, the patentee's conduct can include both specific actions and statements, as well as inaction and/or silence.¹¹⁶⁹ In the instant case, both Scholle's failure to indicate that it considered Blackhawk's new design infringing and Scholle's affirmative actions, which included the prior threat of suit and regular discussions with Blackhawk about other pending actions, were significant.¹¹⁷⁰ The Federal Circuit affirmed the lower court's grant of estoppel.¹¹⁷¹

In *Multiform Desiccants, Inc. v. Medzam, Ltd.*,¹¹⁷² after it entered judgment of non-infringement, the district court stated that it did not need to reach a decision on the issue of patent validity because Medzam did not assert invalidity as a counterclaim during the proceeding.¹¹⁷³ On appeal, Medzam objected to the district court's exercise of judicial discretion¹¹⁷⁴ and argued that it was entitled to a decision because "the validity issue was fully litigated."¹¹⁷⁵ The Federal Circuit cited Medzam's failure to assert a counterclaim of invalidity as

1163. See *id.* at 1470-71, 45 U.S.P.Q.2d (BNA) at 1470 (describing the contacts between Scholle and Blackhawk during the relevant time period).

1164. See *id.* at 1471, 45 U.S.P.Q.2d (BNA) at 1470.

1165. See *id.*, 45 U.S.P.Q.2d (BNA) at 1470.

1166. See *id.*, 45 U.S.P.Q.2d (BNA) at 1470.

1167. See *id.* at 1473, 45 U.S.P.Q.2d (BNA) at 1472.

1168. See *id.*, 45 U.S.P.Q.2d (BNA) at 1472 (holding that there was "no abuse of discretion in the district court's determination that the circumstances presented here properly gave rise to equitable estoppel").

1169. See *id.* at 1471, 45 U.S.P.Q.2d (BNA) at 1472 (citing *A.C. Aukerman Co. v. R.L. Chaides Constr. Co.*, 960 F.2d 1020, 22 U.S.P.Q.2d (BNA) 1321 (Fed. Cir. 1992)).

1170. See *id.* at 1473, 45 U.S.P.Q.2d (BNA) at 1472 ("In any case, Scholle's conduct was not merely silence but also consisted of affirmative acts such as its prior threats to sue Blackhawk and its regular discussions about the Cap Snap litigation.").

1171. See *id.*, 45 U.S.P.Q.2d (BNA) at 1472.

1172. 133 F.3d 1473, 45 U.S.P.Q.2d (BNA) 1429 (Fed. Cir. 1998).

1173. See *id.* at 1481, 45 U.S.P.Q.2d (BNA) at 1435.

1174. See *id.*, 45 U.S.P.Q.2d (BNA) at 1435.

1175. See *id.*, 45 U.S.P.Q.2d (BNA) at 1435.

dispositive,¹¹⁷⁶ and declined Medzam's request for further proceedings on this issue.¹¹⁷⁷

D. Prosecution History Estoppel

The doctrine of prosecution history estoppel limits the scope of protection available under the doctrine of equivalents.¹¹⁷⁸ It prevents a patentee from asserting a scope of equivalency that would include subject matter disclaimed during prosecution in order to obtain allowance of the claims in their issued form.¹¹⁷⁹ Prosecution history estoppel is a question of law and is reviewed *de novo*.¹¹⁸⁰

One of the Federal Circuit's more interesting decisions during the 1998 term was *Hughes Aircraft Co. v. United States*.¹¹⁸¹ In *Hughes*, the Federal Circuit reviewed the impact that the Supreme Court's *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*¹¹⁸² decision had on the doctrine of prosecution history estoppel.¹¹⁸³ The Federal Circuit emphasized that *Warner-Jenkinson* created a rebuttable presumption of prosecution history estoppel that arises whenever an amendment to a claim is made, but the reason for such amendment remains unknown.¹¹⁸⁴ The Federal Circuit noted, however, that prosecution history estoppel does not automatically serve as an absolute bar to preclude any equivalents to a claim limitation added to overcome a patentability rejection.¹¹⁸⁵ Rather, prosecution history estoppel merely precludes subject matter that was surrendered or disclaimed in order to overcome the rejection.¹¹⁸⁶

In the case at bar, the Federal Circuit held that the amendments made to the Hughes Aircraft patent did narrow the range of

1176. *See id.*, 45 U.S.P.Q.2d (BNA) at 1435 (noting that Medzam's motion for judgment filed after close of plaintiff's case was insufficient as a matter of law to convert the defense into a counterclaim).

1177. *See id.*, 45 U.S.P.Q.2d (BNA) at 1436 (stating "that appellate review was unnecessary when the issue of validity was raised only as an affirmative defense") (quoting *Cardinal Chem. Co. v. Morton Int'l, Inc.*, 508 U.S. 83, 93-94, 26 U.S.P.Q.2d (BNA) 1721, 1726 (1993)).

1178. *See Townsend Eng'g Co. v. HiTec Co.*, 829 F.2d 1086, 1090, 4 U.S.P.Q.2d (BNA) 1136, 1139 (Fed. Cir. 1987). *See generally supra* Part III.C (discussing decisions on the doctrine of equivalents).

1179. *See Zenith Labs, Inc. v. Bristol-Meyers Squibb Co.*, 19 F.3d 1418, 1424, 30 U.S.P.Q.2d (BNA) 1285, 1290 (Fed. Cir. 1994).

1180. *See La Bounty Mfg. v. United States Int'l Trade Comm'n*, 867 F.2d 1572, 1576, 9 U.S.P.Q.2d (BNA) 1995, 1998 (Fed. Cir. 1989).

1181. 140 F.3d 1470, 46 U.S.P.Q.2d (BNA) 1285 (Fed. Cir. 1998); *see also* Parts I.E, III.C (discussing *Hughes Aircraft*).

1182. 520 U.S. 17 (1997).

1183. *See Hughes*, 140 F.3d at 1475, 46 U.S.P.Q.2d (BNA) at 1289.

1184. *See id.* at 1476, 46 U.S.P.Q.2d (BNA) at 1289.

1185. *See id.*, 46 U.S.P.Q.2d (BNA) at 1290 ("We reject the government's contention that *Warner-Jenkinson* requires such a wooden approach to prosecution history estoppel.").

1186. *See id.*, 46 U.S.P.Q.2d (BNA) at 1290.

equivalents, but they did not preclude all of the equivalents.¹¹⁸⁷ The court determined further that because the accused device did not fall within the range of subject matter surrendered, prosecution history estoppel did not preclude infringement under the doctrine of equivalents.¹¹⁸⁸

The court faced a related issue in *Insituform Technologies, Inc. v. CAT Contracting, Inc.*¹¹⁸⁹ Here, the defendants argued that because the *Warner-Jenkinson* decision created a presumption that an amendment is made for the purposes of patentability where no explanation is given for such amendment, the doctrine of equivalents could not apply in this case.¹¹⁹⁰ Thus, when the plaintiff amended its claim, it relinquished coverage of any process that created a vacuum at multiple sources because it gave no explanation for such a narrowing amendment.¹¹⁹¹ The Federal Circuit rejected this argument and pointed to the prosecution history, which provided an explanation for the narrowing amendment, namely to avoid a prior art teaching.¹¹⁹² The Federal Circuit held that the bar created in *Warner-Jenkinson* only applies when no explanation for an amendment exists.¹¹⁹³

In *Litton Systems, Inc. v. Honeywell, Inc.*,¹¹⁹⁴ Honeywell argued for a broad rule that automatically would bar all equivalents to an element added by amendment for reasons of patentability, regardless of whether the record established that the applicant had in fact surrendered all coverage beyond the literal claim scope.¹¹⁹⁵ The Federal Circuit noted that such a rule would bar both after-rising equivalents (expressly approved by the Supreme Court) and any equivalents to the majority of claim limitations amended during patent prosecution.¹¹⁹⁶ Accordingly, the court refused to interpret the *Warner-Jenkinson* decision in such a manner.¹¹⁹⁷

Instead, the Federal Circuit interpreted *Warner-Jenkinson* to reaffirm the doctrine that an estoppel only bars recapture of that subject matter that is actually surrendered during prosecution.¹¹⁹⁸

1187. *See id.* at 1477, 46 U.S.P.Q.2d (BNA) at 1290.

1188. *See id.*, 46 U.S.P.Q.2d (BNA) at 1290.

1189. 161 F.3d 688, 48 U.S.P.Q.2d (BNA) 1610 (Fed. Cir. 1998), *cert. denied*, 119 S. Ct. 1254 (1999); *see also supra* Part III.C (detailing the doctrine of equivalents analysis in *Insituform*).

1190. *See id.* at 691-92, 48 U.S.P.Q.2d (BNA) at 1613-14.

1191. *See id.* at 691, 48 U.S.P.Q.2d (BNA) at 1613.

1192. *See id.* at 692, 48 U.S.P.Q.2d (BNA) at 1614.

1193. *See id.*, 48 U.S.P.Q.2d (BNA) at 1614.

1194. 140 F.3d 1449, 46 U.S.P.Q.2d (BNA) 1321 (Fed. Cir. 1998).

1195. *See id.* at 1456, 46 U.S.P.Q.2d (BNA) at 1326.

1196. *See id.* at 1457, 46 U.S.P.Q.2d (BNA) at 1326.

1197. *See id.*, 46 U.S.P.Q.2d (BNA) at 1326.

1198. *See id.* at 1458, 46 U.S.P.Q.2d (BNA) at 1327.

Accordingly, the reason for a claim amendment remains relevant to the application of an estoppel. A claim amendment to avoid prior art prevents recapture of subject matter that the applicant surrendered to obtain patent protection.¹¹⁹⁹

The Federal Circuit also noted that the Supreme Court articulated an additional rule to trigger prosecution history estoppel. If no clear reason for an amendment can be discerned from the prosecution record, a trial court can presume that the applicant did so for a reason related to patentability, thereby triggering an estoppel.¹²⁰⁰

Litton argued that the reason for the amendment in the case at bar was to respond to a PTO rejection under 35 U.S.C. § 112, ¶ 2.¹²⁰¹ Therefore, the plaintiff argued that no estoppel arose.

The Federal Circuit agreed that amendments made in response to indefiniteness and enablement rejections generally are not related to patentability issues.¹²⁰² The court, however, noted that amendments made to what the inventor “regards as his invention” pursuant to a § 112 rejection were related to patentability.¹²⁰³ The court noted that a § 112 rejection of this type normally follows some other rejection of the inventive material set forth in the claim; therefore, a court should look at the rejections made prior to the § 112 rejection and determine whether amendments made in response to the § 112 rejection were in fact the result of a previous patentability rejection.¹²⁰⁴ Applying this analysis, the Federal Circuit held that prosecution history estoppel applied to the phrase claim limitation at issue.¹²⁰⁵

After the Federal Circuit established that prosecution history estoppel applied, it proceeded to determine the scope of the estoppel.¹²⁰⁶ Subject matter is relinquished when one of “ordinary skill in the art would objectively conclude from the prosecution history that an applicant surrendered it.”¹²⁰⁷ When the subject matter or limitation is relinquished as a result of a patentability rejection, the

1199. *See id.*, 46 U.S.P.Q.2d (BNA) at 1327.

1200. *See id.* at 1461, 46 U.S.P.Q.2d (BNA) at 1330.

1201. *See id.*, 46 U.S.P.Q.2d (BNA) at 1329-30. This provision requires the patent applicant to point out and claim specifically what they regard as their invention and that rejections under this provision are not related to patentability.

1202. *See id.*, 46 U.S.P.Q.2d (BNA) at 1330.

1203. *See id.*, 46 U.S.P.Q.2d (BNA) at 1330.

1204. *See id.*, 46 U.S.P.Q.2d (BNA) at 1330 (citing *In re Prater*, 56 C.C.P.A. 1381, 415 F.2d 1393, 162 U.S.P.Q. (BNA) 541 (C.C.P.A. 1969)).

1205. *See id.*, 46 U.S.P.Q.2d (BNA) at 1330 (holding that Litton made its amendment for reasons related to patentability).

1206. *See id.* at 1462, U.S.P.Q.2d (BNA) at 1330.

1207. *Id.*, 46 U.S.P.Q.2d (BNA) at 1330 (citing *Mark I Mktg. Corp. v. R.R. Donnelley & Sons Co.*, 66 F.3d 285, 291, 36 U.S.P.Q.2d (BNA) 1095, 1100 (Fed. Cir. 1995)).

applicant is estopped from asserting that the original limitation, or variation thereof, is an equivalent of the substituted limitation.¹²⁰⁸ Based on this reasoning, the Federal Circuit held that Litton was estopped from asserting that Honeywell's disputed claim element was equivalent to elements in its patent claims because Litton had amended its original claim language as a result of a patentability rejection, thus precluding an equivalency argument.¹²⁰⁹

In *Cybor Corp. v. FAS Technologies, Inc.*,¹²¹⁰ the Federal Circuit considered whether the accused device infringed under the doctrine of equivalents.¹²¹¹ Specifically, Cybor argued that there was no infringement under the doctrine of equivalents because prosecution history estoppel precluded the patentee from claiming the doctrine of equivalents subject matter surrendered during prosecution of the application for the parent.¹²¹² According to the Federal Circuit, the inventors' statements to the PTO with respect to the prior art did not demonstrate the surrender of the features in question.¹²¹³ Cybor's pump and reservoir did not fall within the range of subject matter relinquished during prosecution and therefore, prosecution history estoppel did not preclude infringement under the doctrine of equivalents.¹²¹⁴ Because there were significant differences between the prior art reference cited during prosecution and the claimed invention, the court found that the statements made by the patentee during prosecution could not be properly interpreted to preclude coverage of the accused device.¹²¹⁵

E. Assignor Estoppel

The doctrine of assignor estoppel prevents a party who assigns a patent from later challenging that patent's validity.¹²¹⁶ The Federal Circuit has reasoned that such an assignment contains an "implicit representation by the assignor that the patent rights that he is

1208. *See id.*, 46 U.S.P.Q.2d (BNA) at 1330 (citing *Southwall Tech., Inc. v. Cardinal IG Co.*, 54 F.3d 1570, 1580, 34 U.S.P.Q.2d (BNA) 1673, 1680 (Fed. Cir. 1995)).

1209. *See id.*, 46 U.S.P.Q.2d (BNA) at 1331.

1210. 138 F.3d 1448, 46 U.S.P.Q.2d (BNA) 1169 (Fed. Cir. 1998) (en banc).

1211. *See id.* at 1460, 46 U.S.P.Q.2d (BNA) at 1178.

1212. *Id.* at 1178.

1213. *See id.*, 46 U.S.P.Q.2d (BNA) at 1179 (stating that every statement made by a patentee during prosecution to distinguish a prior art reference does not create a separate estoppel).

1214. *See id.*, 46 U.S.P.Q.2d (BNA) at 1178 (explaining that the district court was correct in denying Cyber Corporation's motion for judgment as a matter of law).

1215. *Id.*, 46 U.S.P.Q.2d at 1178.

1216. *See Diamond Scientific v. Ambico, Inc.*, 848 F.2d 1220, 1224, 6 U.S.P.Q.2d 2028, 2030 (Fed. Cir. 1998).

assigning (presumably for value) are not worthless.”¹²¹⁷

In *Mentor Graphics Corp. v. Quickturn Design Systems, Inc.*,¹²¹⁸ the Federal Circuit upheld a district court’s ruling that a patent assignor, and its wholly owned subsidiary, were estopped from challenging the validity of the assigned patent.¹²¹⁹ In 1992, Mentor assigned its ‘473 patent directed to hardware emulation to Quickturn. Quickturn later dedicated subject matter in certain ‘473 claims, choosing to pursue its own application to similar technology. Ultimately, Quickturn received its ‘353 patent.

Later, Mentor purchased a French company called Meta, which became a wholly owned subsidiary of Mentor. Believing that Meta’s products were infringing its patents, Quickturn asked the ITC to prevent importation of the allegedly infringing devices pursuant to 19 U.S.C. § 1337.¹²²⁰ In response, Mentor sought a declaratory judgment of invalidity and non-infringement of Quickturn’s patents, including the ‘473 patent it had assigned to Quickturn.¹²²¹

The district court granted Quickturn’s motion for partial summary judgment because the court found it unlikely that Mentor would be able to show that the patent was invalid because Mentor is estopped from attacking its validity in the first place.¹²²² The Federal Circuit affirmed the district court’s finding.¹²²³ The Federal Circuit stated that “[a]ssignor estoppel prevents a party who assigns a patent to another from later challenging the validity of the assigned patent,” because the “assignment contains an ‘implicit representation by the assignor that the patent rights that he is assigning are not worthless.’”¹²²⁴

In response, Mentor argued that a warranty disclaimer signed by Quickturn at the time of the assignment gave Mentor the right to attack the patent’s validity.¹²²⁵ The warranty language stated that “seller also disclaims any warranty as to the validity or enforceability of the patent and patent applications assigned to Purchaser under

1217. *Id.*, 6 U.S.P.Q.2d (BNA) at 2030.

1218. 150 F.3d 1374, 47 U.S.P.Q.2d (BNA) 1683 (Fed. Cir. 1998).

1219. *See id.* at 1380, 47 U.S.P.Q.2d (BNA) at 1683.

1220. *See id.* at 1376-77, 47 U.S.P.Q.2d (BNA) at 1685.

1221. *See id.* at 1375, 47 U.S.P.Q.2d (BNA) at 1684.

1222. *See id.* at 1377, 47 U.S.P.Q.2d (BNA) at 1685 (finding that the doctrine of assignor estoppel barred Mentor from challenging the patent’s validity).

1223. *See id.* at 1380, 47 U.S.P.Q.2d (BNA) at 1688.

1224. *Id.* at 1377, 47 U.S.P.Q.2d (BNA) at 1686 (quoting *Diamond Scientific v. Ambico, Inc.*, 848 F.2d 1220, 1224, 6 U.S.P.Q.2d (BNA) 2028, 2030 (Fed. Cir. 1988), which held that assignor estoppel is properly supported by public policy in order to prevent injustice against the assignee).

1225. *See id.* at 1377, 47 U.S.P.Q.2d (BNA) at 1685.

this Agreement.”¹²²⁶ Although the Federal Circuit noted that an assignor may expressly reserve the right to attack the patent’s validity, or that an assignee may waive its right to assert assignor estoppel, such a reservation or waiver must be clear and explicit.¹²²⁷ Thus, the Federal Circuit concluded that this warranty was not a sufficient disclaimer of the right to sue.¹²²⁸

With respect to Meta, the Federal Circuit held that because it was a wholly owned subsidiary of Mentor, it also was unable to attack the patent’s validity.¹²²⁹ The court noted that assignor estoppel prevents parties that are in privity with an estopped assignor from challenging the validity of the patent.¹²³⁰ To determine whether privity existed, the court looked at all direct and indirect party contacts to examine the nature of the relationship between the parties in light of the alleged infringement.¹²³¹ The court found three compelling factors in favor of privity: Mentor owned all of Meta’s stock, the two companies shared personnel, and Meta sold itself to Mentor to develop capital that would allow it to import the allegedly infringing device.¹²³² The Federal Circuit found these factors sufficient to estop Meta from asserting an invalidity defense.¹²³³ The court concluded, however, that Mentor and Meta could still attempt other defense strategies such as arguing for a narrow claim construction¹²³⁴ or that the accused devices were within the prior art and therefore, cannot infringe.¹²³⁵

1226. *Id.* at 1367, 47 U.S.P.Q.2d (BNA) at 1684.

1227. *See id.* at 1378, 47 U.S.P.Q.2d (BNA) at 1686.

Without exceptional circumstances (such as an express reservation by the assignor of the right to challenge the validity of the patent or an express waiver by the assignee of the right to assert assignor estoppel), one who assigns a patent surrenders with that assignment the right to later challenge the validity of the assigned patent.

Id. at 1378, 47 U.S.P.Q.2d (BNA) at 1686; *see also* Q.C. Prods., Inc. v. Shorty, Inc., 992 F.2d 1211, 26 U.S.P.Q.2d (BNA) 1778 (Fed. Cir. 1993) (affirming application of assignor estoppel which barred alleged patent infringer’s invalidity defense).

1228. *See Mentor Graphics*, 150 F.3d at 1378, 47 U.S.P.Q.2d (BNA) at 1686 (noting that the warranty language served merely to allocate the risk that the patent will be declared invalid to Quickturn, rather than reserving a right to challenge its validity).

1229. *See id.* at 1379, 47 U.S.P.Q.2d (BNA) at 1686.

1230. *See id.*, 47 U.S.P.Q.2d (BNA) at 1687.

1231. *See id.*, 47 U.S.P.Q.2d (BNA) at 1687.

1232. *See id.*, 47 U.S.P.Q.2d (BNA) at 1687.

1233. *See id.*, 47 U.S.P.Q.2d (BNA) at 1687.

1234. *See id.*, 47 U.S.P.Q.2d (BNA) at 1687. The court held that:

State of the art can not be used to destroy the patent and defeat the grant, because the assignor is estopped to do this. But, the state of the art may be used to construe and narrow the claims of the patent, conceding their validity. The distinction may be a nice one but it seems workable.

Id., 47 U.S.P.Q.2d (BNA) at 1687 (citing *Westinghouse Elec. v. Formica Insulation Co.*, 266 U.S. 342, 351 (1924)).

1235. *See id.*, 47 U.S.P.Q.2d (BNA) at 1687. The court believed that:

The judgment is affirmed for the reason that we find that the application of the doctrine of estoppel so as to foreclose the assignor of a patent from asserting the right

F. Licensing

One of a patent's advantages is the power to license another, presumably for royalties, to practice the patented invention. Although often contractual in nature, and thus settled in state court, the Federal Circuit will examine licensing issues in the context of patent infringement or validity.

In *Ethicon, Inc. v. United States Surgical Corp.*,¹²³⁶ while affirming a decision by the district court to dismiss an infringement suit, the Federal Circuit examined the relationship between inventorship and the grant of a license. Dr. In-Bae Yoon and his exclusive licensee, Ethicon Inc., own U.S. Patent No. 4,535,773 ("the '773 patent"), which related to trocars. In 1989, Yoon and Ethicon sued United States Surgical Corp. for infringement of the '773 patent.¹²³⁷ While the suit was still pending, U.S. Surgical became aware that Mr. Young Jae Choi, an associate of Yoon's, also worked on portions of the patented trocars and claimed to have contributed to the '773 invention.¹²³⁸ Choi, who was not named as a co-inventor on the '773 patent, granted U.S. Surgical a "retroactive license" to practice "Choi's trocar related inventions."¹²³⁹ U.S. Surgical first moved to correct inventorship of the '773 patent under 35 U.S.C. § 256, claiming Choi as a co-inventor.¹²⁴⁰ U.S. Surgical then moved to dismiss the infringement suit and asserted that Choi, as joint owner of the patent, granted U.S. Surgical a valid license under the patent.¹²⁴¹

The Federal Circuit observed that ownership attaches not to individual claims, but to a patent as a whole and therefore concluded that a joint inventor with respect to even one claim enjoys a presumption of ownership in the entire patent.¹²⁴² Thus, because Choi was found to be a co-inventor, Yoon must share ownership of all

to make use of the prior art invention of an expired patent, which anticipates that of the assigned patent, is inconsistent.

Id., 47 U.S.P.Q.2d (BNA) at 1687 (citing *Scott Paper Co. v. Marcalus Mfg.*, 326 U.S. 249, 257-58 (1945)).

1236. 135 F.3d 1456, 45 U.S.P.Q.2d (BNA) 1545 (Fed. Cir.), *cert. denied*, 119 S. Ct. 278 (1998); *see also supra* Part II.J (detailing inventorship aspects of *Ethicon*).

1237. *See id.*, 45 U.S.P.Q.2d (BNA) at 1547. Yoon was listed as the sole inventor and was issued the '773 patent with fifty-five claims. Ethicon filed suit against U.S. Surgical for infringement of claims 34 and 50.

1238. *See id.* at 1459, 45 U.S.P.Q.2d (BNA) at 1547.

1239. *See id.*, 45 U.S.P.Q.2d (BNA) at 1547; *see also id.* at 1465, 45 U.S.P.Q.2d (BNA) at 1551-52 (affirming the district court's finding that Choi did, in fact, co-invent claims 33 and 47).

1240. *See id.* at 1459, 45 U.S.P.Q.2d (BNA) at 1547.

1241. *See id.*, 45 U.S.P.Q.2d (BNA) at 1547.

1242. *See id.* at 1465-66, 45 U.S.P.Q.2d (BNA) at 1552 (interpreting 35 U.S.C. § 261 as suggesting that property rights vest in the patent as a whole and not in each individual claim).

of the claims with Choi, even those that Yoon invented himself. Consequently, the court concluded that Choi did have the authority to license rights in the entire patent when he licensed U.S. Surgical.¹²⁴³ The Federal Circuit, however, agreed with Ethicon's challenge to the retroactive effect of the license.¹²⁴⁴ The Federal Circuit noted that a license to a third party by one co-owner only operates prospectively because, absent agreement to the contrary, one co-owner cannot grant a release of another co-owner's right to accrued damages.¹²⁴⁵

The Federal Circuit reiterated, however, that "as a matter of substantive patent law, all co-owners must ordinarily consent to join as plaintiffs in an infringement suit. Consequently, 'one co-owner has the right to impede the other co-owner's ability to sue infringers by refusing to voluntarily join in such as suit.'"¹²⁴⁶ Thus, because Choi did not consent to the suit, the Federal Circuit was forced to affirm the district court's dismissal of the case.¹²⁴⁷

V. OTHER SOURCES OF LIABILITY

A. Antitrust

In *Nobelpharma AB v. Implant Innovations, Inc.*,¹²⁴⁸ the Federal Circuit altered its precedent regarding review of certain antitrust issues in patent cases. The Federal Circuit heard Nobelpharma AB's and Nobelpharma USA, Inc.'s ("NP") appeal of the district court's denial of its motion for a new trial or, in the alternative, motion for JMOL on the jury's verdict that NP violated antitrust laws.¹²⁴⁹ NP argued that there was a lack of substantial evidence to support the jury's

1243. *See id.* at 1466, 45 U.S.P.Q.2d (BNA) at 1552.

1244. *See id.* at 1467, 45 U.S.P.Q.2d (BNA) at 1554 ("Choi cannot release U.S. Surgical from its liability for past accrued damages to Ethicon, only from liability to himself.").

1245. *See id.*, 45 U.S.P.Q.2d (BNA) at 1553 (holding that co-ownership agreement did not bar one co-owner from granting license to third party) (citing *Schering Corp. v. Roussel-UCLAF SA*, 104 F.3d 341, 345, 41 U.S.P.Q.2d (BNA) 1359, 1362 (Fed. Cir. 1997)).

1246. *Id.* at 1468, 45 U.S.P.Q.2d (BNA) at 1554 (quoting *Schering Corp. v. Roussel-UCLAF SA*, 104 F.3d 341, 345, 41 U.S.P.Q.2d (BNA) 1359, 1362 (Fed. Cir. 1997)).

1247. *See id.* at 1467, 45 U.S.P.Q.2d (BNA) at 1554 ("An action for infringement must join as plaintiffs all co-owners."). The Supreme Court has written that:

The Patentee or his assigns may, by instrument in writing, assign, grant, and convey, either (1) the whole patent . . .; or (2) an undivided part or share of that exclusive right; or (3) the exclusive right under the patent within and throughout a specified part of the United States. A transfer of either of these three kinds of interests is an assignment, properly speaking, and vests in the assignee a title in so much of the patent itself, with a right to sue infringers.

Waterman v. Mackenzie, 138 U.S. 252, 255 (1891).

1248. 141 F.3d 1059, 46 U.S.P.Q.2d (BNA) 1097 (Fed. Cir.), *cert. denied*, 119 S. Ct. 178 (1998).

1249. *See id.* at 1061-62, 46 U.S.P.Q.2d (BNA) at 1099.

finding.¹²⁵⁰ Implant Innovations, Inc. (“3I”) responded by arguing that the jury’s findings were supported by substantial evidence and that these findings provided a sound basis for imposing antitrust liability.¹²⁵¹

Typically, the Federal Circuit is guided by the law of the regional circuit in which the district court sits when reviewing a judgment involving federal antitrust law.¹²⁵² Nevertheless, “[w]hether conduct in the prosecution of a patent is sufficient to strip a patentee of its immunity from the antitrust laws is one of those issues that clearly involves our exclusive jurisdiction over patent cases.”¹²⁵³ Accordingly, an *en banc* panel of the Federal Circuit concluded that the court “should decide these issues as a matter of Federal Circuit law, rather than rely on various regional precedents.”¹²⁵⁴ This new rule applies equally to all antitrust claims premised upon patent infringement, and therefore, all inconsistent precedent was expressly overruled.¹²⁵⁵ The Federal Circuit noted, however, that it would continue to apply the regional circuit law to other antitrust issues, including relevant market, market power, and damages.¹²⁵⁶

To strip a patentee of its exemption, the antitrust plaintiff must demonstrate that the patentee obtained the patent by knowingly and willfully misrepresenting facts to the PTO.¹²⁵⁷ Fraud, however, is distinguished from inequitable conduct. Inequitable conduct is an equitable defense in a patent infringement action, while fraud is a potentially more serious offense and may expose a patentee to antitrust liability.¹²⁵⁸ A finding of fraud requires a higher threshold of both intent and materiality than does a finding of inequitable conduct.¹²⁵⁹ A finding of fraud under the Walker Process Doctrine must be based upon clear and independent evidence of an intent to deceive, coupled with a clear showing of reliance upon such

1250. *See id.* at 1064, 46 U.S.P.Q.2d (BNA) at 1100.

1251. *See id.*, 46 U.S.P.Q.2d (BNA) at 1100.

1252. *See id.* at 1067, 46 U.S.P.Q.2d (BNA) at 1103; *see also* *Loctite Corp. v. Ultraseal Ltd.*, 781 F.2d 861, 875, 228 U.S.P.Q.2d (BNA) 90, 99 (Fed. Cir. 1985) (“We must approach a federal antitrust claim as would a court of appeals in the circuit of the district court whose judgement we review.”).

1253. *Nobelpharma*, 141 F.2d at 1067, 46 U.S.P.Q.2d (BNA) at 1104.

1254. *Id.* at 1068, 46 U.S.P.Q.2d (BNA) at 1104.

1255. *See id.*, 46 U.S.P.Q.2d (BNA) at 1104 (overruling *Cygnus Therapeutics Sys. v. ALZA Corp.*, 92 F.3d 1153, 1161, 39 U.S.P.Q.2d (BNA) 1666, 1672 (Fed. Cir. 1996), *Loctite Corp. v. Ultraseal, Ltd.*, 781 F.2d 861, 875, 228 U.S.P.Q. (BNA) 90, 99 (Fed. Cir. 1985), and *Atari, Inc. v. JS & A Group, Inc.*, 747 F.2d 1422, 1438-40, 223 U.S.P.Q. (BNA) 1074, 1086-87 (Fed. Cir. 1984) (*en banc*), to the extent that they hold otherwise).

1256. *See id.* at 1068, 46 U.S.P.Q.2d (BNA) at 1104.

1257. *See id.*, 46 U.S.P.Q.2d (BNA) at 1104.

1258. *See id.* at 1069, 46 U.S.P.Q.2d (BNA) at 1105.

1259. *See id.* at 1070-71, 46 U.S.P.Q.2d (BNA) at 1106.

misrepresentation. Therefore, inequitable conduct may act as a shield, whereas fraud acts as a sword.¹²⁶⁰

After reviewing the facts, the Federal Circuit concluded that substantial evidence existed upon which a reasonable finder of fact could deny NP immunity from antitrust liability.¹²⁶¹ First, the jury reasonably could have concluded that Branemark, a named inventor of the disputed patent and a member of NP's board of directors, withheld important prior art with the requisite intent to defraud the PTO.¹²⁶² Second, the Federal Circuit determined that substantial evidence existed with respect to the materiality of the withheld prior art.¹²⁶³ Third, a reasonable jury could have found that NP brought suit against 3I with knowledge of the patent applicant's fraud based upon given testimony which suggested that two of NP's then-officers were aware of such fraud.¹²⁶⁴

Further, the Federal Circuit concluded that the district court's instructions to the jury regarding fraud substantially comported with the law. As a result, there was no basis for granting NP's motion for a new trial.¹²⁶⁵ Thus, the court affirmed the denial of NP's motion for JMOL and found that NP was properly deprived of its antitrust immunity under the Walker Process doctrine.¹²⁶⁶

B. Breach of Contract

In *Celeritas Technologies, Ltd. v. Rockwell International Corp.*,¹²⁶⁷ the Federal Circuit affirmed the district court's denial of Rockwell's motion for JMOL on a breach of contract claim.¹²⁶⁸ Celeritas Technologies, Ltd. was the assignee of the '590 patent, which claimed a way to increase the rate of data transmission over analog cellular networks by de-emphasizing the data signal before presenting it to the cellular network.¹²⁶⁹ Thus, the patent claimed to counteract the adverse distortion effects of pre-emphasis and limiter circuits.¹²⁷⁰

In September 1993, Celeritas met with Rockwell representatives to

1260. See *id.* at 1070, 46 U.S.P.Q.2d (BNA) at 1106.

1261. See *id.* at 1072, 46 U.S.P.Q.2d (BNA) at 1107.

1262. See *id.*, 46 U.S.P.Q.2d (BNA) at 1108.

1263. See *id.*, 46 U.S.P.Q.2d (BNA) at 1108.

1264. See *id.* at 1073, 46 U.S.P.Q.2d (BNA) at 1108.

1265. See *id.*, 46 U.S.P.Q.2d (BNA) at 1108 (suggesting that instructions to the jury were explicit and specific and were otherwise, "not lethally erroneous").

1266. See *id.*, 46 U.S.P.Q.2d (BNA) at 1109.

1267. 150 F.3d 1354, 47 U.S.P.Q.2d (BNA) 1516 (Fed. Cir.), cert. denied, 119 S. Ct. 874 (1998).

1268. See *id.* at 1356, 47 U.S.P.Q.2d (BNA) at 1517-18 (affirming district court's decision regarding the contract claim, but reversing the decision concerning the patent claim).

1269. See *id.*, 47 U.S.P.Q.2d (BNA) at 1518.

1270. See *id.*, 47 U.S.P.Q.2d (BNA) at 1518.

demonstrate their proprietary de-emphasis technology.¹²⁷¹ The parties signed a non-disclosure agreement (“NDA”) which covered the subject matter of the meeting and forbade Rockwell from disclosing any proprietary information.¹²⁷² The proprietary information did not include information that was already in the public domain as of the date of the meeting.¹²⁷³ Furthermore, the contract stated:

Injunctive Relief. Celeritas and Rockwell acknowledge that the extent of damages in the event of the breach of any provision of this Agreement would be difficult or impossible to ascertain, and that there will be available no adequate remedy at law in the event of any such breach. Each party therefore agrees that in the event it breaches any provision of this Agreement, the other party will be entitled to injunctive or other equitable relief, in addition to any other relief to which it may be entitled.¹²⁷⁴

In March 1994, Rockwell informed Celeritas that it decided not to license Celeritas’s proprietary technology.¹²⁷⁵ At the same time, Rockwell began its own research to incorporate de-emphasis technology into its modem chip sets.¹²⁷⁶ Rockwell did not, however, independently develop this technology, but instead employed the same engineers who learned of Celeritas’s de-emphasis technology under the NDA.¹²⁷⁷ Rockwell’s subsequent sales surpassed its own projections.¹²⁷⁸

Celeritas sued Rockwell in 1995 under three theories: (1) breach of contract, (2) patent infringement, and (3) misappropriation of trade secrets.¹²⁷⁹ Celeritas stipulated that it would accept the highest award it received under the three independent theories to avoid duplicative recovery.¹²⁸⁰ Celeritas prevailed at trial on each of its theories and stood to gain the most for its breach of contract claim, with the damages award at \$57,658,000.¹²⁸¹ Rockwell moved for JMOL, which the district court denied.¹²⁸²

1271. *See id.*, 47 U.S.P.Q.2d (BNA) at 1518 (“Rockwell is the leading manufacturer of modern ‘chip sets’ which contain the core functions of commercial modems, including the modulation function where de-emphasis is performed.”).

1272. *See id.* at 1357, 47 U.S.P.Q.2d (BNA) at 1518.

1273. *See id.*, 47 U.S.P.Q.2d (BNA) at 1518.

1274. *Id.*, 47 U.S.P.Q.2d (BNA) at 1518.

1275. *See id.*, 47 U.S.P.Q.2d (BNA) at 1519.

1276. *See id.*, 47 U.S.P.Q.2d (BNA) at 1519.

1277. *See id.*, 47 U.S.P.Q.2d (BNA) at 1519.

1278. *See id.*, 47 U.S.P.Q.2d (BNA) at 1519.

1279. *See id.* at 1357, 47 U.S.P.Q.2d (BNA) at 1519.

1280. *See id.*, 47 U.S.P.Q.2d (BNA) at 1519.

1281. *See id.*, 47 U.S.P.Q.2d (BNA) at 1519.

1282. *See id.*, 47 U.S.P.Q.2d (BNA) at 1519.

On appeal to the Federal Circuit, Rockwell first argued that the de-emphasis technology, disclosed to Rockwell at the September 1993 meeting, was already in the public domain and therefore Rockwell did not breach the NDA.¹²⁸³ The Federal Circuit disagreed, noting that the jury reasonably found that the information given by Celeritas to Rockwell was proprietary.¹²⁸⁴ Further, the evidence demonstrated that Rockwell learned implementation details and techniques that extended beyond the information disclosed in the patent.¹²⁸⁵ Thus, even after the patent issued in January 1995, the time Rockwell began to ship its prototype chip sets, Rockwell already had breached the NDA because it had utilized proprietary information.¹²⁸⁶

Second, Rockwell argued that the subject matter of the NDA existed in the public domain before Rockwell began to use such information, because AT&T Paradyne had sold a modem that incorporated de-emphasis technology during the intervening period.¹²⁸⁷ Rockwell asserted that this technology was “readily ascertainable” because a competent engineer could simply reverse engineer the modem.¹²⁸⁸

The Federal Circuit again disagreed with Rockwell because the jury implicitly found that the technology had not been placed in the public domain by the sale of the modem.¹²⁸⁹ The Federal Circuit noted that California law was unsettled with respect to the issue of whether a trade secret enters the public domain when it is “readily ascertainable” or whether it must be “actually ascertained” by the public.¹²⁹⁰ Under either standard, however, the Federal Circuit determined that the jury’s verdict, which granted Celeritas monetary damages, could be supported.¹²⁹¹ Testimony revealed that an engineer would need a spectrum analyzer to discover that AT&T’s modem had de-emphasis technology and most engineers did not have such equipment.¹²⁹²

1283. *See id.* at 1358, 47 U.S.P.Q.2d (BNA) at 1519.

1284. *See id.*, 47 U.S.P.Q.2d (BNA) at 1520 (“[T]he law presumes the existence of findings necessary to support the verdict the jury reached.”) (citing *Perkin-Elmer Corp. v. Computervision Corp.*, 732 F.2d 888, 893, 221 U.S.P.Q.2d (BNA) 669, 672-73 (Fed. Cir. 1984)).

1285. *See id.* at 1358, 47 U.S.P.Q.2d (BNA) at 1520.

1286. *See id.*, 47 U.S.P.Q.2d (BNA) at 1520.

1287. *See id.*, 47 U.S.P.Q.2d (BNA) at 1519.

1288. *See id.*, 47 U.S.P.Q.2d (BNA) at 1519.

1289. *See id.*, 47 U.S.P.Q.2d (BNA) at 1519.

1290. *See id.*, 47 U.S.P.Q.2d (BNA) at 1520. *Compare* *ABBA Rubber Co. v. Seaquist*, 286 Cal. Rptr. 518 (1991) (holding that a trade secret is protectable if it has not yet been ascertained by others), *with* *American Paper & Packaging Prod. v. Kirgan*, 228 Cal. Rptr. 713 (1986) (suggesting that a trade secret is not protectable if readily ascertainable by others).

1291. *See Celeritas*, 150 F.3d at 1358, 47 U.S.P.Q.2d (BNA) at 1520.

1292. *See id.* at 1359, 47 U.S.P.Q.2d (BNA) at 1520 (asserting that Rockwell’s own expert testimony contradicted the assertion that the technology was “readily ascertainable”).

The Federal Circuit further dismissed Rockwell's assertion that because the parties previously agreed that damages would be difficult to calculate, Celeritas was not entitled to receive damages at all.¹²⁹³ Rockwell also was unsuccessful in arguing that Celeritas was not harmed, that the damages were speculative, and that under California laws contract damages should be limited to the statutory remedies for misappropriation of Celeritas's trade secrets.¹²⁹⁴

In *Bradley v. Chiron Corp.*,¹²⁹⁵ the Federal Circuit affirmed the district court's decision to dismiss Bradley's claims of mistake of law and fact, fraud, and failure of consideration in an attempt to rescind a settlement agreement of a potential interference action between the parties.¹²⁹⁶

In 1977, while employed at the Centers for Disease Control and Prevention ("CDC"), Dr. Daniel Bradley isolated a concentrated, purified form of the Hepatitis C Virus ("HCV").¹²⁹⁷ In 1982, Chiron Corporation entered into a collaboration with the CDC and Bradley, where Chiron would attempt to use recombinant procedures to clone HCV using samples of HCV supplied by Bradley.¹²⁹⁸ In 1987, Chiron succeeded in cloning a portion of the virus and developed a diagnostic assay for detecting the presence of HCV.¹²⁹⁹ Based on these developments, Chiron filed a corresponding patent application without naming Bradley as a co-inventor.¹³⁰⁰ Bradley filed a separate patent application and named himself as a co-inventor, attempting to provoke an interference proceeding with Chiron's patent application.¹³⁰¹

Chiron and Bradley then entered into a settlement agreement whereby Bradley released Chiron and discharged his rights in any claims arising thereafter.¹³⁰² Bradley further warranted, by signing the

1293. *See id.*, 47 U.S.P.Q.2d (BNA) at 1520 ("The clause providing for injunctive relief in fact clearly and unambiguously provides for an injunction 'in addition to any other relief to which it may be entitled.'").

1294. *See id.* at 1359-60, 47 U.S.P.Q.2d (BNA) at 1520-21.

1295. 136 F.3d 1317, 45 U.S.P.Q.2d (BNA) 1819 (Fed. Cir. 1998).

1296. *See id.* at 1320, 45 U.S.P.Q.2d (BNA) at 1820 (applying California law).

1297. *See id.*, 45 U.S.P.Q.2d (BNA) at 1820.

1298. *See id.*, 45 U.S.P.Q.2d (BNA) at 1820 (indicating that all parties to the agreement understood the potential for commercial gain).

1299. *See id.*, 45 U.S.P.Q.2d (BNA) at 1820 (recognizing Bradley's contention that he contributed to the invention).

1300. *See id.*, 45 U.S.P.Q.2d (BNA) at 1820 (noting that such filing led to a deterioration of the collaborative effort between the parties).

1301. *See id.* at 1320-21, 45 U.S.P.Q.2d (BNA) at 1820-21 (stating that Bradley first consulted with several CDC lawyers to discuss possibility of legal action).

1302. *See id.* at 1321, 45 U.S.P.Q.2d (BNA) at 1821 ("CDC . . . the United States . . . and Dr. Bradley hereby forever release, discharge and assign to Chiron their entire right, title and interest in and to, any and all claims, actions and the like based in law or equity known or unknown, now existing or which might arise hereafter.").

agreement, that no patent application would be maintained that would name himself as an inventor or co-inventor.¹³⁰³ The settlement agreement also contained language that made Dr. Bradley available to Chiron for the sole purpose of evaluating his claim to inventorship.¹³⁰⁴ After Chiron completed such evaluation, “the [settlement] agreement allowed Chiron, at its discretion, (i) to add Dr. Bradley to one or more Chiron patents as an inventor if in Chiron’s opinion Dr. Bradley is an inventor, or (ii) to submit any material information regarding inventorship to the U.S. Patent and Trademark Office (“PTO”).”¹³⁰⁵ Chiron also agreed to pay CDC over \$1.9 million and to pay Bradley \$337,500 over five years.¹³⁰⁶

Four years after the settlement agreement was signed, however, Bradley sued to rescind the agreement alleging mistake, fraud, and failure of consideration.¹³⁰⁷ The district court dismissed Bradley’s suit for failure to state a claim upon which relief could be granted under Federal Rules of Civil Procedure 12(b)(6).¹³⁰⁸ Bradley then amended his complaint, but in response to another motion by Chiron under Rule 12(b)(6), Bradley needed, and the district court granted, leave to amend his complaint to state additional facts concerning his assertion of unilateral mistake.¹³⁰⁹ Several assertions in Bradley’s second amended complaint, however, differed from those in the previous complaint. The district court dismissed the second amended complaint and declared the changes “false and [a] sham.”¹³¹⁰

Bradley argued on appeal that the language of the settlement agreement lead him to believe that the issue of inventorship would be resolved by the PTO and that this supported his claim of mistake of law and fact.¹³¹¹ The Federal Circuit found, however, that Bradley failed to show that Chiron was aware of Bradley’s mistaken belief that the PTO would determine the issue of inventorship.¹³¹² The Federal Circuit concluded that the language of the settlement agreement clearly stated that Chiron would retain “sole” discretion in the

1303. *See id.*, 45 U.S.P.Q.2d (BNA) at 1821.

1304. *See id.*, 45 U.S.P.Q.2d (BNA) at 1821.

1305. *See id.*, 45 U.S.P.Q.2d (BNA) at 1821.

1306. *See id.*, 45 U.S.P.Q.2d (BNA) at 1821.

1307. *See id.*, 45 U.S.P.Q.2d (BNA) at 1821.

1308. *See id.*, 45 U.S.P.Q.2d (BNA) at 1821.

1309. *See id.* at 1324, 45 U.S.P.Q.2d (BNA) at 1824.

1310. *See id.*, 45 U.S.P.Q.2d (BNA) at 1824 (reiterating the district court’s description of Bradley’s changes as “a transparent attempt to conform the facts to the requirement of the cause of action”).

1311. *See id.* at 1323, 45 U.S.P.Q.2d (BNA) at 1822 (claiming that § 2.3 of the settlement agreement entitled Bradley to have his rights determined by PTO).

1312. *See id.*, 45 U.S.P.Q.2d (BNA) at 1822.

determination of inventorship.¹³¹³ The Federal Circuit further found that Bradley neglected his duty to learn and know the content of the contract he had signed.¹³¹⁴

The Federal Circuit noted that in California, “when a person with the capacity of reading and understanding an instrument signs it, he is, in the absence of fraud or imposition, bound by its contents, and is estopped from saying that its provision is contrary to his intentions or understanding.”¹³¹⁵ The Federal Circuit also noted that “the weight of public policies favoring settlement of disputes, the integrity of contracts, and the stability of agreements that had been fully performed by a party, require ‘reasonable inquiry to ascertain or effort to understand the meaning and content of the contract upon which one relies.’”¹³¹⁶ Against these policies and Bradley’s asserted “false and sham” facts, the Federal Circuit affirmed the district court’s decision that Bradley failed “to state a claim for rescission based on mistake of fact or law.”¹³¹⁷

Turning to the district court’s dismissal of Bradley’s fraud claim, the Federal Circuit stated that fraud is grounds for contract rescission:¹³¹⁸

The charge of actual fraud requires that the accused party made a material representation or omission with knowledge of its falsity, with intent to deceive, or to induce the other party to enter into a contract. The accused party must have intentionally induced a misunderstanding of the contract terms, or known of it and fostered it.¹³¹⁹

The Federal Circuit agreed with the district court that the evidence was insufficient to prove that Chiron misled Bradley into thinking that the agreement provisions provided for the resolution of patent ownership.¹³²⁰ Rather, the Federal Circuit found that the language of the settlement agreement that prohibited Bradley from entering into

1313. *See id.*, 45 U.S.P.Q.2d (BNA) at 1823 (“[T]he contract provisions were unambiguous, fully consistent as written, and not consistent as construed by Dr. Bradley.”).

1314. *See id.*, 45 U.S.P.Q.2d (BNA) at 1823 (asserting that if mistake existed it was due to neglect of legal duty imposed by § 1577 of the California Civil Code).

1315. *Id.* at 1323, 45 U.S.P.Q.2d (BNA) at 1822 (quoting *Dobler v. Story*, 268 F.2d 274, 277 (9th Cir. 1959)).

1316. *Id.* at 1324, 45 U.S.P.Q.2d (BNA) at 1823 (quoting *Wal-Noon Corp. v. Hill*, 199 Cal. Rptr. 646, 652 (1975)).

1317. *Id.* at 1326, 45 U.S.P.Q.2d (BNA) at 1825.

1318. *See id.*, 45 U.S.P.Q.2d (BNA) at 1825 (citing CAL. CIV. CODE § 1689(b)(1) (West 1997)).

1319. *See id.*, 45 U.S.P.Q.2d (BNA) at 1825 (citing CAL. CIV. CODE § 1572 (West 1997)).

1320. *See id.*, 45 U.S.P.Q.2d (BNA) at 1825 (“There was no allegation that Chiron had exclusive knowledge, or that it withheld knowledge, or induced Dr. Bradley to enter into the contract, or presented a misleading interpretation. We agree with the district court’s analysis.”).

an interference proceeding clearly dictated against such construction.¹³²¹ Therefore, the Federal Circuit found the evidence insufficient to state a claim for rescission of the settlement agreement on the ground of fraud.¹³²²

Finally, the court agreed with the district court that Bradley could not sustain a claim for rescission based on failure of consideration.¹³²³ Bradley had been paid full monetary compensation prior to the suit.¹³²⁴ Further, the court found Bradley's argument that rescission was proper based on Chiron's failure to submit all inventorship information to the PTO was unpersuasive,¹³²⁵ and duty on Chiron was discretionary and was not "consideration."¹³²⁶

1321. *See id.*, 45 U.S.P.Q.2d (BNA) at 1825.

1322. *See id.* at 1327, 45 U.S.P.Q.2d (BNA) at 1826.

1323. *See id.*, 45 U.S.P.Q.2d (BNA) at 1826.

1324. *See id.*, 45 U.S.P.Q.2d (BNA) at 1826.

1325. *See id.*, 45 U.S.P.Q.2d (BNA) at 1826.

1326. *See id.*, 45 U.S.P.Q.2d (BNA) at 1826.