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A. Extrinsic Evidence may be Considered to Explain the Meaning of a Reference under 35 U.S.C. § 102

The subject patent in the case of Scripps Clinic & Research Foundation v. Genentech, Inc.\(^1\) was a reissue patent entitled "Ultrapurification of Factor VIII Using Monoclonal Antibodies."\(^2\)

Before the district court, the accused infringer had argued that several claims of the patent were invalid under 35 U.S.C. § 102(b) based upon subject matter described in a 1979 publication by a Dr. Harris.\(^3\) The parties had filed three successive declarations of Dr. Harris with the district court, each declaration explaining the meaning of the 1979 publication.

The district court, citing the third Harris declaration, held that the claims were invalid under 35 U.S.C. § 102(b) in view of the 1979 Harris publication and granted the accused infringer's motion for summary judgment on this issue.\(^4\) The patentee appealed.

On appeal, the Federal Circuit observed that it is sometimes appropriate to consider extrinsic evidence to explain the meaning of a reference under 35 U.S.C. § 102.\(^5\) It is appropriate to use the extrinsic evidence to educate the decision-maker to what the reference meant to persons of ordinary skill in the field of the invention, but it is not appropriate to use the extrinsic evidence to fill gaps in the reference.\(^6\)

In Scripps, the record showed apparent inconsistencies among
the three Harris declarations. To the extent that these apparent inconsistencies raised questions of credibility and weight, whether of the witness or of the interpretation of the publication, such factual questions were not properly resolved on summary judgment. The Federal Circuit therefore reversed the grant of partial summary judgment of invalidity for anticipation by the Harris publication.

B. Invalidity Under 35 U.S.C. § 102(b) Requires Proof by Clear and Convincing Evidence

The respondent in the case of Intel Corporation v. U.S. International Trade Commission had argued that the subject patent was invalid under 35 U.S.C. § 102(b) because devices which embodied the patented invention had been placed on sale more than one year before the patent application’s filing date.

On appeal, the Federal Circuit noted that the respondent had not offered any direct or circumstantial evidence showing that the patentee had sold the patented invention before the critical date. Instead, the respondent had merely offered evidence showing that such a sale had been “likely”, and had argued that the fact of such sale could be reasonably inferred from the evidence.

The Federal Circuit found that the reasonable inferences which the respondent suggested be drawn from the evidence did not meet the “clear and convincing” standard of proof required for showing patent invalidity under 35 U.S.C. § 102(b). Thus, the respondent had failed to carry its burden of proof that a sale or offer to sell had been made prior to the critical date. Accordingly, the Federal Circuit affirmed the Commission’s determination that the patent was not proven invalid.

C. Post-Critical Date Events May Be Used to Establish That An Invention Was “On Sale” Under 35 U.S.C. § 102(b)

The application for the subject patent in the case of Sonoscan, Inc. v. Sonotek, Inc. had been filed on September 15, 1988. On
September 10, 1987 (more than one year prior to the application filing date) the patentee had quoted a price on a system including the claimed invention to a first customer.\textsuperscript{15} On September 18, 1987 (less than one year prior to the application filing date) the patentee had quoted the same price on the same system to a second customer.\textsuperscript{16}

After the patent issued, the patentee filed suit against an alleged infringer. As an affirmative defense, the alleged infringer asserted that the patent was invalid under 35 U.S.C. § 102(b) on the basis that the claimed invention had been on sale more than one year prior to the patent application filing date.

The patentee conceded that the September 18 quotation to the second customer had been for the claimed invention, but argued that on the September 15 "critical date" the invention had not been sufficiently developed to be "on sale."\textsuperscript{17}

The district court heard testimony concerning the state of development of the invention both before and after the September 15 "critical date." The district court found that no serious change in the invention had taken place between September 10 and September 18.\textsuperscript{18}

On the basis of these findings, the district court concluded that the claimed invention had been sufficiently developed so that the September 10 quotation was a genuine offer to sell the claimed invention.\textsuperscript{19} The district court therefore held the patent invalid under § 102(b) and entered final judgment in favor of the alleged infringer.\textsuperscript{20} The patentee appealed.

On appeal, the patentee argued that the September 18 quotation was irrelevant because it had occurred after the critical date, and that the district court had therefore erred by taking the September 18 quotation into consideration.\textsuperscript{21}

The Federal Circuit found, however, that the district court had properly inquired as to what was offered in the September 18 quotation, what development activities occurred between September 10 and September 18, and had properly inferred from the evidence that what was adequately developed on September 18 was also adequately developed on September 10. The Federal Circuit therefore

\textsuperscript{15} Id. at 1157.
\textsuperscript{16} Id.
\textsuperscript{17} Id. at 1158.
\textsuperscript{18} Id. at 1159.
\textsuperscript{19} Sonoscan, 19 USPQ2D at 1158.
\textsuperscript{21} Sonoscan, 19 USPQ2D at 1159.
affirmed the judgment of the district court.22

D. "Inherency" Represents An Exception to The Rule That Anticipation Requires Every Element of the Claims to Appear in A Single Reference

The subject patent in the case of Continental Can Company USA, Inc. v. Monsanto Company23 was directed to a plastic bottle whose ribbed bottom structure had sufficient flexibility to impart improved impact resistance, combined with sufficient rigidity to resist deformation under internal pressure. All of the claims recited that the patented plastic bottle was "characterized by the feature that the ribs are hollow."24

The alleged infringer had moved for summary judgment of invalidity under 35 U.S.C. § 102(a) based upon a prior art reference to Marcus.25 The Marcus reference did not state that the ribs disclosed therein were "hollow."26 The alleged infringer had argued, however, that the Marcus ribs were formed by injection blow molding, which was the same process described for the patented ribs. Therefore, according to the alleged infringer, the ribs of the Marcus reference were "inherently" hollow, regardless of how the ribs were shown in the Marcus reference.27

The district court agreed with the alleged infringer, found that all of the claims of the patent were anticipated by the Marcus reference, and granted summary judgment of patent invalidity. The patentee appealed.

On appeal, the Federal Circuit observed that the concept of "inherency" represents a modest flexibility in the rule that anticipation under § 102 requires every element of the claims to appear in a single reference. "Inherency" is not a substitute for determination of patentability under § 103.28 Instead, "inherency" is intended to accommodate those situations in which the common knowledge of the skilled artisan is not expressly stated in the reference.29

To serve as an anticipation under § 102 when a reference is silent about the asserted inherent characteristic, the missing description in the reference may be filled by extrinsic evidence. How-

22. Id.
23. 948 F.2d 1264, 20 USPQ2D 1746 (Fed. Cir. 1991).
24. Id. at 1747.
25. Id.
26. Id. at 1748.
27. Id.
29. Id.
ever, such evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency may not be established by mere probabilities or possibilities.  

In *Continental Can*, there was no dispute that the Marcus reference disclosed an injection blow molding process. However, there was a dispute regarding whether a skilled artisan would recognize this process as necessarily producing “hollow” ribs, as the term “hollow” was used in the patent. The Federal Circuit concluded that this was a genuine dispute of a material fact which required a trial for its resolution. Resolution of this disputed fact adversely to the patentee was improper on summary judgment. The Federal Circuit therefore vacated the grant of summary judgment of anticipation under § 102(a) and remanded the case.

E. Conception of a Genetic Invention Under 35 U.S.C. § 102(g) Requires That the Inventor Be Able to Define the Gene So As to Distinguish It From Other Materials

The subject patent in the case of *Amgen, Inc., v. Chugai Pharmaceutical Co., Ltd.* was entitled “DNA Sequences Encoding Erythropoietin.” The patent claims were directed to a “purified and isolated DNA sequence” encoding human EPO. The structure of this DNA sequence had not been known until September of 1983, when the inventor had reduced the claimed invention to practice by cloning the gene.

The district court had found that the successful identification and isolation of the EPO gene resulted from a probing strategy which used two sets of fully-degenerate cDNA probes of two different regions of the EPO gene to screen a cDNA library. The accused infringer had asserted that this successful strategy had first been conceived by a Dr. Fritsch in 1981, and that Fritsch had been diligent until he reduced the claimed invention to practice in May of

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32. *Id.*
33. 927 F.2d 1200, 18 USPQ2D 1016 (Fed. Cir. 1991).
34. Erythropoietin (EPO) is a protein consisting of 165 amino acids which stimulates the production of red blood cells.
35. *Amgen*, 18 USPQ2D at 1018.
36. *Id.* at 1019.
1984. The accused infringer therefore had argued that the patent claims were invalid under 35 U.S.C. § 102(g) due to Fritsch's prior invention.37

The district court disagreed with the accused infringer and held that the patent claims were valid and had been infringed.38 The accused infringer appealed.

On appeal, the Federal Circuit noted that a gene is a chemical compound.39 Conception of a chemical compound requires that the inventor be able to define the compound so as to distinguish the compound from other materials, and to describe how to obtain the compound.40 If an inventor is unable to envision the detailed constitution of a gene so as to distinguish it from other materials, as well as a method for obtaining it, then conception is not established until the gene has been isolated and thereby successfully reduced to practice.41

Therefore, to act as prior art under 35 U.S.C. § 102(g), Fritsch's conception of a process had to be sufficiently specific that one skilled in the relevant art would succeed in cloning the EPO gene. However, the record showed that prior to September of 1983, Fritsch did not have a complete mental conception of a purified and isolated DNA sequence encoding EPO and a method for its preparation, in which the precise identity of the sequence is envisioned. All Fritsch had at that time was an objective to make an invention which he could not then adequately describe or define sufficiently to distinguish it from other genes. Fritsch had a goal of obtaining the isolated EPO gene and an idea of a possible method of obtaining it, but he did not conceive a purified and isolated DNA sequence encoding EPO and a viable method for obtaining it until after the inventor.42

The record indicated that neither party had an adequate conception of the DNA sequence until reduction to practice had been achieved, and the inventor had been the first to accomplish that goal.

The Federal Circuit concluded that the district court had not erred in finding that the claims directed to a purified and isolated DNA sequence encoding human EPO were not invalidated under
II. OBVIOUSNESS - 35 U.S.C. § 103

A. Obviousness Is Not Negated by the Quantity of References Cited

The claimed invention in the case of In re Gorman was directed to a composite candy sucker on a stick, molded in an elastomeric mold in the shape of a human thumb. All of the claims had been rejected as obvious under 35 U.S.C. § 103 in view of thirteen references.

On appeal, the applicant argued that when it is necessary to combine the teachings of a large number of references in order to support a rejection for obviousness under 35 U.S.C. § 103, this in and of itself weighs against a holding of obviousness.

The Federal Circuit noted, however, that the criterion for obviousness under 35 U.S.C. § 103 is not the number of references, but what the references would have meant to a person of ordinary skill in the field of the invention.

The Federal Circuit found that each element of the claimed invention was present in the prior art, and that the prior art used the various elements for the same purposes as in the claimed invention. These facts made the claimed invention, as a whole, obvious in terms of 35 U.S.C. § 103, and the obviousness of the claimed invention was not negated by the large number of references cited. The rejection of the claims under 35 U.S.C. § 103 was therefore affirmed.

B. Obviousness Rejection Requires Consideration of the Degree to Which One Reference Might Discredit Another Reference

The subject application in the case of In re Young was directed to a method and apparatus for generating an acoustic pulse

43. Id. at 1022.
44. 933 F.2d 982, 18 USPQ2D 1885 (Fed. Cir. 1991).
45. Id. at 1887.
46. Id. at 1888.
48. Gorman, 18 USPQ2D at 1889.
49. 927 F.2d 588, 18 USPQ2D 1089 (Fed. Cir. 1991).
in water. All of the claims had been rejected as obvious under 35 U.S.C. § 103 in view of a prior art patent to Carlisle. The Carlisle reference taught both the method and the advantages of the applicant's claimed invention.\textsuperscript{50}

The applicant had argued that the teachings of Carlisle had been expressly discredited by a prior art article written by Knudsen. The Knudsen article described a series of tests which evaluated the Carlisle technique. The Knudsen article stated that the Carlisle technique yielded no appreciable improvement in bubble oscillation suppression.\textsuperscript{51}

The applicant had argued that the effective teaching of the Knudsen/Carlisle combination suggested avoidance of the Carlisle technique, and that a person of ordinary skill in the art would therefore not have considered Carlisle when developing a method and apparatus for generating an acoustic pulse in water. The Board had rejected the applicant's arguments, holding that Carlisle was appropriately applied notwithstanding the teachings of Knudsen.\textsuperscript{52}

On appeal, the issue was whether the Board had properly affirmed the rejection over Carlisle in light of Knudsen's allegedly contrary teachings.

The Federal Circuit stated that when the prior art contains apparently conflicting references, each reference must be weighed for its power to suggest solutions to the skilled artisan. In weighing the suggestive power of each reference, consideration must be given to the degree to which one reference might accurately discredit another.\textsuperscript{53}

In \textit{Young}, the record showed that Knudsen did not test the Carlisle technique under conditions which were directly comparable to the conditions disclosed in Carlisle. Moreover, Knudsen's conclusion that the Carlisle technique was ineffective appeared to directly contradict at least some of the data contained in Knudsen.\textsuperscript{54}

The Federal Circuit concluded that, considering the discrepancies between the Knudsen test and the Carlisle disclosure, as well as the tendency of some of Knudsen's data to confirm the Carlisle technique, the Board had correctly determined that Knudsen did not convincingly discredit Carlisle and would not have deterred the skilled artisan from using the teachings of Carlisle. The use of Car-

\textsuperscript{50} Id. at 1091.
\textsuperscript{51} Id.
\textsuperscript{52} Id. at 1092.
\textsuperscript{53} Id. at 1091.
\textsuperscript{54} \textit{Young}, 18 USPQ2D at 1092.
lisle in the rejection of the claims was therefore not clearly erroneous and the Board’s decision affirming the examiner’s rejection was therefore affirmed.55

C. Obviousness Rejection Requires Consideration of Whether the Prior Art Discloses That the Skilled Artisan Would Have a Reasonable Expectation of Success in Making the Claimed Invention

The claimed invention in the case of In re Vaeck56 was directed to the use of genetic engineering techniques for the production of insecticidal Bacillus proteins within transformed cyanobacterial hosts.57 The subject matter of the application included a chimeric (i.e., hybrid) gene comprising (1) a gene derived from a bacterium of the Bacillus genus whose product is an insecticidal protein, united with (2) a DNA promoter effective for expressing the Bacillus gene in a host cyanobacterium, so as to produce the desired insecticidal protein.58

The claims had been rejected under 35 U.S.C. § 103. The examiner stated that the primary reference disclosed a chimeric gene capable of being highly expressed in a cyanobacterium, the gene comprising a promoter region effective for expression in a cyanobacterium operably linked to a structural gene encoding the enzyme chloramphenicol acetyl transferase (CAT). The chimeric gene and the transformed host of the primary reference differed from the claimed invention in that, in the primary reference, the structural gene encoded CAT rather than insecticidally active protein.59 The secondary references taught genes encoding insecticidally active proteins produced by Bacillus, and the advantages of expressing such genes in heterologous hosts to obtain larger quantities of the protein. The examiner contended that it would have been obvious to one of ordinary skill in the art to substitute the Bacillus

55. Id.
57. Id. at 1439.
58. Claim 1 recited:
   A chimeric gene capable of being expressed in Cyanobacteria cells comprising:
   (a) a DNA fragment comprising a promoter region which is effective for expression of a DNA fragment in a Cyanobacterium; and (b) at least one DNA fragment coding for an insecticidally active protein produced by a Bacillus strain, or coding for an insecticidally active truncated form of the above protein or coding for a protein having substantial sequence homology to the active protein, the DNA fragments being linked so that the gene is expressed.
   Id. at 1440.
59. Id. at 1441.
genes taught by the secondary references for the CAT gene in the vectors of the primary reference in order to obtain high level expression of the Bacillus genes in the transformed cyanobacteria. The examiner further contended that it would have been obvious to use cyanobacteria as heterologous hosts for expression of the claimed genes due to the ability of cyanobacteria to serve as transformed hosts for the expression of heterologous genes. The examiner's rejection had been affirmed by the Board, and the applicant appealed to the Federal Circuit.\textsuperscript{60}

On appeal, the Federal Circuit observed that where a claimed composition has been rejected as obvious in view of a combination of prior art references, a proper analysis under § 103 requires, inter alia, consideration of two factors: (1) whether the prior art would have suggested to those of ordinary skill in the art that they should make the claimed composition; and (2) whether the prior art would also have revealed that in making the claimed composition, those of ordinary skill would have a reasonable expectation of success. Both the suggestion and the reasonable expectation of success must be found in the prior art, not in the applicant's disclosure.\textsuperscript{61}

In \textit{Vaeck}, the Federal Circuit found that there was no suggestion in the primary reference of substituting in the disclosed plasmid a structural gene encoding Bacillus insecticidal proteins for the CAT gene utilized for selection purposes. Nor did the Federal Circuit find a suggestion in the secondary references of the substitution of insecticidal Bacillus genes for CAT marker genes in cyanobacteria. While the secondary references disclosed expression of Bacillus genes encoding insecticidal proteins in certain transformed bacterial hosts, the secondary references did not disclose or suggest expression of such genes in transformed cyanobacterial hosts.\textsuperscript{62}

The similarity between bacteria and cyanobacteria alone was not sufficient to motivate the skilled artisan to substitute cyanobacteria for bacteria as a host for expression of the claimed gene. Evidence of recent uncertainty regarding the biology of cyanobacteria tended to rebut the position that the skilled artisan would have considered the cyanobacteria effectively interchangeable with bacteria as hosts for expression of the claimed gene.\textsuperscript{63}

The Federal Circuit therefore concluded that the prior art of-

\textsuperscript{60.} \textit{Id.} at 1442.

\textsuperscript{61.} \textit{In re Dow Chemical Co.}, 837 F.2d 469, 473, 5 USPQ2D 1529, 1531 (Fed. Cir. 1988).

\textsuperscript{62.} \textit{Vaeck}, 20 USPQ2D at 1443.

\textsuperscript{63.} \textit{Id.}
ferred no explicit or implicit suggestion of the substitution that was the difference between the claimed invention and the prior art. Moreover, the prior art did not convey to those of ordinary skill a reasonable expectation of success in making the claimed composition. Accordingly, the Federal Circuit reversed the rejection of the claims under 35 U.S.C. § 103.

D. Obviousness Rejection Can Not Be Overcome by a Terminal Disclaimer

In In re Bartfeld the claims of a pending application had been rejected under 35 U.S.C. § 103 as obvious in view of two U.S. patent references. One of the two U.S. patent references was owned by the owner of the pending application. Nevertheless, the co-owned patent reference was available as prior art because the co-owned patent reference had an earlier filing date than the pending application and named different inventive entities than the pending application. The PTO Board affirmed the § 103 rejection.

On appeal to the Federal Circuit, the applicant argued that, in view of the co-ownership of the reference and the pending application, the obviousness rejection under 35 U.S.C. § 103 was comparable to an obviousness-type double patenting rejection. Consequently, the § 103 rejection (like an obviousness-type double patenting rejection) could be overcome by an appropriate terminal disclaimer.

The Federal Circuit noted, however, that there is a basic difference between an obviousness-type double patenting rejection and an obviousness rejection under 35 U.S.C. § 103. An obviousness-type double patenting rejection depends entirely upon subject matter that is claimed in an issued U.S. patent. An obviousness rejection under 35 U.S.C. § 103 depends upon subject matter that is disclosed (regardless of whether the subject matter is claimed) in a prior art reference (regardless of whether the reference is an issued U.S. patent). Consequently, a prior art reference that renders claimed subject matter obvious under 35 U.S.C. § 103 does not necessarily create an obviousness-type double patenting situation.

64. See In re O'Farrell, 853 F.2d 894, 7 USPQ2D 1673 (Fed. Cir. 1988).
65. 925 F.2d 1450, 17 USPQ2D 1885 (Fed. Cir. 1991).
68. Bartfield, 17 USPQ2d at 1886. In support of this position, the applicant cited the legislative history underlying the 1984 amendment to 35 U.S.C. § 103 and the Federal Circuit's holding in In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985).
69. Bartfield, 17 USPQ2D at 1888.
The purpose of a terminal disclaimer is to limit the term of a patent, not to remove a reference as prior art. If claimed subject matter is obvious in view of the prior art, then a terminal disclaimer can not convert that obvious subject matter into unobvious (and therefore patentable) subject matter. Given these fundamental differences between an obviousness-type double patenting rejection and an obviousness rejection under 35 U.S.C. § 103, the Federal Circuit concluded that a terminal disclaimer is neither an appropriate nor available means for overcoming a rejection under § 103 and affirmed the decision of the Board.

E. Evidence of "Secondary Considerations" May Not Be Sufficient to Defeat a Motion for Summary Judgment of Invalidity Under 35 U.S.C. § 103

The subject patent in the case of Ryko Manufacturing Co. v. Nu-Star, Inc. was directed to an automatic car wash system electronically activated by an electrical numerical keypad device.

The district court determined that the difference between the claimed invention and the prior art was the claimed invention's substitution of an electrical numerical keypad device for a coin box or other common input device. The district court found that utilization of a numerical keypad device to electronically activate an automatic car wash system was a combination that was clearly suggested by the prior art. The district court determined that the patentee had shown evidence of so-called "secondary considerations" (such as commercial success, long felt but unsolved needs, and the failure of others to invent), but this evidence did not carry sufficient weight to override a determination of obviousness. Accordingly, the district court granted the alleged infringer's motion for summary judgment of patent invalidity under 35 U.S.C. § 103. The patentee then appealed.

On appeal, the patentee argued that the district court had committed legal error by improperly focusing its obviousness analysis on only one element of the claimed invention (the electrical numerical keypad device), rather than focusing upon the claimed invention as a whole.

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70. See In re Braithwaite, 54 C.C.P.A. 1589, 379 F.2d 594, 603, 154 USPQ 29, 36 (CCPA 1967).
71. Bartfield, 17 USPQ2D at 1889.
72. 950 F.2d 714, 21 USPQ2D 1053 (Fed. Cir. 1991).
73. Id. at 1055.
74. Id. at 1056.
The Federal Circuit acknowledged that, when analyzing the question of obviousness, the district court must evaluate the claimed invention as a whole and not unduly focus on one facet of the claimed invention. However, the district court must also determine the principal differences between the claimed invention and the prior art to place the obviousness analysis into proper perspective. The Federal Circuit concluded that, in evaluating the claimed invention as a whole, the district court in Ryko had correctly compared the claimed invention to the prior art and had correctly found only one difference recited in the claims that was not taught by the prior art.

Regarding the “secondary considerations”, the Federal Circuit found that the district court had, on the alleged infringer’s motion for summary judgment, appropriately accepted the patentee’s evidence of commercial success as being true. The alleged infringer had argued that the patentee had failed to produce evidence of the required “nexus” between the commercial success and the merits of the claimed invention. However, the Federal Circuit noted that prima facie evidence of the required nexus is established if there is commercial success and if the invention disclosed in the patent is that which was commercially successful. In Ryko the Federal Circuit found sufficient prima facie evidence in the record to withstand summary judgment on the nexus issue. Consequently, the district court had appropriately assumed that a nexus existed between the commercial success and the merits of the claimed invention.

However, even though the district court found that the secondary considerations weighed in favor of the patentee, the district court concluded that the secondary consideration did not carry sufficient weight to override a determination of obviousness. The Federal Circuit concluded that, as long as the secondary considerations are contemplated by the district court, it is appropriate for the district court to reach such a conclusion on summary judgment. The holding of the district court was therefore affirmed.

77. Ryko, 21 USPQ2D at 1056.
79. Ryko, 21 USPQ2D at 1058.
80. Id.
F. Obviousness-type Double Patenting Rejection Does Not Mean That the First-filed Patent is a Prior Art Reference Against the Later-filed Application

The patentee in the case of Quad Environmental Technologies Corporation v. Union Sanitary District 81 was the owner of two patents. The earlier issued '589 patent described and claimed a method of removing odors from wet waste gas streams. The later issued '461 patent described and claimed a method of removing odors from dry waste gas streams. Both patents had been filed within a year of one another, and both patents named the same inventor.82

The patentee had requested, and the PTO had granted, reexamination of the '461 patent. The Reexamination Order stated that the '589 patent raised a new question of patentability under the judicially-created doctrine of obviousness-type double patenting.83

To "obviate" the issue of obviousness-type double patenting, the patentee had filed a terminal disclaimer, disclaiming that portion of the term of the '461 patent which extended beyond the expiration date of the '589 patent. The examiner held that the terminal disclaimer resolved the issue of obviousness-type double patenting, and a Reexamination Certificate was issued.84

The patentee had then sued the alleged infringer for infringement of the reexamined '461 patent. The district court had granted the alleged infringer's motion for summary judgment of invalidity for obviousness under 35 U.S.C. § 102(b)/§ 103. The motion had been based on the patentee's pre-trial stipulation that the invention disclosed in the '589 patent had been in commercial use more than one year before the filing of the '461 patent.85

The district court had not made an independent finding that the '461 patent claims were obvious in view of the '589 patent disclosure. Instead, the district court held that the patentee's filing of the terminal disclaimer to obviate the double patenting issue was an admission that the '461 patent claims were obvious in view of the '589 patent disclosure. The district court thus held that the patentee was estopped from arguing that the '461 claims were unobvious in view of the process disclosed in the '589 patent.86

The patentee appealed the summary judgment of the district

81. 946 F.2d 870, 20 USPQ2D 1392 (Fed. Cir. 1991).
82. Id. at 1393.
83. Id.
84. Id.
85. Id.
86. Quad Environmental Technologies, 20 USPQ2D at 1394.
court holding all the claims of the '461 patent invalid on the basis of obviousness.\textsuperscript{87}

On appeal, the Federal Circuit observed that a rejection for obviousness-type double patenting means that the claims of a later patent application are deemed obvious from the \textit{claims} of an earlier patent.\textsuperscript{88} A rejection for obviousness-type double patenting does not mean that the first-filed patent is a prior art reference under § 102/§ 103 against the later-filed application.\textsuperscript{89} Thus, the "obvi-

ation" of an obviousness-type double patenting by filing a terminal disclaimer has no effect on a rejection under § 103 based on the first-filed patent. A rejection under § 103 based on the first-filed patent can not be overcome by a terminal disclaimer.\textsuperscript{90} Thus, a terminal disclaimer is not an admission of obviousness of the later-filed claimed invention in light of the earlier-filed disclosure, for that is not the basis of the disclaimer.

The Federal Circuit therefore concluded that the district court had incorrectly granted summary judgment based on an error of law. The Federal Circuit reversed the grant of summary judgment and remanded for trial.\textsuperscript{91}

\textbf{G. Obviousness-type Double Patenting Rejection of Commonly Owned Applications Claiming Separate and Independent "Subcombination" Inventions Requires A "Two-way" Patentability Determination}

The case of \textit{In re Braat} involved a pending application to Braat and an issued patent to Dil.\textsuperscript{92} Both the Dil patent and the Braat application were assigned to the same assignee. The Dil patent had issued in June 1980 based upon an application filed in January 1979. The pending Braat application had been filed in July 1978.\textsuperscript{93}

Both the Braat application and the Dil patent were directed to compact discs. The Braat application was directed to a technique for controlling the phase depth of information areas on compact discs by varying the physical depth of the information areas. The Dil patent was also concerned with controlling the phase depth of

\begin{footnotes}
\item[87.] \textit{Id.} at 1392.
\item[88.] In \textit{re Longi}, 759 F.2d 887, 893, 225 USPQ 645, 648 (Fed. Cir. 1985); In \textit{re Braithwaite}, 54 C.C.P.A. 1589, 379 F.2d 594, 600, 154 USPQ 29, 34 (CCPA 1967).
\item[89.] In \textit{re Bowers}, 53 C.C.P.A. 1590, 359 F.2d 886, 887, 149 USPQ 570, 572 (CCPA 1966).
\item[90.] \textit{Bowers}, 359 F.2d at 891 n. 7, 149 USPQ at 575 n. 7.
\item[91.] \textit{Quad}, 20 USPQ2D at 1396.
\item[92.] \textit{In re Braat}, 937 F.2d 589, 19 USPQ2D 1289 (Fed. Cir. 1991).
\item[93.] \textit{Id.} at 1290.
\end{footnotes}
information areas on compact discs, but was primarily concerned with the effect that the angle of the side walls of the information areas had on the phase depth.\textsuperscript{94}

The Dil patent expressly acknowledged the Braat invention, and stated that a compact disc having angled side walls (as taught by Dil) was particularly useful when combined with an alternating phase depth structure (as taught by Braat). Claim 1 of the Dil patent was directed to a compact disc having angled side walls. Claims 5 and 6 of the Dil patent, which depended from claim 1, were directed to a compact disc having angled side walls (as taught by Dil) in combination with an alternating phase depth structure (as taught by Braat).

The PTO Board affirmed the rejection of the claims of the Braat application on grounds of obviousness-type double patenting in view of dependent claims 5 and 6 of the Dil patent.\textsuperscript{95}

On appeal, the Federal Circuit agreed with the Board that the rejected claims of the Braat application were obvious in view of claims 5 and 6 of the Dil patent. However, the Federal Circuit found that the Board had erred in sustaining the obviousness-type double patenting rejection without making a corresponding determination that claims 5 and 6 of the Dil patent were obvious in view of the rejected claims of the Braat application. In the terminology used by the Federal Circuit, the Board had erred in applying a "one-way" patentability determination instead of a "two-way" determination.\textsuperscript{96}

Such a "two-way" patentability determination applies where, for example, an applicant files a first application for a "basic" invention and then subsequently files a second, separate application for an "improvement" invention. As a matter of policy, such an applicant should not be penalized by the different rates of progress of the two applications through the PTO.\textsuperscript{97} Therefore, if the later filed improvement patent issues before the earlier filed basic patent, a double patenting rejection is only proper against the claims of the basic patent if the improvement invention is not patentably distinct.

\textsuperscript{94} Id. at 1291.

\textsuperscript{95} Obviousness-type double patenting is a judicially created doctrine intended to prevent improper extension of the patent term by prohibiting claims in a second patent which define an obvious variation of an invention claimed in a first patent. In re Longi, 759 F.2d 887, 892, 225 USPQ 645, 648 (Fed. Cir. 1985); In re Vogel, 57 C.C.P.A. 920, 422 F.2d 438, 441, 164 USPQ 619, 622 (CCPA 1970).

\textsuperscript{96} Braat, 19 USPQ2D at 1292.

\textsuperscript{97} Id. at 1293.
from the basic invention. In such a situation, the order in which the two applications issue is irrelevant. The relevant determination is whether the improvement invention is patentably distinct from the basic invention.

The Federal Circuit determined that the same policy should apply to the claims of the Braat application, even though the Federal Circuit did not consider the Dil invention to be an “improvement” of the Braat invention. Instead, the Federal Circuit viewed the Dil patent and the Braat application as disclosing separate and independent “subcombination” inventions. Dil had simply combined these two separate subcombination inventions to form a third invention, which third invention was defined in dependent claims 5 and 6 of the Dil patent.

The Federal Circuit reasoned that the common assignee of the Dil and Braat applications should not be penalized merely because the Dil patent happened to have issued first. Therefore, a double patenting rejection would be sustainable only if the rejected claims of the Braat application were obvious in view of claims 5 and 6 of the Dil patent, and claims 5 and 6 of the Dil patent were obvious in view of the rejected claims of the Braat application (thereby establishing the absence of a patentable distinction between claims 5 and 6 of Dil and the rejected claims of Braat).

The Federal Circuit found that claims 5 and 6 of the Dil patent were not obvious in view of the rejected claims of the Braat application. The Federal Circuit therefore concluded that the obviousness-type double patenting rejection was in error, and reversed the decision of the Board.


A. The Written Description Requirement is Separate and Distinct from the Enablement Requirement

The patentee in the case of Vas-Cath Inc. v. Mahurkar had filed a U.S. design patent application directed to a double lumen catheter. The patentee had also filed a Canadian design patent application comprising the same drawings as the U.S. design patent application. The Canadian design patent application ultimately is-

99. Id.
100. Braat, 19 USPQ2D at 1292.
101. Id. at 1293.
102. Id. at 1294.
sued as a Canadian design patent.\textsuperscript{104}

More than one year after the issuance of the Canadian design patent, the patentee filed two utility patent applications in the U.S. The U.S. utility patent applications included the same drawings as the U.S. design patent application and claimed the benefit of the filing date of the U.S. design patent application. The U.S. utility patent applications issued as U.S. utility patents.\textsuperscript{105}

After issuance, the patentee was sued by an alleged infringer seeking a declaratory judgment of patent invalidity and non-infringement. The alleged infringer argued that the U.S. utility patents were not entitled to the filing date of the U.S. design patent application under 35 U.S.C. \S\ 120, because the drawings of the U.S. design patent application did not provide an adequate "written description" of the invention claimed in the U.S. utility patents, as required by 35 U.S.C. \S\ 112, \textsuperscript{11}106 The alleged infringer asserted that, as a consequence, the U.S. utility patents were anticipated by the Canadian design patent under 35 U.S.C. \S\ 102(b).\textsuperscript{107}

The alleged infringer moved for summary judgment on the validity issue. For purposes of the summary judgment motion, the patentee conceded that if the U.S. utility patents were not entitled to the filing date of the U.S. design patent application under 35 U.S.C. \S\ 120, then the Canadian design patent would represent an anticipating \S\ 102(b) reference against the claims of the U.S. utility patents.\textsuperscript{108}

The district court agreed with the alleged infringer and held the U.S. utility patents invalid under 35 U.S.C. \S\ 102(b).\textsuperscript{109} The patentee appealed.

The issue on appeal was whether the district court erred in concluding, on summary judgment, that the disclosure of the U.S. design patent application did not provide a \S\ 112, \textsuperscript{11}11 "written description" adequate to support the claims of the U.S. utility patents.\textsuperscript{110}

\begin{itemize}
\item \textsuperscript{104} \textit{Id.} at 1112.
\item \textsuperscript{105} \textit{Id.} at 1113.
\item \textsuperscript{106} The first paragraph of 35 U.S.C. \S\ 112 requires that:
\begin{quote}
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.
\end{quote}
\item \textsuperscript{107} \textit{Vas-cath,} 19 USPQ2D at 1116.
\item \textsuperscript{108} \textit{Id.} at 1117.
\item \textsuperscript{109} \textit{Vas-Cath Inc. v. Mahurkar,} 745 F. Supp. 517, 17 USPQ2D 1353.
\item \textsuperscript{110} \textit{Vas-Cath,} 19 USPQ2D at 1117.
\end{itemize}
The Federal Circuit initially noted that, under proper circumstances, drawings alone may be sufficient to provide the “written description of the invention” required by § 112, ¶1.\textsuperscript{111}

The Federal Circuit then explained the extent to which the “written description” requirement of 35 U.S.C. § 112, ¶1, is separate and distinct from the enablement (“make and use”) requirement of 35 U.S.C. § 112, ¶1.\textsuperscript{112} As interpreted by the Federal Circuit, the “written description” requirement requires more than a mere explanation of how to “make and use” the invention.\textsuperscript{113} The written description requirement also requires the applicant to convey, with reasonable clarity to those skilled in the art that, as of the filing date, the applicant was in possession of the invention claimed.\textsuperscript{114}

Thus, in \textit{Vas-Cath}, the proper test under the “written description” requirement was whether the drawings of the U.S. design patent application conveyed with reasonable clarity to the skilled artisan that the patentee had in fact invented the catheter recited in the claims of the U.S. utility patents. The proper test was not whether the drawings of the U.S. design patent application necessarily excluded all diameters other than those within the range claimed in the U.S. utility patents, as the district court had erroneously assumed.\textsuperscript{115}

In \textit{Vas-Cath} the patentee had submitted the declaration of an expert explaining why a skilled artisan, studying the drawings of the U.S. design patent application, would have understood from the drawings that the catheter must have a diameter within the range recited by the claims of the U.S. utility patents. The district court had relied upon later patents issued to the patentee which disclosed diameter ratios that differed from those in the U.S. utility patents. However, since application sufficiency under § 112, ¶1, must be

\begin{itemize}
\item \textsuperscript{111} \textit{Id.}, at 1114.
\item \textsuperscript{112} In \textit{In re Wilder}, 736 F.2d 1516, 1520, 222 USPQ 369, 372 (Fed. Cir. 1984), \textit{cert. denied}, 469 U.S. 1209, 84 L. Ed. 2d 323, 105 S. Ct. 1173 (1985), the Federal Circuit stated: “The description requirement is found in 35 U.S.C. § 112 and is separate from the enablement requirement of that provision.” However, in \textit{Kennecott Corp. v. Kyocera Int’l, Inc.}, 835 F.2d 1419, 1421, 5 USPQ2D 1194, 1197 (Fed. Cir. 1987), \textit{cert. denied}, 486 U.S. 1008, 100 L. Ed. 2d 198, 108 S. Ct. 1735 (1988), the Federal Circuit had stated: “The purpose of the [written] description requirement [of section 112, first paragraph] is to state what is needed to fulfill the enablement criteria. Those requirements may be viewed separately, but they are intertwined. . . . The written description must communicate that which is needed to enable the skilled artisan to make and use the claimed invention.”
\item \textsuperscript{113} \textit{Vas-Cath}, 19 USPQ2D at 1117.
\item \textsuperscript{114} \textit{Id.}
\item \textsuperscript{115} \textit{Id.}
\end{itemize}
judged as of the filing date, the Federal Circuit viewed these later patents involving different range limitations as being irrelevant.

The Federal Circuit held that the patentee's unrefuted declaration evidence gave rise to a genuine issue of material fact inappropriate for summary disposition. The district court's grant of summary judgment holding the U.S. utility patents invalid under 35 U.S.C. § 102(b) was reversed and the case remanded for further proceedings.

B. The First Paragraph of § 112 Requires That the Scope of the Claims Must Bear a "Reasonable Correlation" to the Scope of Enablement Provided by the Specification

The claimed invention in the case of In re Vaeck was directed to the use of genetic engineering techniques for the production of insecticidal Bacillus proteins within transformed cyanobacterial hosts. The subject matter of the application included a chimeric (i.e., hybrid) gene comprising (1) a gene derived from a bacterium of the Bacillus genus whose product is an insecticidal protein, united with (2) a DNA promoter effective for expressing the Bacillus gene in a host cyanobacterium, so as to produce the desired insecticidal protein.

In addition to describing the claimed invention in generic terms, the patent application disclosed two particular species of Bacillus as sources of insecticidal protein and nine genera of cyanobacteria as useful hosts. The relevant working examples described in the application detailed the transformation of a single strain of cyanobacteria.

The examiner had rejected the claims under 35 U.S.C. § 112,

117. Vas-Cath, 19 USPQ2D at 1119.
118. Id. at 1120.
120. Id. at 1439.
121. Claim 1 recited:

A chimeric gene capable of being expressed in Cyanobacteria cells comprising:

(a) a DNA fragment comprising a promoter region which is effective for expression of a DNA fragment in a Cyanobacterium; and (b) at least one DNA fragment coding for an insecticidally active protein produced by a Bacillus strain, or coding for an insecticidally active truncated form of the above protein or coding for a protein having substantial sequence homology to the active protein, the DNA fragments being linked so that the gene is expressed.

Id. at 1440.
122. Id.
first paragraph, on the ground that the disclosure was enabling only for claims limited in accordance with the specification as filed. The examiner took the position that undue experimentation would be required of the skilled artisan to practice the claimed invention, in view of the unpredictability in the art, the breadth of the claims, the limited number of working examples and the limited guidance provided in the specification. The examiner’s rejection had been affirmed by the Board, and the applicant appealed to the Federal Circuit.\textsuperscript{123}

On appeal, the Federal Circuit noted that, although the first paragraph of 35 U.S.C. §112 does not so state, enablement requires that the specification teach the skilled artisan to make and use the invention without “undue experimentation.” Some degree of experimentation is permissible. The issue is whether the amount of experimentation required to make and use the invention is “undue.”\textsuperscript{124}

Moreover, the first paragraph of §112 requires that the scope of the claims must bear a “reasonable correlation” to the scope of enablement provided by the specification.\textsuperscript{125} The first paragraph of 35 U.S.C. §112 requires sufficient disclosure, either through illustrative examples or terminology, to teach the skilled artisan how to make and use the invention as broadly as it is claimed. This means that the disclosure must adequately guide the skilled artisan to determine, without undue experimentation, which species among all those encompassed by the claimed genus possess the disclosed utility. Where a claimed genus represents a diverse and relatively poorly understood group of microorganisms, the required level of disclosure will be greater than the disclosure of an invention involving a “predictable” factor (such as a mechanical or electrical element).\textsuperscript{126}

In Vaeck, the Federal Circuit observed that the rejected claims were not limited to any particular genus or species of cyanobacteria. Cyanobacteria are a diverse and relatively poorly studied group of organisms, comprising 150 different genera, and heterologous gene expression in cyanobacteria is “unpredictable.” Only one particular species of cyanobacteria was employed in the working examples of the specification, and only nine genera of cyanobacteria were men-

\textsuperscript{123} Id. at 1442.
\textsuperscript{124} In re Wands, 858 F.2d 731, 736-37, 8 USPQ2D 1400, 1404 (Fed. Cir. 1988).
\textsuperscript{125} In re Fisher, 57 C.C.P.A. 1099, 427 F.2d 833, 839, 166 USPQ 18, 24 (CCPA 1970).
\textsuperscript{126} Id.
tioned in the entire patent application.127

Consequently, there was no reasonable correlation between the narrow disclosure in the application and the broad scope of protection sought in the claims encompassing gene expression in any and all cyanobacteria. Taking into account the relatively incomplete understanding of the biology of cyanobacteria as of the application's filing date, as well as the limited disclosure of particular cyanobacterial genera operative in the claimed invention, the Federal Circuit found that the Board had not erred in rejecting the claims under § 112, first paragraph. Accordingly, the Federal Circuit affirmed the rejection of the claims under 35 U.S.C. § 112, first paragraph.128

C. The First Paragraph of 35 U.S.C. § 112 Requires a Description of All Claim Elements That Are Integral to the Invention and Not Well Known in the Art

In the case of In re Buchner129 the claimed invention was directed to a digital transmission system which included a comparator and a divider. Although the specification adequately disclosed the functions performed by the comparator and the divider, the examiner found that neither the comparator nor the divider were standard elements, and that the specification failed to disclose the structure of these two elements. The examiner therefore rejected the application under 35 U.S.C. § 112, ¶1, for failing to describe how to make and use the comparator and the divider without undue experimentation.130

In response, the applicant offered a declaration of an expert stating that the divider and the comparator were well-known to the skilled artisan as of the application filing date and that these two elements were "routinely built." The expert's declaration provided details concerning the structure and the function of the comparator and the divider.131

The Board found that the expert's declaration failed to overcome the § 112 rejection. The Board characterized the declaration as a mere conclusory statement unsupported by any factual documentation showing that the technology concerning the comparator

127. Vaeck, 20 USPQ2D at 1444.
128. Id. at 1445.
129. 929 F.2d 660, 18 USPQ2D 1331 (Fed. Cir. 1991).
130. Id.
131. Id. at 1332.
and the divider was, in fact, well-known.\textsuperscript{132}

On appeal, the Federal Circuit noted that the elements at issue were integral to the practice of the claimed invention, and that neither the specification nor the prior art appeared to describe the structure of these elements. Consequently, it was reasonable for the examiner in this case to doubt that the claimed invention could have been carried out based upon the specification.

The Federal Circuit further held that if information is not well known in the art, then $\S$ 112 requires the specification itself to contain such information. It is not sufficient to provide such information only through an expert's declaration.\textsuperscript{133} Consequently, even though the expert's declaration in \textit{Buchner} provided significant detail concerning the structure and function of the elements in question, the declaration was insufficient to overcome the rejection under 35 U.S.C. $\S$ 112, $\S$1.

Moreover, the Federal Circuit found that the expert's declaration was inadequate because the expert's opinion on the ultimate legal issue was a conclusory statement unsupported by any additional evidence.\textsuperscript{134} The declaration failed to provide adequate evidentiary support showing that the divider and the comparator were well known to the skilled artisan as of the filing date and that they were routinely built. Although the declaration described how to construct the divider and the comparator, it did not demonstrate that such construction was well-known to the skilled artisan. The Federal Circuit reasoned that if the comparator and the divider were so well-known and routinely built as of the effective filing date, then the expert should have had no trouble documenting this fact. The declaration did not, however, provide such supporting documentation.\textsuperscript{135}

The Federal Circuit therefore concluded that the Board had not erred in affirming the examiner's rejection of the claims for failure to comply with 35 U.S.C. $\S$ 112, $\S$1, and affirmed the Board's decision.\textsuperscript{136}

\begin{footnotes}
\item[132] \textit{Id.}
\item[133] In re Smyth, 38 C.C.P.A. 1130, 189 F.2d 982, 990, 90 USPQ 106, 112 (1951).
\item[134] In re Brandstadter, 484 F.2d 1395, 1405, 179 USPQ 286, 294 (CCPA 1973).
\item[135] \textit{Buchner}, 18 USPQ2D at 1332.
\item[136] \textit{Id.}
\end{footnotes}
D. For Claims Directed to DNA Sequences, the First Paragraph of 35 U.S.C. § 112 Requires Disclosing How to Make and Use Enough Sequences to Justify the Grant of the Claims

The subject patent in the case of Amgen, Inc., v. Chugai Pharmaceutical Co., Ltd. was entitled “DNA Sequences Encoding Erythropoietin.” The patent claims were directed to a “purified and isolated DNA sequence” encoding human EPO. Claim 7 encompassed all possible DNA sequences that will encode any polypeptide having an amino acid sequence “sufficiently duplicative” of EPO to possess the property of increasing production of red blood cells.

The district court found that over 3,600 different EPO analogs could be made by substituting only a single amino acid position, and over a million different analogs could be made by substituting three amino acids. Thus, the number of claimed DNA encoding sequences that could produce an EPO-like product was potentially enormous.

The district court concluded that the patent specification was insufficient to enable one of ordinary skill in the art to make and use the invention defined by claim 7 without undue experimentation, and held claim 7 invalid for lack of enablement under 35 U.S.C. § 112. The patentee appealed.

On appeal, the Federal Circuit noted that under 35 U.S.C. § 112, an inventor must provide a disclosure sufficient to enable a skilled artisan to carry out the invention commensurate with the scope of the claims. For claims directed to DNA sequences, 35 U.S.C. § 112 requires disclosing how to make and use enough sequences to justify the grant of the claims sought.

Claim 7 encompassed every possible analog of a gene containing about 4,000 nucleotides. The patent specification disclosed only how to make EPO and a few analogs. Considering the structural complexity of the EPO gene, the many possibilities for change in its structure, the uncertainty as to what utility might be possessed by these analogs, the Federal Circuit found that the disclosure was insufficient to enable one of ordinary skill in the art to make and use the invention.

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137. 927 F.2d 1200, 18 USPQ2D 1016 (Fed. Cir. 1991).
138. Erythropoietin (EPO) is a protein consisting of 165 amino acids which stimulates the production of red blood cells. Id. at 1018.
139. Id. at 1027.
inadequate in terms of identifying the various analogs that are
within the scope of the claim, the methods for making them, and
the structural requirements for producing compounds with EPO-
like activity.\textsuperscript{142}

The record showed that there may be many other genetic se-
quences that code for EPO-type products. The patent disclosed
how to make and use only a few of them. The Federal Circuit
therefore concluded that the patent disclosure was inadequate to
support a patent claim covering all possible genetic sequences that
have EPO-like activity. The Federal Circuit found no error in the
district court's conclusion that claim 7 was invalid under 35 U.S.C.
\textsection 112.\textsuperscript{143}

\textbf{E. \textit{The Particulars of Making a Commercial Embodiment of}}
\textbf{\textit{the Invention Do Not Necessarily Equate With the}}
\textbf{\textit{"Best Mode" of Carrying Out the Invention}}

The subject patent in the case of \textit{Wahl Instruments, Inc. v. Ac-
vious, Inc.}\textsuperscript{144} was directed to a reversible temperature indicating de-
vice useful in timing the cooking of eggs. A commercial
embodiment of the claimed invention had been mass produced us-
ing a technique known as "embedment molding."\textsuperscript{145}

The inventor had testified that, at the time the patent applica-
tion had been filed, the best technique for manufacturing the com-
mercial version of the claimed invention had been the embedment
molding technique. The alleged infringer asserted that because the
patent specification did not describe the embedment molding tech-
nique, the patent specification failed to disclose the best mode con-
templated by the inventor of carrying out the invention as required
by 35 U.S.C. \textsection 112. The district court granted the alleged in-
fringer's motion for summary judgment on this ground, ruling that
the claims were invalid for failure to disclose the best mode. The
patentee appealed the district court's grant of summary
judgment.\textsuperscript{146}

On appeal, the Federal Circuit observed that a description of a
particular manufacturing technique may or may not be required as

\begin{itemize}
\item \textsuperscript{142} \textit{Amgen,} 18 USPQ2D at 1027-28.
\item \textsuperscript{143} \textit{Id.} at 1028.
\item \textsuperscript{144} 950 F.2d 1575, 21 USPQ2D 1123 (Fed. Cir. 1991).
\item \textsuperscript{145} The embedment molding technique consists of layering plastic into a mold, followed
by an adhesive pouring, onto which a thermochromic layer is placed, followed by a third
pouring to complete the device. \textit{Id.} at 1125.
\item \textsuperscript{146} \textit{Id.} at 1126.
\end{itemize}
part of a best mode disclosure respecting a device.\textsuperscript{147} There is no mechanical rule that a best mode violation occurs because the inventor failed to disclose a particular manufacturing technique. One must look at the scope of the invention, the skill in the art, the evidence as to the inventor's belief, and all of the circumstances in order to evaluate whether the inventor's failure to disclose a particular manufacturing technique gives rise to an inference that the inventor concealed information which one of ordinary skill in the art would not know.\textsuperscript{148}

The Federal Circuit further observed that any manufacturing technique requires the selection of specific steps and materials over others. The best mode does not necessarily cover each of these selections. A technique considered "best" in a manufacturing sense may have been selected for a non-"best mode" reason, such as the manufacturing equipment was on hand, certain materials were available, a prior relationship with a supplier was satisfactory, or other reasons having nothing to do with the development of the invention. Thus, the particulars of making a commercial embodiment of the invention do not necessarily equate with the "best mode" of "carrying out" an invention.\textsuperscript{149}

In \textit{Wahl Instruments} the record indicated that the embedment molding technique had been well known at the time the application had been filed, and that the embedment molding technique would have been utilized if one in the business of fabricating solid plastic articles had been asked to make the claimed invention. There was no proof that the embedment molding technique was "best" for any reason related to the claimed invention, other than the commercial manufacture of a particular embodiment of the invention. The record indicated that the embedment molding technique had been selected as the commercial manufacturing technique solely for reasons of cost and volume.

The Federal Circuit observed that the claimed invention was directed to a device and a method of using the device, not to a method of manufacturing the device. How to mass produce the claimed invention was not part of the claimed invention or a best mode of the claimed invention. The embedment molding technique was therefore not a "mode" of "carrying out" the invention within


\textsuperscript{148} Engel Indus., Inc. v. Lockformer Co., 946 F.2d 1528, 1531-32, 20 USPQ2d 1300, 1302-03 (Fed. Cir. 1991); Randomex, Inc. v. Scopus Corp., 849 F.2d 585, 587, 7 USPQ2d 1050, 1052 (Fed. Cir. 1988).

\textsuperscript{149} \textit{Wahl}, 21 USPQ2d at 1127.
the meaning of the statute, and the inventor had concealed nothing respecting the claimed invention by failing to disclose the embed-
ment molding technique.150

The Federal Circuit concluded that the patent was not invalid for failure to disclose the best mode, and reversed the decision of the
district court.151

F. Invalidity for Failure to Disclose the Best Mode Requires
Both Knowledge and Concealment of a Better Mode

The case of Engel Industries, Inc., v. The Lockformer Com-
pany152 involved an appeal by a patentee from a district court deci-
sion holding the patent in suit invalid due to the patentee's failure to
disclose the best mode as required by 35 U.S.C. § 112.

On appeal, the Federal Circuit noted that invalidity for failure
to set forth the best mode requires that (1) the inventor knew of a
better mode of carrying out the claimed invention than the mode
disclosed in the specification, and (2) the inventor concealed that
better mode.153 The element of concealment of the inventor's pre-
ferred mode must be established before claims may be invalidated
on best mode grounds.154

The Federal Circuit concluded that the district court had not
found such concealment, nor did the evidence support such a find-
ing. Since neither knowledge that there, was a better mode nor con-
cealment of that better mode had been established, the Federal
Circuit reversed the holding of invalidity for failure to comply with
the best mode requirement.155

150. Id.
151. Id.
152. 946 F.2d 1528, 20 USPQ2D 1300 (Fed. Cir. 1991).
153. Chemcast Corp. v. Arco Indus. Corp., 913 F.2d 923, 927-28, 16 USPQ2D 1033,
1036-37 (Fed. Cir. 1990).
154. Randomex, Inc. v. Scopus Corp., 849 F.2d 585, 588, 7 USPQ2D 1050, 1053 (Fed.
Cir. 1988); In re Gay, 50 CCPA 725, 309 F.2d 769, 774, 135 USPQ 311, 316 (1962); W.L.
Gore & Assoc., Inc. v. Garlock, Inc., 721 F.2d 1540, 1556-57, 220 USPQ 303, 316 (Fed. Cir.
1983), cert. denied, 469 U.S. 851, 83 L. Ed. 2d 107, 105 S. Ct. 172 (1984); Hybritech, Inc. v.
Monoclonal Antibodies, Inc., 802 F.2d 1367, 1384-85, 231 USPQ 81, 94 (Fed. Cir. 1986),
cert. denied, 480 U.S. 947, 94 L. Ed. 2d 792, 107 S.Ct. 1606 (1987); In re Sherwood, 613 F.2d
809, 816-17, 204 USPQ 537, 544 (CCPA 1980), cert. denied, 450 U.S. 994, 210 USPQ 776, 68
L.Ed.2d 193, 101 S.Ct. 1694 (1981); In re Karnofsky, 55 CCPA 940, 390 F.2d 994, 997, 156
USPQ 682, 685 (1966).
155. Engel, 20 USPQ2D at 1304.
G. No Cell Deposit May Be Required If the Specification Enables the Skilled Artisan to Prepare the Best Mode Cells from Known Materials

The subject patent in the case of Amgen, Inc., v. Chugai Pharmaceutical Co., Ltd.\textsuperscript{156} was entitled “DNA Sequences Encoding Erythropoietin.”\textsuperscript{157} The patent claims were directed to a “purified and isolated DNA sequence” encoding human EPO.\textsuperscript{158}

The accused infringer argued that the subject patent was invalid under the best mode requirement of 35 U.S.C. § 112 due to the failure of the patentee to deposit the best mode host cells. The accused infringer contended that the “best mode” requirement for patents involving novel genetically-engineered biological subject matter requires a biological deposit, so that the public has access to exactly the best mode contemplated by the inventor.

The district court disagreed with the accused infringer and held that the patent was valid and had been infringed.\textsuperscript{159} The accused infringer appealed.

On appeal, the Federal Circuit noted that analysis of the best mode requirement has two components.\textsuperscript{160} The first is a subjective inquiry, asking whether, at the time the patent application was filed, the inventor contemplated a best mode of practicing the claimed invention. If so, then the second inquiry is whether the disclosure is adequate to enable one skilled in the art to practice the contemplated best mode.\textsuperscript{161}

The Federal Circuit then observed that there is a basic distinction between novel genetically-engineered biological materials and biological cells obtained from nature. When a biological sample required for the practice of an invention is obtained from nature, the invention may be incapable of being practiced without access to that specific biological sample. Consequently, the best mode requirement of 35 U.S.C. § 112 requires a deposit of that specific biological sample.\textsuperscript{162}

However, when an organism is created by the insertion of genetic material into a cell obtained from generally available sources,

\textsuperscript{156} 927 F.2d 1200, 18 USPQ2D 1016 (Fed. Cir. 1991).
\textsuperscript{157} Erythropoietin (EPO) is a protein consisting of 165 amino acids which stimulates the production of red blood cells.
\textsuperscript{158} Amgen, 18 USPQ2D at 1018.
\textsuperscript{160} Chemcast Corp. v. Arco Indus. Corp., 913 F.2d 923, 927, 16 USPQ2D 1033, 1036 (Fed. Cir. 1990).
\textsuperscript{161} Amgen, 18 USPQ2D at 1024.
\textsuperscript{162} Id.
then all that is required by 35 U.S.C. § 112 is a description of the best mode and an adequate description of the means of carrying out the invention. If the cells can be prepared without undue experimentation from known materials, based on the description in the patent specification, then a deposit is not required.\textsuperscript{163}

In \textit{Amgen}, the record showed that the invention as it related to the best mode host cells, could be practiced by one skilled in the art following a specific example in the patent specification. The Federal Circuit therefore held that there was no failure to comply with the best mode requirement for lack of a deposit of the cells. The district court finding that the accused infringers had not met their burden of proving a best mode violation was affirmed.\textsuperscript{164}

\textbf{H. Claims Are Properly Declared Invalid Under the Second Paragraph of 35 U.S.C. § 112 If the Meaning of the Claims Is In Doubt}

The subject patent in the case of \textit{Amgen, Inc., v. Chugai Pharmaceutical Co., Ltd.}\textsuperscript{165} was entitled "Method for the Purification of Erythropoietin and Erythropoietin Compositions."\textsuperscript{166}

Claims 4 and 6 of the patent recited a specific activity limitation of "at least about 160,000." The district court found that the term "at least about 160,000" gave no hint as to which specific activity level constituted infringement. The district court therefore held claims 4 and 6 to be invalid for indefiniteness under 35 U.S.C. § 112.\textsuperscript{167} The patentee appealed.

On appeal, the Federal Circuit observed that if the meaning of claims is in doubt, then the claims are properly declared invalid under 35 U.S.C. § 112 (especially when there is close prior art).\textsuperscript{168}

The Federal Circuit found the district court's invalidity holding to be supported by the fact that nothing in the patent specification, prosecution history, or prior art provided any indication as to what range of specific activity was covered by the term "at least about," and by the fact that no expert testified as to a definite meaning for the term "at least about" in the context of the prior art.\textsuperscript{169}

\textsuperscript{163} \textit{Id.} at 1025.
\textsuperscript{164} \textit{Id.}
\textsuperscript{165} 927 F.2d 1200, 18 USPQ2D 1016 (Fed. Cir. 1991).
\textsuperscript{166} Erythropoietin (EPO) is a protein consisting of 165 amino acids which stimulates the production of red blood cells. \textit{Id.} at 1018.
\textsuperscript{167} \textit{Amgen Inc. v. Chugai Pharmaceutical Co.,} 13 USPQ2D 1737 (1990).
\textsuperscript{168} \textit{Standard Oil Co. v. American Cyanamid Co.,} 774 F.2d 448, 453, 227 USPQ 293, 297 (Fed. Cir. 1985).
\textsuperscript{169} \textit{Amgen,} 18 USPQ2D at 1031.
The Federal Circuit cautioned that its holding in *Amgen* that the term “at least about” renders claims 4 and 6 indefinite should not be interpreted as ruling out any and all uses of this term in patent claims. The term “at least about” may be acceptable claim language in appropriate fact situations.\(^{170}\)


The subject patent in the case of *Carl Zeiss Stiftung v. Renishaw PLC*\(^{171}\) was directed to a “touch-trigger” probe used in machines for measuring the dimensions of objects to extremely fine precision. Claim 3 of the patent recited a device for performing the function of moving a stylus in a position-determining apparatus so as to provide for repeatable displacement and return of the stylus to a rest position.\(^{172}\)

In the opinion of the district court, the touch-trigger probe invention disclosed in the patent consisted of more than merely moving a stylus back and forth between a rest position and an unseated position. Focusing on the fact that claim 3 did not recite any electrical circuitry or other signalling means, the district court concluded that claim 3 arbitrarily presented only a part of the invention. The district court held that claim 3 was therefore invalid as lacking claim definiteness under 35 U.S.C. § 112, ¶2. The patentee appealed the judgment of the district court.\(^{173}\)

On appeal, the Federal Circuit noted that a claim must recite a structure that is capable of performing its purported function.\(^{174}\) The Federal Circuit found that the device defined by claim 3 was capable of performing the purpose recited in claim 3 of “mounting a stylus in position-determining apparatus” so as to provide for repeatable displacement and return to a rest position.\(^{175}\)

The Federal Circuit further observed that it is not necessary that a claim recite each and every element needed for the practical utilization of the claimed subject matter. A single piece of appara-


\(^{171}\) 945 F.2d 1173, 20 USPQ2D 1094 (Fed. Cir. 1991).

\(^{172}\) *Id.* at 1099.

\(^{173}\) *Id.* at 1100.


\(^{175}\) *Carl Zeiss*, 20 USPQ2D at 1101.
tus disclosed in the specification as an embodiment of an invention may include several separate subcombination inventions. It is therefore entirely consistent with the claim definiteness requirement of 35 U.S.C. § 112, ¶2 to present "subcombination" claims, drawn to only one aspect or combination of elements of an invention that has utility separate and apart from other aspects of the invention. 176

Consequently, the district court’s holding of invalidity based upon a conclusion of lack of claim definiteness was legally incorrect. The Federal Circuit therefore reversed the holding and remanded the case.

J. The Doctrine of Claim Differentiation Cannot Override the Requirements of the Sixth Paragraph of 35 U.S.C. § 112

The subject patent in the case of The Laitram Corporation v. Rexnord, Inc. 177 was directed to a conveyor belt. Claim 21 of the patent included the following limitation:

means for joining said pluralities [of link ends] to one another so that the axes of said holes of said first plurality are arranged coaxially, the axes of said holes of said second plurality are arranged coaxially and the axes of respective holes of both pluralities of link ends are substantially parallel; . . . . 178

Before the district court, the accused infringer argued that the above-quoted means plus function limitation must be interpreted in accordance with 35 U.S.C. § 112, ¶6. 179 Therefore, a proper finding of literal infringement of claim 21 requires that the means in the accused device must be structurally equivalent to the cross member element described in the patent specification which performs the recited function of joining the link ends to one another. 180

The patentee argued that an interpretation which reads the structural limitation of a cross member into claim 21 is impermissi-

177. 939 F.2d 1533, 19 USPQ2D 1367 (Fed. Cir. 1991).
178. Id.
179. 35 U.S.C. § 112, ¶6 provides:
   An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.
ble despite § 112, ¶6, because claim 24 of the patent (a claim which depended from claim 21, but which was not in suit) specifically recited a cross member. The patentee asserted that claim 21 cannot also require a cross member because to do so would violate the doctrine of claim differentiation.\textsuperscript{181}

The district court held that § 112, ¶6 was inapplicable to the above-quoted limitation, because the means plus function language already included a recital of structure. The district court therefore did not compare the accused device to the cross member structure disclosed in the patent specification. Instead, the district court held that the above-quoted claim limitation was literally met by the accused device because the accused device included a means for performing the recited function of joining. The district court therefore ruled that claim 21 was literally infringed by the accused device.\textsuperscript{182} The accused infringer appealed the judgment of the district court.

On appeal, the Federal Circuit found that the applicability of § 112, ¶6 was not precluded merely because the means plus function language included a recital of structure.\textsuperscript{183} The Federal Circuit found that the recital of structure in the means plus function language merely served to further specify the function performed by the means. In other words, the recital of structure merely told what the “means-for-joining” did, but did not tell what the “means-for-joining” was structurally. The district court had therefore erred, as a matter of law, by not interpreting the above-quoted subparagraph in accordance with § 112, ¶6.

Regarding the patentee’s argument that claim 24 prevented claim 21 from being interpreted as statutorily mandated by 35 U.S.C. § 112, ¶6, the Federal Circuit noted that claim differentiation is a judicially created guide to claim interpretation. This judicially created guide cannot override the express statutory requirements of § 112, ¶6. Therefore, a means-plus-function limitation can not be made open-ended by merely adding a dependent claim which specifically recites the structure disclosed in the specification. Otherwise, the express requirement of § 112, ¶6 could easily be avoided.\textsuperscript{184}

Moreover, the Federal Circuit found that even under a proper § 112, ¶6 claim interpretation, claims 21 and 24 did not have ex-

\textsuperscript{181} See, SRI Int’l v. Matsushita Elec. Corp. of America, 775 F.2d 1107, 1121, 227 USPQ 577, 586-87 (Fed. Cir. 1985) (en banc).

\textsuperscript{182} See, Laitram Corp. v. Rexnord, Inc., 15 USPQ2D 1161 (E.D. Wis. 1990).

\textsuperscript{183} Laitram, 19 USPQ2D at 1367.

\textsuperscript{184} Id.
actly the same scope, and consequently there was no violation of the
document of claim differentiation. As properly interpreted under
§ 112, ¶6, claim 21 literally covered the cross member structure
described in the patent specification and equivalents thereof. In
contrast, dependent claim 24 literally covered the cross member
structure only, and did not literally cover equivalents of the cross
member structure. Claim 21 was therefore broader than dependent
claim 24.

The Federal Circuit therefore concluded that the district
court's finding of infringement had been based upon a legally erro-
neous claim interpretation, and that under the correct interpreta-
tion there was no proof of infringement, either literally or under the
document of equivalents. The Federal Circuit therefore reversed the
judgment of the district court.

K. Consideration of the Prior Art Is Not Necessary in
Applying the Sixth Paragraph of 35 U.S.C § 112

The respondents in the case of Intel Corporation v. U. S. Inter-
national Trade Commission had challenged the Commission's
finding of infringement of several patent claims containing means-
plus-function limitations. The respondents argued that the Com-
million had improperly construed these means-plus-function limi-
tations in view of the prior art. The respondents asserted that a
finding of equivalency of structure under 35 U.S.C. § 112, ¶6, could
not be made if the prior art was considered.

On appeal, the Federal Circuit pointed out that the respon-
dents had confused equivalent structure under 35 U.S.C. § 112, ¶6
with equivalence under the doctrine of equivalents.

The Federal Circuit noted that to literally meet a means-plus-
function limitation, the accused device must (1) perform the identi-
cal function claimed for the means element, and (2) perform that
function using the same structure as disclosed in the specification or
an equivalent structure. In determining equivalent structure
under 35 U.S.C. § 112, ¶6, the sole question is whether the single
means in the accused device which performs the function stated in

185. Id.
186. Id.
187. 946 F.2d 821, 20 USPQ2D 1161 (Fed. Cir. 1991).
188. Id. at 1179.
189. Pennwalt Corp. v. Durand-Wayland, Inc., 833 F.2d 931, 934, 4 USPQ2D 1737,
1739 (1987) (en banc); Laitram Corp. v. Rexnord, Inc., 939 F.2d 1533, 19 USPQ2D 1367,
1369-70 (Fed. Cir. 1991); Durango Assoes., Inc. v. Reliance, Inc., 843 F.2d 1349, 1357, 6
USPQ2D 1290, 1295 (Fed. Cir. 1988).
the claim is the same as, or an equivalent of, the corresponding structure described in the patent specification as performing that function. The aids for determining equivalent structure under 35 U.S.C. § 112, ¶6 are the same as those used in interpreting any other type of claim limitation, namely, the specification, the prosecution history, other claims in the patent, and expert testimony.

It is therefore not necessary to consider the prior art in determining equivalent structure under 35 U.S.C. § 112, ¶6. The Federal Circuit noted that individual claim limitations, including claim limitations written in means-plus-function terminology, are frequently found in the prior art. However, the fact that the prior art discloses an individual claim limitation does not thereby limit the scope of the claim.

The Federal Circuit therefore affirmed the Commission's findings of infringement.

IV. DIVISIONAL APPLICATIONS - 35 U.S.C. § 121

A. 35 U.S.C. § 121 Will Not Remove a Parent Patent As a Reference if the Principle of "Consonance" Has Been Violated

The case of Symbol Technologies, Inc. v. Opticon, Inc. involved several patents directed to methods and devices employing lasers to read bar codes.

The patentee had filed its original application in February 1980. In the first office action, the examiner had required restriction to one of seven species identified as Groups I - VII. The patentee had elected to prosecute the Group I claims, directed to a lightweight laser scanning apparatus. The original application containing the Group I apparatus claims matured into the "parent" patent.

After the examiner had required restriction, the patentee had filed a divisional application containing method claims drawn to the invention of the non-elected Group VI claims. This divisional application, containing both the Group VI method claims as well as new apparatus claims, had eventually issued as the "divisional" patent.

191. Intel, 20 USPQ2D at 1179-80.
192. Id.
194. Id. at 1243.
After issuance, the patentee had sued for infringement of both the parent patent and the divisional patent. In response, the infringer had argued that the divisional patent was invalid for obviousness-type double patenting over the parent patent. The infringer had asserted that the parent patent was a reference against the divisional patent because the patentee had violated the principle of "consonance" by adding apparatus claims to the divisional patent application.\footnote{Id. at 1249.}

The district court concluded that the divisional patent was not proved invalid for obviousness-type double patenting over the parent patent, and found infringement.\footnote{Symbol Technologies, Inc. v. Opticon, Inc., 17 USPQ2d 1737 (S.D.N.Y. 1990).} The infringer appealed the judgment.

With regard to the issue of double patenting, the Federal Circuit observed on appeal that 35 U.S.C. § 121\footnote{Section 121 provides, in relevant part: A patent issuing on an application with respect to which a requirement for restriction under this section has been made, or on an application filed as a result of such requirement, shall not be used as a reference either in the Patent and Trademark Office or in the courts against a divisional application or against the original application or any patent issued on either of them, if the divisional application is filed before the issuance of the patent on the other application.} will not apply to remove a parent patent as a reference where the principle of "consonance" has been violated. The principle of "consonance" requires that the line of demarcation between the independent and distinct inventions that prompted a restriction requirement be maintained throughout prosecution of a divisional application. Therefore, although claims may be amended or added during prosecution of the divisional application, they can not be amended or added so as to bring them back over the line imposed in the original restriction requirement which gave rise to the divisional application. If that line of demarcation is crossed, then the prohibition of the third sentence of § 121 does not apply, and the parent patent may be used as a reference against the invention claimed in the divisional patent.\footnote{Gerber Garment Technology, Inc. v. Lectra Systems, Inc., 916 F.2d 683, 688, 16 USPQ2d 1436, 1440 (Fed. Cir. 1990).}

The Federal Circuit read the infringer's assertion to allege that because the Group VI invention had been described as a "method" in the restriction requirement, the addition of apparatus claims in the divisional application had crossed the line of demarcation. However, the record showed that both the method claims and the apparatus claims in the divisional patent were directed to the same
Group VI invention. The Federal Circuit found that the use of the word “method” to describe the Group VI claims during restriction did not mean that the claims were limited to a method, but instead was merely used as a short-hand description of the invented system. Therefore, the line of demarcation established in the restriction requirement had not been crossed, and the parent patent was not available as a reference against the divisional patent under § 121. The Federal Circuit therefore affirmed the judgment of the district court.

V. INTERFERENCE - 35 U.S.C. § 135

A. Actual Reduction to Practice May Be Shown by an Adequate Simulation

The subject invention in the case of DSL Dynamic Sciences Limited v. Union Switch & Signal, Inc. was directed to a coupler mount assembly used to attach equipment to a railway car coupler. The appellant was the assignee of a U.S. patent which had issued in June of 1985, based upon an application filed in September 1983. The appellee was the assignee of a pending U.S. patent application that had been filed in March 1984.

An interference had been declared between the appellant’s issued patent and the appellee’s pending application. During the interference proceeding, the appellee argued that it had reduced the invention to practice in the U.S. in May 1983. In support of its reduction to practice, the appellee presented evidence of tests that had been performed on moving trains during May 1983. These tests involved the use of a prototype of the coupler mount assembly on the caboose of a train.

Because the appellant’s activity relating to conception and reduction to practice had been performed in Canada, the appellant was prevented by 35 U.S.C. § 104 from establishing an invention date earlier than its U.S. filing date of September 1983. The Board found that the appellee had established a reduction to practice of May 1983, and was therefore entitled to priority of invention.

The appellant sought review of the Board’s decision via an action in federal district court under 35 U.S.C. § 146. In the district court...
court, the appellant argued that the appellee's tests had not been performed in the intended environment of the claimed invention and that the tests were therefore insufficient to establish a reduction to practice of the claimed invention. According to the appellant, the purpose of the claimed invention was to obviate the need for a caboose at the end of a train. Therefore, the claimed invention would never be attached to a caboose, but would instead be attached to the coupler of a freight car. If the device tested by the appellee in May 1983 had been attached to a freight car, then the device would have failed. The district court declined to admit the appellant's evidence on this point, and affirmed the award of priority to the appellee.\footnote{Id.}

On appeal, the Federal Circuit found that even if the appellant's evidence had been admitted by the district court, the appellee would nevertheless still be entitled to the award of priority of invention.\footnote{DSL, 18 USPQ2D at 1154.}

The Federal Circuit noted that the appellee could meet its burden of proving an actual reduction to practice by showing one of two things: (1) that the use of a coupler mount assembly with a caboose is an intended purpose of the claimed invention; or (2) that if the use of a coupler mount assembly with a caboose is not an intended purpose of the claimed invention, then the tests performed on a caboose coupler sufficiently simulated the conditions present on a freight car coupler to adequately show reduction to practice of the claimed invention.\footnote{Id. at 1154-55.}

The Federal Circuit found that, even if the district court had accepted the appellant's argument that the claimed invention would not be attached to a caboose, the tests performed on a caboose coupler were sufficient to simulate the conditions present on a freight car coupler to adequately show reduction to practice of the claimed invention. Consequently, the appellee was entitled to the award of priority of invention, and the decision of the district court was affirmed.\footnote{Id. at 1155.}
B. *An Assistant Technician Performing Perfunctory Tasks Under the Supervision of a Senior Scientist Is Not Generally Necessary to Verify the Reliability of Evidence About Scientific Methods or Data*

The subject invention in the case of *Holmwood v. Sugavanam*\(^{209}\) was a chemical fungicide. Both parties had made and marketed the chemical fungicide overseas. An interference had been declared between Holmwood's U.S. patent application and Sugavanam's U.S. patent application.\(^{210}\)

Sugavanam, the senior party, had an effective filing date of October 16, 1981. To defeat Sugavanam, Holmwood had attempted to show that his invention had been reduced to practice in the U.S. before October 16, 1981.\(^{211}\)

The evidence showed that Holmwood's assignee, a German corporation, had sent the claimed fungicide into the U.S. to verify positive test results previously obtained in Germany. Dr. Walter Zeck, a biological research manager for the U.S. affiliate of Holmwood's assignee, had received the claimed fungicide on or about September 16, 1980.\(^{212}\)

Upon receipt of the claimed fungicide, Dr. Zeck began a series of standard tests for effectiveness. Two of Dr. Zeck's laboratory assistants performed the tests in the U.S. and filed reports on the results in October 1980. The test results showed that the claimed fungicide worked for its intended purpose.\(^{213}\)

Holmwood presented Dr. Zeck's testimony to the Board. The Board attached negative implications to Holmwood's failure to call Dr. Zeck's laboratory assistants to testify about their ministerial role in the testing. The Board concluded that Dr. Zeck was not "the most satisfactory witness concerning the testing of the samples" and refused to give any weight to Dr. Zeck's testimony in reaching its conclusion.\(^{214}\)

The Board held that Holmwood had failed to establish a reduction to practice before the effective filing date of Sugavanam. The Board awarded priority to Sugavanam. Holmwood appealed from the decision of the Board.\(^{215}\)

\(^{209}\) 948 F.2d 1236, 20 USPQ2D 1712 (Fed. Cir. 1991).
\(^{210}\) *Id.* at 1713.
\(^{211}\) *Id.*
\(^{212}\) *Id.*
\(^{213}\) *Id.*
\(^{214}\) *Id.*
\(^{215}\) *Id.*
On appeal, the Federal Circuit noted that a junior technician performing perfunctory tasks under the supervision of a senior scientist is not generally necessary to verify the reliability of evidence about scientific methods or data. In the absence of indicia calling into question the trustworthiness of the senior scientist's testimony, the Board may rely on the trained supervisor's testimony to ascertain scientific methods or results.\textsuperscript{216}

The Federal Circuit found that, due to Dr. Zeck's careful supervision of the testing program and the indicia of reliability in the test program itself, the Board's refusal to accord full weight to Dr. Zeck's testimony was unreasonable. The Board had erred in determining that, without his assistants' testimony, Dr. Zeck's testimony lacked probative weight.\textsuperscript{217}

The Federal Circuit concluded that Dr. Zeck had supplied reliable, unrebutted evidence showing that Holmwood's invention had worked for its intended purpose. If Dr. Zeck's testimony was given proper weight, then a preponderance of the evidence showed that Holmwood's invention had been reduced to practice in the U.S. before Sugavanam's effective filing date. Accordingly, the Federal Circuit reversed the decision of the Board.\textsuperscript{218}

C. \textit{A Pending Interference Proceeding May Not Serve as Adequate Reason for the Dismissal of a Declaratory Judgment Action for Non-infringement}

The patent owner in the case of \textit{Minnesota Mining and Manufacturing Co. v. Norton Company}\textsuperscript{219} had filed an application directed to an aluminum-based process for making abrasive material. Several months later, the accused infringer had filed a patent application which claimed both an aluminum-based process for making abrasive material as well as an iron-based process for making abrasive material. The iron-based process was used by the accused infringer in the commercial manufacture of abrasive material.\textsuperscript{220}

The application directed to the aluminum-based process had issued as a patent while the accused infringer's application was still pending. The accused infringer then initiated an interference proceeding with respect to the aluminum-based process. The patent owner informed the accused infringer (as well as the accused in-

\textsuperscript{216} \textit{Id.} at 1714.
\textsuperscript{217} \textit{Id.} at 1715.
\textsuperscript{218} \textit{Id.}
\textsuperscript{219} 929 F.2d 670, 18 USPQ2D 1302 (Fed. Cir. 1991).
\textsuperscript{220} \textit{Id.} at 1303.
fringer's customers) that, under the doctrine of equivalents, the issued patent covered the accused infringer's iron-based process. 221

The accused infringer filed suit under 28 U.S.C. § 2201 seeking a declaratory judgment that its iron-based process did not infringe the issued patent. 222 The patent owner moved to dismiss the declaratory judgment litigation, arguing that the results of the interference proceeding might moot any declaratory judgment issued by the district court. The district court granted the patent owner's motion and dismissed the accused infringer's complaint. 223

On appeal to the Federal Circuit, the accused infringer argued that the harm threatened to its business entitled it to the benefits of 28 U.S.C. § 2201, and that the district court erred in giving too little consideration to the harm which a delay in deciding the infringement litigation would inflict on the accused infringer. 224

The Federal Circuit, agreeing with the accused infringer, noted that the pending interference proceeding would only determine the issue of priority of invention. The pending interference proceeding would not determine the infringement issue underlying the declaratory judgment litigation. 225

If the interference proceeding resulted in an award of priority to the accused infringer, then the infringement litigation would be moot. However, the Federal Circuit found that the mere chance of the infringement litigation becoming moot was not reason enough to dismiss the litigation. The accused infringer was entitled by 28 U.S.C. § 2201 to have a decision on the infringement question and not to have to wait until the final resolution of the interference proceeding. 226

The Federal Circuit noted (without providing specific examples) that there may be situations in which a district court should decline to exercise its discretion to assume jurisdiction under 28 U.S.C. § 2201 when an interference proceeding is underway. However, in the case of Minnesota Mining and Manufacturing Co., the Federal Circuit held that it was an abuse of discretion to have dis-

221. Id. at 1304.
222. 28 U.S.C. § 2201, also referred to as the Declaratory Judgment Act, provides:

In a case of actual controversy within its jurisdiction . . . any court of the United States, upon the filing of an appropriate pleading, may declare the rights and other legal relations of any interested party seeking such declaration, whether or not further relief is or could be sought.

223. Minnesota Mining, 18 USPQ2D at 1304.
224. Id. at 1305.
225. Id. at 1306.
226. Id.
missed a declaratory judgment litigation for non-infringement based on a pending interference proceeding, when the interference proceeding could not decide (or was not likely to moot) the infringement issues raised and when the declaratory judgment plaintiff would likely suffer significant ongoing harm during any delay.\textsuperscript{227}

The Federal Circuit therefore reversed the judgment of the district court and remanded for further proceedings relating to the declaratory judgment litigation.\textsuperscript{228}

VI. APPEAL TO THE COURT OF APPEALS FOR THE FEDERAL CIRCUIT - 35 U.S.C. § 141


The case of \textit{In re Van Geuns}\textsuperscript{229} resulted from an interference involving a patent application filed by Van Geuns and a patent issued to Brown. During the interference proceeding, the Board had determined that the subject matter of both Brown's patent and Van Geuns' application was unpatentable for obviousness.\textsuperscript{230}


Van Geuns moved the Federal Circuit to enjoin Brown's district court proceeding. Brown opposed Van Geuns' motion and moved the Federal Circuit to either remand Van Geuns' appeal to the PTO or to stay Van Geuns' appeal pending resolution of the district court action.\textsuperscript{232}

The Federal Circuit found that the patent statute provided both Brown and Van Geuns with the right to seek direct review in separate courts. Section 141 specifically permits a "party to an interference dissatisfied with the decision of the Board of Patent Appeals and Interferences . . . [to] appeal the decision to the United States Court of Appeals for the Federal Circuit . . . ." Section 146

\textsuperscript{227} Id.
\textsuperscript{228} Id.
\textsuperscript{229} Minnesota Mining, 18 USPQ2D at 1307.
\textsuperscript{230} Id. at 1292.
\textsuperscript{231} Id. at 1295.
\textsuperscript{232} Id.
specifically permits "any party to an interference dissatisfied with the decision of the Board of Patent Appeals and Interferences... [to seek] remedy by civil action..." Congress thereby explicitly preserved both alternative routes for review of a Board interference proceeding, and the Federal Circuit concluded that it could not foreclose either route.  

The Federal Circuit noted that, to promote efficient judicial management and conservation of scarce judicial resources, it may enjoin parties under its jurisdiction from proceeding with a concurrent action involving the same or related issues.  However, in In re Van Geuns, the Federal Circuit found that Van Geuns' § 141 appeal did not feature the same parties or issues as Brown's § 146 district court case.  

Van Geuns' appeal under § 141 contested only the Board's patentability determinations on claims corresponding to the interference count. Van Geuns' appeal was therefore no different than a traditional ex parte appeal to the Federal Circuit from a Board determination, and did not include any adverse entity other than the Commissioner.

In contrast, Brown's district court litigation under § 146 included Brown's assignee as a party. Moreover, Brown contested the propriety of the Board's rejection of Brown's charges of inequitable conduct against Van Geuns. Van Geuns' § 141 appeal therefore did not feature the same parties or the same issues as Brown's § 146 district court case, and resolution of one case would not dispose of the other litigation.  

The Federal Circuit therefore denied Van Geuns' motion to enjoin Brown's § 146 district court proceeding, and also denied Brown's motion to either remand Van Geuns' § 141 appeal to the PTO or to stay the appeal pending resolution of the district court action.

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233. Id. at 1294.
235. Van Geuns, 20 USPQ2D at 1295.
236. Id.
238. Van Geuns, 20 USPQ2D at 1295.
VII. PROTECTION OF FEDERALLY OWNED INVENTIONS - 35 U.S.C. § 207

A. A Licensee Under a Patent Owned by the Federal Government May Maintain an Infringement Action Without Joining the Federal Government as a Party

The lawsuit underlying the appeal in Nutrition 21 v. The United States was for infringement of a patent owned by the United States.

The patent licensee had filed suit against an accused infringer and had named the U.S. as a party defendant pursuant to Fed. R. Civ. P. 19(a). The U.S. had moved to be dismissed from the case, arguing that the suit could be maintained by the licensee alone, without the need for the U.S. as a party. The U.S. based its argument on (1) the enforcement rights granted to the licensee by the U.S. under the patent license agreement, and (2) the authorization provided to federal agencies under 35 U.S.C. 207(a)(2) to grant patent enforcement rights to licensees.

239. 930 F.2d 862, 18 USPQ2D 1351 (Fed. Cir. 1991).
241. Fed. R. Civ. P. 19(a) provides:

Joinder of Persons Needed for Just Adjudication

(a) Persons To Be Joined If Feasible. A person who is subject to service of process and whose joinder will not deprive the court of jurisdiction over the subject matter of the action shall be joined as a party in the action if (1) in the person's absence complete relief cannot be accorded among those already parties or (2) the person claims an interest relating to the subject of the action and is so situated that the disposition of the action in the person's absence may (i) as a practical matter impair or impede the person's ability to protect that interest or (ii) leave any of the persons already parties, subject to a substantial risk of incurring double, multiple, or otherwise inconsistent obligations by reason of the claimed interest. If the person has not been so joined, the court shall order the person be made a party. If the joined party objects to venue and joinder of that party would render the venue of the action improper, that party shall be dismissed from the action.

242. Section 207 of Title 35, provides in pertinent part:

(a) Each Federal agency is authorized to —

(2) grant nonexclusive, exclusive, or partially exclusive licenses under federally owned patent applications, patents, or other forms of protection obtained, royalty-free or for royalties or other consideration, and on such terms and conditions, including the grant to the licensee of the right of enforcement pursuant to the provisions of chapter 29 of this title as determined appropriate in the public interest;

(3) undertake all other suitable and necessary steps to protect and ad-
The licensee acknowledged that it would not otherwise object to proceeding without the U.S. as a party, but feared that if it proceeded without the U.S., then, after judgment by the district court, the Federal Circuit might subsequently dismiss the infringement action on appeal due to the absence of an indispensable party under Fed. R. Civ. P. 19(b).\textsuperscript{243} The licensee therefore opposed the U.S. motion to be dismissed, and moved for realignment of the U.S. as an involuntary plaintiff pursuant to Fed. R. Civ. P. 19(a).

The district court, relying on the case of \textit{Independent Wireless Telegraph Co. v. Radio Corp. of America},\textsuperscript{244} concluded that the patent owner is a necessary party to a suit for patent infringement brought by an exclusive licensee. The district court therefore issued an order denying the U.S. motion to be dismissed as a party and realigning the U.S. as an involuntary plaintiff.\textsuperscript{245}

The question on appeal was whether the licensee could maintain a patent infringement action without the U.S. as a party, when the U.S. had authorized the licensee to sue for patent infringement in its own name and on its own behalf.\textsuperscript{246}

In answering this question in the affirmative, the Federal Circuit emphasized the language of the patent license agreement, which expressly empowered the licensee to bring infringement suits in its own name, at its own expense, and on its own behalf, with the U.S. retaining a continuing right to intervene in such suit.\textsuperscript{247}

The Federal Circuit also noted that the public policy concerns minister rights to federally owned inventions on behalf of the Federal Government either directly or through contract . . . .

\textsuperscript{243} Fed. R. Civ. P. 19(b) provides:

\begin{quote}
\textbf{Determination by Court Whenever Joinder not Feasible}

If a person as described in subdivision (a)(1)-(2) hereof cannot be made a party, the court shall determine whether in equity and good conscience the action should proceed among the parties before it, or should be dismissed, the absent person being thus regarded as indispensable. The factors to be considered by the court include: first, to what extent a judgment rendered in the person's absence might be prejudicial to the person or those already parties; second, the extent to which, by protective provisions in the judgment, by the shaping of relief, or other measures, the prejudice can be lessened or avoided; third, whether a judgment rendered in the person's absence will be adequate; fourth, whether the plaintiff will have an adequate remedy if the action is dismissed for nonjoinder.
\end{quote}

\textsuperscript{244} 269 U.S. 459, 70 L. Ed. 357, 46 S.Ct. 166 (1926). \textit{Independent Wireless} held that "both the owner and the exclusive licensee are generally necessary parties in the [patent infringement] action in equity." 269 U.S. at 466.


\textsuperscript{246} Nutrition 21, 18 USPQ2D at 1352.

\textsuperscript{247} \textit{Id.} at 1354.
underlying passage of the legislation that included 35 U.S.C. 207(a)(2) (specifically, concerns regarding the effective private sector commercialization of inventions resulting from government-financed research) support maintenance of the infringement suit without the U.S. as a party. The case of Independent Wireless was not controlling, because that case did not involve a government-owned patent, and because the relevant law had been changed by Congress.248

The Federal Circuit therefore held that, pursuant to 35 U.S.C. 207(a)(2) and the patent license agreement involved, the licensee could maintain an action against the accused infringer without the U.S. as a party. The Federal Circuit expressly declined to consider the question of what preclusive effect the outcome of the lawsuit might have upon the U.S. after its dismissal as a party.249

VIII. REISSUE - 35 U.S.C. § 251

A. A Patentee Can Not Be Compelled to Seek Reissue Where the Patentee Insists That There Is No Error In the Patent

In defense to a charge of patent infringement, the alleged infringer in the case of Green v. The Rich Iron Company, Inc.250 asserted that the patent was invalid under 35 U.S.C. § 102(b) because the invention had been in public use or on sale more than one year before the application filing date.251

The alleged infringer filed a motion for summary judgment on its § 102(b) defense. The district court denied the motion without prejudice. However, the district court sua sponte ordered the patentee to seek reissue from the PTO, stating that the PTO was the best forum for consideration of the § 102(b) issue, given the special expertise of the PTO regarding the validity of patents and concerns of judicial economy. The patentee appealed from the district court’s order.252

The issue on appeal was whether a district court can compel a patentee to seek reissue, even though the patentee insists that there is no error in the patent.

The Federal Circuit observed that 35 U.S.C. § 251 permits the PTO to reissue a patent that “is, through error without any decep-

248. Id.
249. Id. at 1355-56.
250. 944 F.2d 852, 20 USPQ2D 1075 (Fed. Cir. 1991).
251. Id.
252. Id.
tive intention, deemed 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 had a right to claim in the patent.” The implementing regulation, 37 C.F.R. § 1.175(a)(1), requires the reissue applicant to file a statement under oath or a declaration “when the applicant verily believes the original patent to be wholly or partly inoperative or invalid, stating such belief and the reasons why.” Similarly, 37 C.F.R. § 1.175(a)(5) requires the reissue applicant to explain how the errors arose or occurred, and 37 C.F.R. § 1.175(a)(6) requires the reissue applicant to affirm that the errors occurred without any deceptive intention.

The Federal Circuit noted that the case authority relied upon by the district court involved reissue applications filed pursuant to the “no-fault” reissue practice, under which an applicant was permitted to file for reissue merely for the purpose of obtaining a PTO determination regarding the effect of newly discovered prior art. Such “no-fault” reissue practice is no longer permitted, and reissue is now available only for those patents which, through “error,” are deemed wholly or partly inoperative or invalid.

The Federal Circuit concluded that if the patentee insists that there is no error in the patent, then ordering the patentee to seek reissue would compel the patentee to attest to error which the patentee does not believe exists. Accordingly, the Federal Circuit reversed the district court order and remanded the case for further proceedings.

B. That an Error Could Have Been Discovered at the Time of Prosecution Does Not Preclude Correction of the Error Through Reissue

The subject patent in the case of Scripps Clinic & Research Foundation v. Genentech, Inc. was a reissue patent entitled “Ultrapurification of Factor VIII Using Monoclonal Antibodies.” The original patent had contained process claims and product-by-process claims, but had not contained any product claims. The “error” that the inventors had sought to cure via reissue was the claiming of “less than they had a right to claim” in the original patent due to

253. Id. at 1076.
254. Id.
255. Green, 20 USPQ2D at 1076.
257. Green, 20 USPQ2D at 1077.
258. Id.
259. 927 F.2d 1565, 18 USPQ2D 1001 (Fed. Cir. 1991).
the omission of the product claims.260

Before the district court the accused infringer had argued that the patentee's reason for seeking reissue was inadequate under 35 U.S.C. § 251. The district court granted the accused infringer's motion for partial summary judgment of invalidity on this ground, and the patentee appealed. 261

On appeal, the Federal Circuit observed that the district court had mistakenly interpreted 35 U.S.C. § 251 as requiring a showing that the error could not have been avoided. However, the reissue statute does not require that no competent attorney could have avoided the error sought to be corrected by reissue. Failure of an attorney to appreciate the full scope of the invention, or failure to claim the invention sufficiently broadly, are among the most common sources of errors in patents. The fact that the error could have been discovered at the time of prosecution does not, by itself, preclude a patentee from correcting the error through reissue.262

The Federal Circuit found that the inventors had established that they had claimed less than they had a right to claim, that they had done so in error, and that there had been no deceptive intent. The application for reissue therefore fully complied with the requirements of 35 U.S.C. § 251, and the district court's grant of partial summary judgment was reversed.263


Less than one year after issuance of the subject patent in the case of In re Amos,264 the patentees had submitted an application for a broadened reissue. The broadened reissue application sought to add new claims 10-12 to original claims 1-9.265

The PTO Board had found that the disclosure of the original patent failed to set forth an “intent to claim” the subject matter defined by new claims 10-12, and that the “objective intent” of the patentees, as manifested in the original patent, had been to solely claim the invention defined by claims 1-9. Because it found that the failure to claim the subject matter defined by new claims 10-12 was not the result of an “error” as required by 35 U.S.C. § 251, the

260. Id. at 1008.
261. Id. at 1009.
263. Scripps, 18 USPQ2d at 1009.
264. 953 F.2d 613, 21 USPQ2D 1271 (Fed. Cir. 1991).
265. Id. at 1272.
Board affirmed the final rejection of new claims 10-12. The patentee appealed the Board’s decision.\textsuperscript{266}

The issue on appeal was whether the concept of “intent to claim” had any role in a rejection of claims submitted during reissue under 35 U.S.C. § 251.\textsuperscript{267}

The Federal Circuit observed that there are four types of error identified in 35 U.S.C. § 251 as being correctable via reissue.\textsuperscript{268} First, the patentee may correct an error in the specification.\textsuperscript{269} Second, the patentee may correct a defective drawing. Third, the patentee may correct original claims that are too broad. Fourth, the patentee may correct original claims that are too narrow.\textsuperscript{270} The basis for correcting original claims that are too broad has generally been the discovery of partially-invalidating prior art.\textsuperscript{271} In contrast, the basis for correcting original claims that are too narrow has been the post-issuance discovery of attorney error in understanding the scope of the invention.\textsuperscript{272}

The Federal circuit noted that the phrase “intent to claim” does not appear in 35 U.S.C. § 251. The Federal Circuit read the Board’s phrase “intent to claim” as a decision that new claims 10-12 were not for the “same invention” as disclosed in the original patent, and interpreted the Board’s decision as being based upon a determination that the original patent disclosure did not support the subject matter of new claims 10-12 as required by § 251.\textsuperscript{273}

The Federal Circuit noted that the inquiry under § 251 as to whether the new claims are for the same invention as disclosed in the original patent is analogous to the analysis required by § 112, ¶1. The entirety of the original patent must be examined and a decision must be made whether, through the “objective eyes” of the hypothetical person having ordinary skill in the art, an inventor could fairly have claimed the new claims in the original application.\textsuperscript{274}

The record showed that the original patent disclosure did cover the subject matter defined by new claims 10-12. Consequently, the

\textsuperscript{266} Id. at 1273.
\textsuperscript{267} Id.
\textsuperscript{268} In re Clark, 522 F.2d 623, 625-26, 187 USPQ 209, 211-12 (CCPA 1975).
\textsuperscript{269} In re Salem, 553 F.2d 676, 679, 193 USPQ 513, 516 (CCPA 1977).
\textsuperscript{270} In re Handel, 312 F.2d 943, 948, 136 USPQ 460, 464 (CCPA 1963).
\textsuperscript{271} In re Harita, 847 F.2d 801, 805, 6 USPQ2d 1930, 1932 (Fed. Cir. 1988).
\textsuperscript{273} Amos, 21 USPQ2D at 1274.
\textsuperscript{274} Id. at 1275.
Federal Circuit concluded that the Board had erred in denying the reissue application on the basis of the lack of an "intent to claim." The Federal Circuit therefore reversed the Board, stating that the presence or absence of an objective "intent to claim," standing alone, is not dispositive of any required inquiry under § 251 and cannot, alone, form the basis for a denial of reissue claims.275

D. Involvement in a Reissue Proceeding May Excuse a Patentee's Delay in Filing Suit for Infringement

The subject patent in the case of Vaupel Textilmaschinen KG v. Meccanica Euro Italia S.P.A.276 had issued in June, 1976. A reissue application was filed in December, 1979, and the reissue proceeding was completed in February, 1985. The patentee did not file suit for infringement until August, 1988. The patentee asserted that its delay in filing suit after it first learned of the infringement was excused due to the patentee's involvement in the reissue proceeding.277

The district court found that the patentee had not shown evidence sufficient to excuse its failure to file suit within six years of the time the patentee knew or should have known of the infringement. The district court therefore concluded that the patentee was barred from maintaining an infringement action by laches.278 The patentee appealed the district court's conclusion.

On appeal, the Federal Circuit noted that if a patentee establishes that it was engaged in "other litigation," then the patentee may avoid the consequences of what would otherwise be an unreasonable delay in filing suit.279 The "other litigation" excuse normally applies when a patentee delays filing suit against an alleged infringer until the conclusion of a prior lawsuit. If the alleged infringer is ultimately sued, and if the alleged infringer had received adequate notice of the alleged infringement, then the time consumed by the other litigation may be considered in determining whether the patentee's delay in filing suit was reasonable.280

For purposes of determining the reasonableness of a patentee's

276. 944 F.2d 870, 20 USPQ2D 1045 (Fed. Cir. 1991).
277. Id. at 1050.
278. Id. at 1050.
279. Laches may be found when the patentee's delay in filing suit is shown to be unreasonable and unexcused and the alleged infringer has suffered material prejudice or injury as a result of the delay. Leinoff v. Louis Milona & Sons, 726 F.2d 734, 741, 220 USPQ 845, 850 (Fed. Cir. 1984).
279. Watkins v. Northwestern Ohio Tractor Pullers Ass'n, 630 F.2d 1155, 1162, 208 USPQ 545, 551 (6th Cir. 1980).
280. Vaupel, 20 USPQ2D at 1050.
delay in filing suit, the Federal Circuit saw no distinction between litigation raising the issue of patent validity and a PTO proceeding involving patentability. The Federal Circuit therefore reasoned that a reissue proceeding should be treated in the same way as an infringement litigation for purposes determining the applicability of the "other litigation" excuse.\textsuperscript{281}

For the "other litigation" excuse to apply, the alleged infringer must be adequately informed of the "other litigation" and must also be adequately informed that the patentee intends to enforce the patent against the alleged infringer after the "other litigation" is completed.\textsuperscript{282}

In \textit{Vaupel}, the alleged infringer had been actively involved in the reissue proceeding as a protestor. In the opinion of the Federal Circuit, the record left no doubt that the alleged infringer had been adequately informed of the "other litigation", and had been adequately informed of the patentee's intent to enforce the patent after the "other litigation" had been completed. Under these circumstances, the patentee was not required to provide the alleged infringer with written notification of an intent to sue after completion of the reissue proceeding in order to avoid a holding of laches. The district court's conclusion that the alleged infringer had not been adequately informed of the patentee's intent to enforce the patent due to the patentee's failure to provide such written notification to the alleged infringer was legal error.\textsuperscript{283}

The Federal Circuit concluded that the patentee's delay in filing suit was excused because of the patentee's involvement in the reissue proceeding, and the patentee was not guilty of laches. The judgment of the district court relating to laches was reversed.

IX. \textsc{Patent Infringement - 35 U.S.C. § 271.}

\textbf{A. Proper Claim Interpretation Is a Question of Law}

The district court in the case of Key Manufacturing Group, Inc. v. Microdot, Inc.\textsuperscript{284} had found the accused infringer liable for both literal infringement and infringement under the doctrine of equivalents.\textsuperscript{285} The accused infringer appealed.

\textsuperscript{281} \textit{Id.} at 1051.
\textsuperscript{282} Hottel Corp. v. Seaman Corp., 833 F.2d 1570, 1573, 4 USPQ2D 1939, 1940-41 (Fed. Cir. 1987).
\textsuperscript{283} \textit{Vaupel}, 20 USPQ2D at 1051.
\textsuperscript{285} \textit{Id.} at 1807.
The issue on appeal was one of proper claim interpretation, which is a question of law freely reviewable by the Federal Circuit. There were no factual disputes over the meaning of the subject claim language, and neither party asserted that the claim language had anything other than its common, ordinary meaning.

The Federal Circuit found that the district court's interpretation of the claims conflicted with the straightforward language of the claims, as supported by the patent specification and the prosecution file history. The Federal Circuit concluded that the district court had erred in interpreting the claims, and that the accused product did not literally infringe the properly interpreted claims.

The Federal Circuit also found that the accused device did not infringe under the doctrine of equivalents, because a hypothetical claim which literally encompassed the accused device would have been obvious in view of the prior art.

The Federal Circuit therefore reversed the judgment of the district court.

**B. Product-by-Process Claims Are Not Limited to the Product Prepared by the Process Set Forth in the Claims**

The subject patent in the case of Scripps Clinic & Research Foundation v. Genentech, Inc. was entitled "Ultrapurification of Factor VIII Using Monoclonal Antibodies." The patent owner had argued that the accused infringer's recombinantly-produced Factor VIII:C product infringed several of the patent's product-by-process claims. The district court disagreed, concluding that the product-by-process claims could not be infringed unless the accused infringer also practiced the process defined by the claims. The district court therefore refused to grant the patentee's motion for summary judgment of infringement of the product-by-process claims. The

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288. Key Manufacturing, 17 USPQ2D at 1809.


290. 927 F.2d 1565, 18 USPQ2D 1001 (Fed. Cir. 1991).

291. Id. at 1015.
On appeal, the Federal Circuit noted that the district court’s conclusion conflicted with precedent which indicated that, in determining the patentability of product-by-process claims during prosecution, the product is interpreted as not being limited by the process stated in the claims. The Federal Circuit found that, since claims must be construed the same way for validity and for infringement, the correct reading of product-by-process claims is that they are not limited to the product prepared by the process set forth in the claims. Thus, the Federal Circuit concluded that infringement of the product-by-process claims by the accused infringer’s product was an issue which may be considered at trial.

C. A Claim Element Can Not Be Interpreted Contrary to Its “Plain Meaning” Based Upon an “Alternative” to the Claim Element Described in the Specification

The subject patent in the case of Unique Concepts, Inc. v. Brown was directed to an “assembly of border pieces” used to attach a fabric wall covering to a wall. The claimed assembly was made up of a number of “right angle corner border pieces” and “linear border pieces” which were arranged to form a frame.

The alleged infringer had argued that the accused product did not infringe because the accused product did not have corner border pieces which were preformed at a right angle, but instead employed two linear pieces which were each mitered, i.e., cut at a 45 degree angle, and then placed together to form a right angle.

After trial, the district court entered judgment for the alleged infringer, finding that the mitered linear pieces used by the alleged infringer did not meet the claim language “right angle corner border pieces,” either literally or under the doctrine of equivalents. The patentee appealed.

On appeal, the Federal Circuit found that the claim language made unambiguous reference to two distinct elements: “linear border pieces” and “right angle corner border pieces.” The Federal

292. Id.
293. E.g., In re Thorpe, 777 F.2d 695, 227 USPQ 964 (Fed. Cir. 1985); In re Brown, 59 C.C.P.A. 1036, 459 F.2d 531, 535, 173 USPQ 685, 688 (CCPA 1972); In re Bridgeford, 53 C.C.P.A. 1182, 357 F.2d 679, 682 n.5, 149 USPQ 55, 58 n.5 (CCPA 1966).
294. Scripps, 18 USPQ2D at 1016.
295. 939 F.2d 1558, 19 USPQ2D 1500 (Fed. Cir. 1991).
296. Id. at 1502.
297. Id. at 1503.
Circuit reasoned that if linear border pieces whose ends are mitered are the same as linear border pieces and a right angle corner piece, then the recitation of both "right angle corner border pieces" and "linear border pieces" in the same claim would be redundant. The Federal Circuit further reasoned that "merging" the two types of claim elements into one would violate the "all elements rule," which requires that to prove infringement, every element in the claim must be found in the accused device either literally or equivalently.299

The Federal Circuit acknowledged that the patent specification contained the following paragraph, which described the option of using "improvised corner pieces" rather than "preformed right-angle corner pieces":

Instead of using preformed right-angle corner pieces of the type previously disclosed, one may improvise corner pieces by miter-cutting the ends of a pair of short linear border pieces at right angles to each other and providing a space between the cut ends to define the necessary storage slot. For this purpose, a temporary spacer may be used to provide exactly the right amount of storage space. The advantage of such corner pieces resides in the fact that linear pieces may be mass-produced at low cost by continuous extrusion, whereas preformed corner pieces must be molded or otherwise fabricated by more expensive techniques. On the other hand, a preformed corner piece is somewhat easier for a do-it-yourselfer to work with.300

The Federal Circuit viewed the above-quoted paragraph as disclosing an "alternative" to the claimed right angle corner border piece, rather than disclosing an example of the claimed right angle corner border piece.301 The Federal Circuit stated:

It would run counter to [the requirement of 35 U.S.C. § 112 to particularly point out and distinctly claim the subject matter of the invention] for an applicant for patent to expressly state throughout his specification and in his claims that his invention includes right angle corner border pieces and then be allowed to avoid that claim limitation in a later infringement suit by pointing to one paragraph in his specification stating an alternative

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300. Unique Concepts, 19 USPQ2D at 1503.
301. In a dissenting opinion, Judge Rich viewed the above-quoted paragraph as demonstrating that the specification disclosed two different species of the claimed "right angle corner border pieces": (1) preformed one-piece and (2) mitered, short, linear pieces, arranged at right angles and properly spaced at their junction. Id. at 1506.
that lacks that limitation, and thus interpret the claim contrary to its plain meaning. Such a result would encourage an applicant to escape examination of a more broadly-claimed invention by filing narrow claims and then, after grant, asserting a broader scope of the claims based on a statement in the specification of an alternative never presented in the claims for examination.\footnote{302}

The Federal Circuit concluded that if the patentee had intended to claim mitered linear border pieces as an alternative to right angle corner border pieces, then the patentee was required to persuade the examiner to issue such a claim. The patentee failed to do so. Consequently, the mitered linear border pieces disclosed but not claimed in the patent application were dedicated to the public.\footnote{303}

The Federal Circuit concluded that the district court had correctly found that a proper construction of the claim language “right angle corner border pieces” required a single preformed corner piece, and that the patent did not literally cover the alleged infringer’s corners formed by aligning two mitered straight pieces. The decision of the district court was therefore affirmed.

\section{D. An Infringement Analysis Requires Comparison of the Accused Product to the Patent Claims, Not To Another Product}

The subject design patent in the case of \textit{Lund Industries, Incorporated v. Go Industries, Inc.}\footnote{304} was directed to an automobile sun visor. The parties had previously settled an earlier lawsuit by entering into a settlement agreement in which the accused infringer had conceded the validity of the subject design patent and had admitted infringement.\footnote{305}

After settlement of the earlier lawsuit, the accused infringer had introduced a new sun visor product. The patentee had sought a preliminary injunction, charging that the accused infringer’s new sun visor product infringed the design patent.\footnote{306}

In weighing the likelihood of success on infringement, the district court compared the new visor and the admittedly infringing old visor covered by the settlement agreement. The district court

\footnotesize{\begin{tabular}{l}
\textit{Id.} at 1504. \\
938 F.2d 1273, 19 USPQ2D 1383 (Fed. Cir. 1991). \\
\textit{Id.} at 1384. \\
\textit{Id.} at 1385. \\
\end{tabular}}
found that the new visor did not colorably differ from the admittedly infringing old visor. Relying on the case of *KSM Fastening Sys. v. H.A. Jones Co.*,\(^{307}\) to justify its comparison of the new visor with the old visor, the district court concluded that the new visor also infringed the design patent and therefore issued a preliminary injunction. The accused infringer appealed.

On appeal, the Federal Circuit found that the district court had erred by relying on *KSM*. In *KSM*, the Federal Circuit had permitted comparison of an infringing device and an accused device as part of the inquiry into whether contempt proceedings were appropriate. However, in *KSM* the Federal Circuit had not permitted comparison of an infringing device and an accused device to determine whether the patent had been infringed.\(^{308}\)

In *Lund*, the Federal Circuit held that a proper infringement analysis requires comparison of the accused design to the patent claims, not to another design.\(^{309}\) The district court’s departure from this proper infringement analysis was not justified by the accused infringer’s prior admission of infringement with respect to a different (albeit related) product. The Federal Circuit therefore vacated and remanded with instructions for the district court to analyze the alleged infringement of the design patent by comparing the accused device to the patent claim.\(^{310}\)

### E. Application of the Doctrine of Equivalents Is the Exception, Not the Rule

The subject patent in the case of *Wallace London v. Carson Pirie Scott & Co.*\(^{311}\) was directed to clamps used to hang clothes securely in travel garment bags. The patentee had alleged that the accused clamps infringed literally and under the doctrine of equivalents. Both the patentee and the alleged infringer had moved for summary judgment relating to infringement. The district court granted the alleged infringer’s motion. The patentee appealed only that part of the district court’s judgment relating to infringement under the doctrine of equivalents.\(^{312}\)

On appeal, the Federal Circuit noted that while designing around patents to make new inventions is encouraged, piracy is not.

\(^{307}\) 776 F.2d 1522, 227 USPQ 676 (Fed. Cir. 1985).

\(^{308}\) *KSM*, 776 F.2d at 1530, 227 USPQ at 682.

\(^{309}\) *KSM*, 776 F.2d at 1530, 227 USPQ at 682; *Amstar Corp. v. Envirotech Corp.*, 823 F.2d 1538, 1545, 3 USPQ2D 1412, 1417 (Fed. Cir. 1987).

\(^{310}\) *Lund*, 19 USPQ2D at 1386.

\(^{311}\) 946 F.2d 1534, 20 USPQ2D 1456 (Fed. Cir. 1991).

\(^{312}\) *Id.* at 1458.
Thus, where an infringer, instead of inventing around a patent by making a substantial change, merely makes an insubstantial change, essentially misappropriating the patented invention, infringement may lie under the doctrine of equivalents. Nevertheless, the Federal Circuit made clear that:

Application of the doctrine of equivalents is the exception, however, not the rule, for if the public comes to believe (or fear) that the language of patent claims can never be relied on, and that the doctrine of equivalents is simply the second prong of every infringement charge, regularly available to extend protection beyond the scope of the claims, then claims will cease to serve their intended purpose. Competitors will never know whether their actions infringe a granted patent.313

In Wallace London the Federal Circuit found that the accused device did not work in substantially the same way as the claimed device, and therefore did not infringe under the doctrine of equivalents. Because the evidence showed that the accused device did not meet the claim limitations either literally or equivalently, the alleged infringer was properly entitled to summary judgment as a matter of law. The ruling of the district court was therefore affirmed.314

F. Infringement Under the Doctrine of Equivalents Exists Only If the Changes Made to the Claimed Invention By the Accused Infringer Are Not Substantial

The subject patent in the case of Slimfold Manufacturing Company, Inc. v. Kinkead Industries, Inc.315 had issued in 1974 and was directed to a “Pivot and Guide Rod Assembly for Bi-Fold Door.” In 1976, after becoming aware of the patentee’s product, the accused infringer instructed its engineers to produce a similar product referred to as the “Type I door.” In 1978, after becoming aware of the patent, the accused infringer abandoned the Type I door and began making the “Type II door.” The Type II door had been deliberately designed to avoid infringement of the patent.316

In a suit for patent infringement, the district court found that the Type I door literally infringed the patent, and that the Type II door infringed under the doctrine of equivalents. The district court also found the infringement to be willful, and held that the patent

313. Id. at 1458-59.
314. Id. at 1460.
315. 932 F.2d 1453, 18 USPQ2D 1842 (Fed. Cir. 1991).
316. Id. at 1845.
owner was entitled to treble damages under 35 U.S.C. § 284 and attorneys fees under 35 U.S.C. § 285.\textsuperscript{317}

On appeal, the accused infringer argued that the district court had erred in finding that the Type II door infringed under the doctrine of equivalents and in finding its infringement to be willful.\textsuperscript{318}

With respect to infringement under the doctrine of equivalents, the Federal Circuit found that the district court had been overly concerned with the fact that the Type II door had been deliberately designed to avoid infringement. Noting that intentional "designing around" the claims of a patent is not, by itself, a wrong which must be compensated by invocation of the doctrine of equivalents, the Federal circuit stated:

Designing around patents is, in fact, one of the ways in which the patent system works to the advantage of the public in promoting progress in the useful arts, its constitutional purpose. Inherent in our claim-based patent system is also the principle that the protected invention is what the claims say it is, and thus that infringement can be avoided by avoiding the language of the claims.\textsuperscript{319} It is only when the changes are so insubstantial as to result in "a fraud on the patent" that application of the equitable doctrine of equivalents becomes desirable.\textsuperscript{320}

Therefore, liability for infringement under the doctrine of equivalents may be found only if the changes made to the claimed invention by the accused infringer are not "substantial." Under the Graver Tank tripartite test, the changes made to the claimed invention are not "substantial"\textsuperscript{321} only if the accused device performs substantially the same function, in substantially the same way, to achieve substantially the same result as the claimed invention.

Noting that the claimed invention in Slimfold was a mechanical combination in a crowded field and therefore entitled to only a narrow scope of equivalents, the Federal Circuit concluded that the Type II door did not operate in substantially the same way as the claimed invention. Consequently, the Type II door avoided infringement under the doctrine of equivalents, and the district court's finding to the contrary was reversed.\textsuperscript{322}

\begin{itemize}
\item[\textsuperscript{317}] Id. at 1847.
\item[\textsuperscript{318}] Id.
\item[\textsuperscript{319}] Slimfold, 18 USPQ2D at 1845-46, quoting Texas Instruments, Inc. v. U.S.I.T.C., 805 F.2d 1558, 1572, 231 USPQ 833, 841-42 (Fed. Cir. 1986).
\item[\textsuperscript{321}] Slimfold, 18 USPQ2D at 1846.
\item[\textsuperscript{322}] Id.
\end{itemize}
The Federal Circuit found sufficient evidence in the record to support a finding of willfulness with respect to infringement by the Type I door. However, the Federal Circuit also found that the district court's findings regarding willfulness and the exceptional nature of the case had been influenced by the district court's incorrect assumption that the accused infringer did not avoid infringement when it developed the Type II door. Therefore, the Federal Circuit directed the district court, on remand, to re-determine whether the facts of the case, in light of the holding of no infringement with respect to the Type II door, still merited a finding of willfulness and a finding of "exceptional case" under 35 U.S.C. § 285.323

G. A Patentee Must Prove Substantial Identity As to Each of the Function, Way, and Result Prongs of the Doctrine of Equivalents Test

The subject patent in the case of Malta v. Schulmerich Carillons, Inc.324 was directed to improvements in the design of handbells, of the type used by music groups in churches, schools, and the like. The subject handbells consisted of a bell, a handle, and a clapper pivotally mounted inside the bell.325

The patent disclosed two different embodiments for the clapper. The first embodiment had three opposing pairs of "striking surfaces." The second embodiment had three "opposed pairs of buttons" attached to the surface of the clapper. The patent specifically used the term "striking surfaces" with respect to the first embodiment, and used the different term "buttons" with respect to the second embodiment. The patent stated that the two different embodiments shared the same advantages, but varied in design, flexibility and simplicity.326

Claim 2 of the patent used the broad term "surface portions" to describe the surface of the clapper. Claim 3 of the patent was very similar to claim 2, but used the narrower term "buttons" to describe the surface of the clapper.327

The patentee had alleged infringement of both claims 2 and 3. The jury had been given special interrogatories asking whether the accused handbells infringed claims 2 and 3 of the patent, either literally or under the doctrine of equivalents. In response, the jury

323. Id. at 1847.
324. 952 F.2d 1320, 21 USPQ2D 1161 (Fed. Cir. 1991).
325. Id.
326. Id. at 1166.
327. Id.

had found that claim 2 was not infringed, but that claim 3, while
not literally infringed, was infringed under the doctrine of
equivalents.\(^\text{328}\)

The alleged infringer moved for JNOV on the grounds that the
evidence was not sufficient to support the finding of infringement
under the doctrine of equivalents. The judge agreed, and granted
judgment notwithstanding a jury verdict of non-infringement in
favor of the alleged infringer.\(^\text{329}\) The patentee appealed from the
grant of JNOV of non-infringement.\(^\text{330}\)

On appeal, the Federal Circuit noted that claim 2 of the patent
used the broad term “surface portions” to describe the surface of
the clapper, whereas claim 3 used the narrower term “buttons.”
The Federal Circuit reasoned that where a broad term is used in one
claim and a narrower term is used in a second claim, and is used
with respect to only one embodiment in the specification, the impli-
cation is that infringement of the second claim can be avoided by
not meeting the narrower term.\(^\text{331}\)

The Federal Circuit further noted that the patent stated that
the two different embodiments were alternatives to each other, but
varied in design, flexibility and simplicity. The Federal Circuit
viewed this as indicating that the two different embodiments did not
perform the claimed function in substantially the same “way,” as
that term is used in the *Graver Tank* test.\(^\text{332}\)

In attempting to prove infringement under the doctrine of
equivalents, the patentee had principally relied upon the testimony
of the inventor. The Federal Circuit found the inventor’s testimony
to be conclusory and lacking a sufficiently particularized explana-
tion of both how the overall function, way, and result of the accused
device are substantially the same as those of the claimed device, and
how the plastic/slotted plastic/felt arrangement of the accused de-
vice is the equivalent of the claimed “buttons” limitation.\(^\text{333}\) The
evidence failed to prove that all three prongs of the *Graver Tank*
test had been met, or that the “buttons” limitation had been met
equivalently.\(^\text{334}\) The Federal Circuit could find no other evidence in
the record to provide the necessary substantial evidence on the issue

\(^{328}\) Malta, 21 USPQ2d at 1163.


\(^{330}\) Malta, 21 USPQ2d at 1164.

\(^{331}\) Id. at 1166.

\(^{332}\) Id. at 1165.

\(^{333}\) Id. at 1166.

\(^{334}\) Id.
of infringement under the doctrine of equivalents.\textsuperscript{335}

The patentee had therefore failed to present evidence sufficient to support a finding of infringement of claim 3 under the doctrine of equivalents, and the Federal Circuit upheld the district court's grant of JNOV on the ground of non-infringement.\textsuperscript{336}

H. \textit{Prosecution History Estoppel Does Not Necessarily Preclude Application of the Doctrine of Equivalents}

The district court in the case of \textit{Dixie USA, Inc. v. Infab Corporation} \textsuperscript{337} had determined that the accused device did not infringe literally, and that infringement under the doctrine of equivalents was precluded by prosecution history estoppel.\textsuperscript{338} The district court therefore granted the alleged infringer's motion for summary judgment of non-infringement. The patentee appealed.

On appeal, the patentee argued that, even in the face of prosecution history estoppel, the patentee should still be able to obtain some degree of equivalence, and that a total preclusion of all equivalence should not apply.\textsuperscript{339} The Federal Circuit agreed that, as a general proposition, the patentee's argument was correct.\textsuperscript{340} However, the Federal Circuit found that the district court in \textit{Dixie} had not applied total preclusion.\textsuperscript{341} Instead, the district court had considered the nature of the prior art and the amendments and arguments made during the prosecution of the subject patent application and had concluded that the scope of equivalence being urged by the patentee was precisely that which was forbidden by the prosecution history.\textsuperscript{342}

The Federal Circuit therefore found that the district court had properly applied the doctrine of prosecution history estoppel and affirmed the decision of the district court.\textsuperscript{343}

\begin{footnotesize}
\begin{enumerate}
\item \textit{Malta}, 21 USPQ2D at 1166.
\item \textit{Id.} at 1167.
\item 927 F.2d 584, 17 USPQ2D 1968 (Fed. Cir. 1991).
\item \textit{Id.} at 1969.
\item \textit{Id.} at 1970.
\item Mannesmann Demag Corp. v. Engineered Metal Prod., 793 F.2d 1279, 1284, 230 USPQ 45, 48 (Fed. Cir. 1986).
\item \textit{Dixie}, 17 USPQ2D at 1970.
\item \textit{Id.} at 1971.
\item \textit{Id.}
\end{enumerate}
\end{footnotesize}
X. DEFENSES TO PATENT INFRINGEMENT - 35 U.S.C. § 282

A. Intent to Deceive the Patent Examiner Is an Essential Factual Predicate to Inequitable Conduct

The appeal in the case of Tol-O-Matic, Inc. v. Proma Produkt - Und Marketing Gesellschaft M.B.H.\(^{344}\) was taken from the judgment of the district court holding the subject patent unenforceable based on inequitable conduct.\(^{345}\)

The inequitable conduct issue involved a reference to Hoffar which the patentee had called to the examiner’s attention only after allowance of the claims, following which the examiner had reopened prosecution. There was evidence that the patentee’s German patent attorney had known of the Hoffar reference, and had believed that the Hoffar reference was merely cumulative to the prior art already before the U.S. examiner; that the German attorney responded promptly to the request by the U.S. patent attorney for all references cited in other countries; and that after receiving these references, which included the Hoffar reference, the U.S. patent attorney promptly cited the Hoffar reference to the PTO. There was also evidence that the PTO, investigating the charge of inequitable conduct, had found that the Hoffar reference was merely cumulative to other references already of record.\(^{346}\)

The jury found that the patentee had made material misrepresentations during patent prosecution, and that the patentee had acted with gross negligence, but that the patentee had not intended to deceive the patent examiner.\(^{347}\) Based on these findings, the district court held the patent invalid for inequitable conduct.\(^{348}\)

On appeal, the patentee argued that the district court’s ruling was contrary to law, in light of the jury’s finding that intent to deceive had not been proven.\(^{349}\)

The alleged infringer argued that the jury had simply found that intent to deceive had not been proven by clear and convincing evidence, but that the jury’s finding of gross negligence did establish a sufficient threshold level of intent, which the district court then correctly balanced against the jury’s finding of materiality to sup-

\(^{344}\) 945 F.2d 1546, 20 USPQ2D 1332 (Fed. Cir. 1991).
\(^{345}\) Id. at 1333.
\(^{346}\) Id. at 1334.
\(^{347}\) Id. at 1335.
\(^{348}\) Id. at 1336.
\(^{349}\) Tol-O-Matic, 20 USPQ2D at 1336.
port a finding of inequitable conduct.\textsuperscript{350}

The Federal Circuit noted that inequitable conduct carries the consequence of permanent unenforceability of the patent.\textsuperscript{351} Forfeiture is not favored as a remedy for actions not shown to be culpable. Consequently, clear and convincing evidence of conduct sufficient to support an inference of culpable intent is required for a holding of inequitable conduct.\textsuperscript{352} Gross negligence alone, absent culpable intent, does not provide a sufficient basis for a holding of inequitable conduct.\textsuperscript{353}

The Federal Circuit noted that the jury's specific finding that intent to deceive had not been established, although gross negligence had been established, was not a trivial distinction.\textsuperscript{354} Since intent to deceive the patent examiner is an essential factual predicate to inequitable conduct, the finding that intent had not been proven bars a ruling of inequitable conduct.\textsuperscript{355} The Federal Circuit therefore reversed the judgment of inequitable conduct.

B. \textit{The Materiality of a Withheld Reference Requires Consideration of Both Similarities and Differences Between the Prior Art and the Claimed Invention}

The district court in the case of \textit{Halliburton Company v. Schlumberger Technology Corporation}\textsuperscript{356} determined that the patentee had engaged in inequitable conduct by withholding an important prior art reference from the PTO during prosecution.\textsuperscript{357} The patentee admitted that it had been aware of the withheld reference, but had not considered the reference to be material.\textsuperscript{358} The district court refused to enforce the patent and awarded the accused infringer attorney fees and expenses.\textsuperscript{359} The patentee appealed.

On appeal, the Federal Circuit initially noted that a two-step

\textsuperscript{350} J.P. Stevens & Co., Inc. v. Lex Tex Ltd., Inc., 747 F.2d 1553, 223 USPQ 1089 (Fed. Cir. 1984).
\textsuperscript{351} Tol-O-Matic, 20 USPQ2D at 1337.
\textsuperscript{354} Tol-O-Matic, 20 USPQ2D at 1340.
\textsuperscript{355} Id.
\textsuperscript{356} 925 F.2d 1435, 17 USPQ2D 1834 (Fed. Cir. 1991).
\textsuperscript{357} Id. at 1836.
\textsuperscript{358} Id. at 1841.
analysis is required to properly find inequitable conduct. First, the trial court must determine whether the withheld reference satisfies a threshold level of materiality and whether the applicant's conduct satisfies a threshold showing of intent to mislead. Second, the trial court must balance materiality and intent. The more material the reference, the less culpable the intent required, and vice versa.

Regarding materiality, the Federal Circuit noted that a reference is "material" if there is "substantial likelihood that a reasonable examiner would consider it important in deciding whether to allow the application to issue as a patent." However, a patent applicant is not obligated to disclose a material reference if the material reference is merely cumulative, or if the reference is less material than those references already before the examiner.

In determining whether a withheld reference is merely cumulative, or less material than those references already cited, the Federal Circuit observed that consideration must be given to both similarities and differences between the prior art and the claimed invention, including portions of the withheld reference that teach away from the claimed invention.

In *Halliburton*, the Federal Circuit concluded that the district court had misunderstood the claimed invention, and had therefore failed to appreciate the significance of the differences between the claimed invention and the withheld reference. These differences distinguished the withheld reference from the claimed invention, and also made the withheld reference less material than the cited references.

Because the withheld reference was less material than the cited references, the patentee was under no obligation to disclose the

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360. *Halliburton*, 17 USPQ2D at 1841.
367. *Halliburton*, 17 USPQ2D at 1842.
withheld reference to the PTO. Consequently, when the patentee decided to withhold the reference from the PTO, the patentee could not have acted with culpable intent to mislead.

The Federal Circuit therefore concluded that both the district court's materiality and intent findings were clearly erroneous, and that the patentee had not engaged in inequitable conduct. The judgment of the district court was therefore reversed.

C. A Reference That Is Material Only to Withdrawn Claims Can Not Be the Basis of a Holding of Inequitable Conduct

The subject patent in the case of Scripps Clinic & Research Foundation v. Genentech, Inc. was entitled "Ultrapurification of Factor VIII Using Monoclonal Antibodies." The accused infringer appealed the district court's grant of summary judgment that the patent owner had not engaged in inequitable conduct during prosecution of the subject patent application.

The prosecution history of the patent contained numerous references, including a single paragraph abstract written by a Dr. Meyer, as well as a 27 page paper also written by Dr. Meyer. The Meyer paper, which cited the Meyer abstract, contained a much more detailed disclosure than the Meyer abstract. The Meyer paper had been submitted to the PTO by the patent applicant as part of an information disclosure statement. The Meyer abstract had not been submitted to the PTO by the patent applicant, but had been independently discovered by the Examiner.

On appeal, the accused infringer charged the patent owner with inequitable conduct resulting from the patent owner's failure to bring the Meyer abstract to the examiner's specific attention.

The Federal Circuit observed, however, that the Meyer abstract merely summarized the Meyer paper, and was therefore merely cumulative to the Meyer paper. A reference that is merely cumulative to other references does not meet the threshold of mate-

368. Specialty Composites, 845 F.2d at 992, 6 USPQ2d at 1609; J.P. Stevens, 747 F.2d at 1559-60, 223 USPQ at 1092.
369. Halliburton, 17 USPQ2D at 1842.
370. Id.
371. 927 F.2d 1565, 18 USPQ2D 1001 (Fed. Cir. 1991).
372. Id. at 1003.
373. Id. at 1004.
374. Id. at 1015.
375. Id.
rituality that is a predicate to a holding of inequitable conduct.376

The Federal Circuit further stated that when a reference is before the examiner, whether through the examiner’s search or the applicant’s disclosure, it can not be deemed to have been withheld from the examiner. Thus, what is controlling is whether the Meyer abstract had been considered by the examiner, not how the Meyer abstract came to the examiner’s attention.377

The accused infringer also charged the patent owner with inequitable conduct because the patent owner had originally sought claims to certain monoclonal antibodies, and had subsequently canceled those claims after the examiner had required the patent owner to provide comparative data with the monoclonal antibodies described in the Meyer abstract.378

The Federal Circuit noted, however, that an applicant has the absolute right to decline to do work suggested by the PTO, and to withdraw claims that had been presented for examination, without incurring liability for inequitable conduct. The Federal Circuit held that a reference that is material only to withdrawn claims can not be the basis of a holding of inequitable conduct.379

The Federal Circuit concluded that, drawing all factual inferences in its favor, the accused infringer had failed to offer evidence or legal argument showing that inequitable conduct could be proven at trial, as to either materiality of the Meyer abstract, or the patentee’s intent to deceive or mislead.380 The Federal Circuit therefore affirmed the district court’s grant of partial summary judgment of no inequitable conduct based on the Meyer abstract.381

D. Disputed Fact Questions Regarding Inequitable Conduct Are Not Appropriately Resolved by Summary Judgment

The subject patent in the case of Scripps Clinic & Research Foundation v. Genentech, Inc.382 was a reissue patent entitled “Ultrapurification of Factor VIII Using Monoclonal Antibodies.”383

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377. Id. at 1015.
378. Id.
380. Id. at 1015.
381. Id. at 1016.
382. 927 F.2d 1565, 18 USPQ2D 1001 (Fed. Cir. 1991).
383. Id. at 1003.
During the prosecution of the reissue application, the examiner had raised various questions under 35 U.S.C. § 112 relating to the purity of the Factor VIII that was the subject of the proposed product claims. In response, the inventors had made several statements in the record regarding the purity of the claimed Factor VIII.384

The district court had found that the inventors' statements about the purity of the product were unsupported by the evidence. The district court therefore granted partial summary judgment of unenforceability of the claims due to inequitable conduct.385

On appeal, the Federal Circuit noted that there are two essential factual predicates to a determination of inequitable conduct: the materiality of the representation, and whether the representation was made with intent to deceive or mislead.386

In *Scripps* the Federal Circuit found that there was a factual dispute regarding whether the inventors' statements concerning purity were in error. Moreover, there was a factual dispute regarding the inventor's intent to mislead or deceive the examiner, an issue about which the district court had failed to make any finding.387 It was not appropriate to resolve either of these factually disputed issues on summary judgment. The Federal Circuit therefore reversed the grant of partial summary judgment of unenforceability of the claims for inequitable conduct.

E. Determination of Privity Under the Doctrine of Assignor Estoppel Requires Consideration of Both Direct and Indirect Contacts With the Patentee

Assignor estoppel is an equitable doctrine that prevents a patentee who has assigned the rights to a patent from later contending that what was assigned is a nullity.388 The doctrine also bars a similar challenge by any party in privity with the assignor. Privity depends upon the closeness of the relationship based upon a balancing of the equities.389

The complainant in the case of *Intel Corporation v. U. S. Inter-

384. *Id.* at 1011.
385. *Id.* at 1012.
387. *Scripps*, 18 USPQ2D at 1006.
The complainant further argued that assignor estoppel similarly prevented a second respondent from challenging the validity of the subject patent because of the close relationship that the inventor and the first respondent had with the second respondent.

The Commission determined that the first respondent was in privity with the inventor, and was therefore prevented by assignor estoppel from challenging the validity of the patent. However, the Commission determined that the second respondent did not have sufficient contacts with the inventor to be in privity, and that the second respondent was therefore not estopped from challenging the patent’s validity. The complainant appealed the Commission’s decision that the second respondent was not in privity with the inventor.

On appeal, the Federal Circuit found that the Commission had improperly limited its analysis to whether the relationship between the inventor and the second respondent was enough to find that the two were in privity. In determining whether the second respondent was in privity with the inventor, the Commission should have considered all contacts between the second respondent and the inventor, direct and indirect, including the contacts between the first respondent and the second respondent. The Commission had not adequately considered the part the inventor had played in creating the joint venture between the second respondent and the first respondent, under which both respondents sought to mutually develop the allegedly infringing product. The Federal Circuit concluded that the balance of the equities required a finding of privity between the second respondent and the inventor.

Because of its privity with the inventor and the first respondent, the Federal Circuit concluded that the second respondent should not have been allowed to challenge the validity of the patent. Because the second respondent had been improperly permitted to

390. 946 F.2d 821, 20 USPQ2D 1161 (Fed. Cir. 1991).
391. Id. at 1175.
392. Id.
393. Id. at 1176.
394. Intel, 20 USPQ2D at 1177.
395. Id.
396. Id.
contest the validity of the patent, the Federal Circuit vacated the Commission's holding that claim 1 of the patent was invalid.\textsuperscript{397}

XI. INJUNCTIVE RELIEF - 35 U.S.C. § 283

A. The Patentee Has the Burden of Showing Likelihood of Success With Respect to Validity and Infringement At the Preliminary Injunction Stage

The trial court in the case of *Nutrition 21 v. The United States*\textsuperscript{398} had granted a preliminary injunction pursuant to 35 U.S.C. § 283, which enjoined the alleged infringer from selling or offering for sale a product encompassed within the patent claims.\textsuperscript{399} On appeal to the Federal Circuit, the alleged infringer sought relief from the injunction on grounds that the district court had erred by failing to set forth adequate findings of fact to support the preliminary injunction.\textsuperscript{400}

The Federal Circuit initially noted that the issuance of a preliminary injunction turns upon four factors: 1) the probability that the party seeking the injunction will succeed on the merits; 2) the threat of irreparable harm to the party seeking the injunction should a preliminary injunction be denied; 3) the balance between this harm and the harm that granting the injunction will cause to the other parties; and 4) the public interest.\textsuperscript{401}

Regarding the first factor (the probability that the party seeking the injunction will succeed on the merits), the Federal Circuit observed that while a patent is presumed valid, that presumption of validity is a *procedural* device that places the burden of going forward and the ultimate burden of persuasion *at trial* on the party attacking the validity of a patent.\textsuperscript{402} Prior to trial, at the preliminary injunction stage, the burden of showing likelihood of success on the merits with respect to the patent's validity, enforceability, and infringement is placed upon the patentee.\textsuperscript{403} A patentee must therefore "clearly show" that the patent is valid and infringed

\begin{itemize}
\item \textsuperscript{397} *Id.* at 1181.
\item \textsuperscript{398} 930 F.2d 867, 18 USPQ2D 1347 (Fed. Cir. 1991).
\item \textsuperscript{399} *Nutrition 21 v. Thorne Research Inc.*, 130 F.R.D. 671, 14 USPQ2D 1244 (1990).
\item \textsuperscript{400} *Id.* at 1245.
\item \textsuperscript{401} *Pretty Punch Shoppettes v. Hauk*, 844 F.2d 782, 783, 6 USPQ2D 1563, 1564 (Fed. Cir. 1988).
\item \textsuperscript{403} *Atlas Powder Co. v. Ireco Chemicals*, 773 F.2d 1230, 1233, 227 USPQ 289, 292 (Fed. Cir. 1985).
\end{itemize}
before a court may preliminarily enjoin an alleged infringer.\textsuperscript{404} In the case of \textit{Nutrition 21}, the Federal Circuit found that the required "clear showing" of validity and infringement was absent.\textsuperscript{405}

Regarding the second factor (the threat of irreparable harm to the party seeking the injunction), the Federal Circuit noted that without a clear showing of validity and infringement, a presumption of irreparable harm does not arise in a preliminary injunction proceeding.\textsuperscript{406} There is no presumption that money damages will be inadequate. Nor is irreparable harm proven by evidence of the difficulty of calculating losses in market share or speculation that such losses might occur.

The Federal Circuit therefore vacated the preliminary injunction due to the district court's failure to set forth adequate findings of fact to support the preliminary injunction.\textsuperscript{407}

\textbf{B. Preliminary Injunctive Relief Against Infringement Under The Doctrine of Equivalents Requires a Finding That the Function/Way/Result Test Has Been Met}

The patentee in the case of \textit{The Conair Group, Inc. v. Automatik Apparate-Maschinenbau GmbH}\textsuperscript{408} had filed suit against the alleged infringer and had moved for a preliminary injunction. The district court concluded that both literal infringement and infringement under the doctrine of equivalents were reasonably likely to be found, and granted the motion.\textsuperscript{409} The alleged infringer appealed the preliminary injunction order.

The issue on appeal was whether the District Court had abused its discretion, committed an error of law, or seriously misjudged the evidence by granting the patentee's motion for a preliminary injunction.\textsuperscript{410}

With regard to literal infringement, the Federal Circuit noted that the record contained uncontradicted evidence indicating that at least one limitation of the patent claim was not met by the accused

\textsuperscript{404} \textit{Roper}, 757 F.2d at 1271-72, 225 USPQ at 348-49; Smith Int'l, Inc. v. Hughes Tool Co., 718 F.2d 1573, 1580-81, 219 USPQ 686, 692 (Fed. Cir. 1983).

\textsuperscript{405} \textit{Nutrition 21}, 18 USPQ2D at 1347.

\textsuperscript{406} Datascope Corp. v. Kontron, Inc., 786 F.2d 398, 400, 229 USPQ 41, 42-43 (Fed. Cir. 1986); \textit{Roper}, 757 F.2d at 1271, 225 USPQ at 349.

\textsuperscript{407} \textit{Roper}, 225 USPQ at 349.

\textsuperscript{408} 944 F.2d 862, 20 USPQ2D 1067 (Fed. Cir. 1991).


\textsuperscript{410} \textit{Conair Group}, 20 USPQ2D at 1069.
device.\textsuperscript{411} The Federal Circuit therefore concluded that the district court had seriously misjudged the evidence, and that the district court's determination of a likelihood of success on grounds of literal infringement was erroneous.\textsuperscript{412}

With regard to infringement under the doctrine of equivalents, the Federal Circuit noted that Rule 52(a) of the Federal Rules of Civil Procedure requires a district court to make findings of fact to support the granting of a preliminary injunction. Failure to provide adequate findings of fact is an error of law.\textsuperscript{413}

The Federal Circuit noted that the district court had failed to make any findings that the accused device performed substantially the same function as the claimed invention, that the accused device did so in substantially the same way, or that the accused device obtained the same result.\textsuperscript{414} The district court had further failed to make any findings that the range of equivalents sought by the patentee did not "ensnare the prior art."\textsuperscript{415} Lastly, the district court had failed to make any findings regarding whether the doctrine of prosecution history estoppel applied to limit the range of equivalents.\textsuperscript{416}

Since the district court had made none of the required findings with regard to infringement under the doctrine of equivalents, the Federal Circuit found no basis for concluding that there was a likelihood of success on that ground. Consequently, the injunction was vacated.\textsuperscript{417}

\begin{itemize}
\item \textsuperscript{411} Id. at 1070.
\item \textsuperscript{412} Id. at 1071.
\item \textsuperscript{413} Nutrition 21 v. United States, 930 F.2d 867, 869, 18 USPQ2D 1347, 1349 (Fed. Cir. 1991). Fed. R. Civ. P. 52(a) provides, in pertinent part, that: In all actions tried upon the facts without a jury or with an advisory jury, the court shall find the facts specially and state separately its conclusions of law thereon, and judgment shall be entered pursuant to Rule 58; and in granting or refusing interlocutory injunctions the court shall similarly set forth the findings of fact and conclusions of law which constitute the grounds of its action . . . .
\item \textsuperscript{416} Conair, 20 USPQ2D at 1070.
\item \textsuperscript{417} Id.
\end{itemize}
C. Preliminarily Injunctive Relief Against Infringement
Under the Doctrine of Equivalents Requires
Consideration of Whether the Teachings of the Prior
Art Would Have Made Obvious the Range of
Equivalents Being Asserted

The patent owner in the case of We Care, Inc. v. Ultra-Mark International Corp.\(^{418}\) had filed suit against the alleged infringer and had sought a preliminary injunction pursuant to 35 U.S.C. § 283 to prevent the manufacture and sale of the accused device while the suit was pending.\(^{419}\) The district court determined that the patent owner would probably not be able to prove literal infringement, but granted the injunction based on the finding that the patent owner was likely to prove infringement at trial under the doctrine of equivalents.\(^{420}\) The alleged infringer appealed the district court's grant of a preliminary injunction.

On appeal, the Federal Circuit observed that the doctrine of equivalents may not be used to extend a patent owner's right to exclude beyond what could lawfully have been obtained in the original patent application. Therefore, in determining infringement under the doctrine of equivalents, the prior art must be examined to assure that the range of equivalents being asserted does not encroach upon subject matter in the prior art.\(^{421}\) This examination necessarily involves consideration of not only what the prior art would have anticipated under 35 U.S.C. § 102, but also what the prior art would have made obvious under 35 U.S.C. § 103, at the time the patent application was filed.

With respect to the requisite prior art analysis, the district court in the case of We Care had observed that the none of the relevant prior art references “identically disclosed” every element of the patent claims, as “extended” by the doctrine of equivalents. The Federal Circuit found that the district court's prior art analysis did not go far enough, since the district court failed to consider whether the teachings of the prior art would have made obvious the range of equivalents being asserted for the patent claims.\(^{422}\) The Federal Circuit concluded that the district court had erred by not considering, in an obviousness context, whether a range of equivalents broad

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\(^{418}\) 930 F.2d 1567, 18 USPQ2D 1562 (Fed. Cir. 1991).

\(^{419}\) Id. at 1563.

\(^{420}\) We Care, Inc. v. Ultra-Mark Int'l Corp., et al., 741 F. Supp. 743, 14 USPQ2D 1804 (D. Minn. 1989).


\(^{422}\) We-Care, Inc., 18 USPQ2D at 1565.
enough to find infringement was permissible.\textsuperscript{423}

Accordingly, the Federal Circuit vacated the preliminary injunction and remanded the case to the district court to determine whether the range of equivalents sought by the patent owner encroached upon the prior art.\textsuperscript{424}

\textbf{D. Preliminary Injunctive Relief Against Design Patent Infringement Requires a Finding That the Novelty in the Patented Design Has Been Appropriated and That the Ordinary Observer Would Be Deceived}

In the case of \textit{Oakley, Inc. v. International Tropic-Cal, Inc.}\textsuperscript{425} the District Court had granted a preliminary injunction enjoining the alleged infringer from infringing a design patent. The alleged infringer appealed the injunction.\textsuperscript{426}

On appeal, the Federal Circuit noted that under Rule 52(a) of the Federal Rules of Civil Procedure, a preliminary injunction must be supported by findings of fact.\textsuperscript{427} The test of the adequacy of the findings is whether they are sufficiently comprehensive and pertinent to the issue to form a basis for the decision.\textsuperscript{428}

In the case of a design patent, proof of infringement requires a showing that an ordinary observer would be deceived in a manner that would induce the observer to purchase the accused device supposing it to be the patented design.\textsuperscript{429} In addition to overall similarity of design, the accused device must also appropriate the novelty in the patented design which distinguishes it from the prior art.\textsuperscript{430}

In \textit{Oakley}, the Federal Circuit found that the district court had failed to make any explicit findings regarding these facts.\textsuperscript{431} The district court had made no express or implied finding that the patent owner was likely to be able to prove at trial that the alleged infringer's products infringed the patent.\textsuperscript{432} Because the district court's findings of fact were insufficient for proper review of the
issues, the Federal Circuit vacated the District Court’s preliminary injunction and remanded the case for further proceedings.\textsuperscript{433}

E. \textit{Likelihood of Success On the Merits Includes a Showing That the Plaintiff Holds Title to the Patent}

The inventor of the patented subject matter in the case of \textit{Filmtec Corporation v. Allied-Signal Inc.}\textsuperscript{434} had been one of the founders of the plaintiff corporation.\textsuperscript{435} Prior to founding the plaintiff corporation, the inventor had been employed at a non-profit research organization.\textsuperscript{436}

The inventor’s work at the non-profit research organization had been carried out under a contract with the U.S. Government. The contract required the non-profit research organization to grant to the U.S. Government the entire right in any invention made under the contract or any subcontract thereunder. The contract further required the non-profit research organization to warrant that it would obligate its employees to assign their rights in any invention made under the contract to the non-profit research organization.\textsuperscript{437}

The inventor had left the non-profit research organization in January of 1978. The subject patent application had been filed by the inventor in February of 1979. The inventor assigned his rights in the patent application to the plaintiff corporation. After the subject patent issued, the plaintiff corporation sued the alleged infringer for infringement.\textsuperscript{438}

The alleged infringer asserted that the invention claimed in the patent had been made by the inventor while employed by the non-profit research organization. The alleged infringer asserted that, under the contract between the non-profit research organization and the Government, the Government held legal title to the invention and therefore the inventor had no rights to assign to the plaintiff. Since the plaintiff lacked legal title to the patent, the plaintiff had no standing to bring an infringement action under the patent.\textsuperscript{439}

The district court concluded that, as a matter of law, even if the invention had been made while the inventor had been employed

\textsuperscript{433} \textit{Id.} at 1404.
\textsuperscript{434} 939 F.2d 1568, 19 USPQ2D 1508 (Fed. Cir. 1991).
\textsuperscript{435} \textit{Id.} at 1509.
\textsuperscript{436} \textit{Id.}
\textsuperscript{437} \textit{Id.}
\textsuperscript{438} \textit{Id.} at 1510.
\textsuperscript{439} \textit{Filmtec}, 19 USPQ2D at 1510.
at the non-profit research organization, the Government could have no more than equitable title to the patent, which equitable title could not be asserted as a defense by the alleged infringer.\textsuperscript{440} The district court issued a preliminary injunction against the alleged infringer, and the alleged infringer appealed.

The Federal Circuit viewed the issue on appeal as not who should ultimately be held to have title to the patent, but instead whether the plaintiff had made a sufficient showing to establish reasonable likelihood of success on the merits, which included a showing that title to the patent was held by the plaintiff.\textsuperscript{441}

The Federal Circuit agreed with the alleged infringer that if the subject matter of the patent had been invented by the inventor during his employment with the non-profit research organization, and if the inventor had granted the non-profit research organization rights in the invention made during his employment, then the inventor had nothing to give to the plaintiff and the purported assignment to the plaintiff was a nullity.\textsuperscript{442} Consequently, the plaintiff would lack both title to the patent and standing to bring the present action.\textsuperscript{443}

However, the record did not indicate whether the employment agreement between the inventor and the non-profit research organization either granted or required the inventor to grant to the non-profit research organization the rights to the patented invention.\textsuperscript{444} The Federal Circuit was therefore unable to determine who held legal title to the patent and was unable to determine if the plaintiff could make a sufficient legal showing to establish the likelihood of success necessary to support a preliminary injunction.\textsuperscript{445}

Because the record left serious doubts as to who had title to the patent, the Federal Circuit concluded that the plaintiff had failed to established a reasonable likelihood of success on the merits on the title issue. Consequently, the Federal Circuit vacated the grant of the preliminary injunction and remanded to the district court for further proceedings.\textsuperscript{446}

\textsuperscript{440} Id. at 1511.
\textsuperscript{441} Id.
\textsuperscript{442} Id.
\textsuperscript{443} Id. at 1512.
\textsuperscript{444} Filmtec, 19 USPQ2D at 1512.
\textsuperscript{445} Id.
\textsuperscript{446} Id. at 1513.
XII. DAMAGES - 35 U.S.C. § 284

A. A Party Seeking to Recover Money Damages for Patent Infringement Must Have Held Legal Title to the Patent During the Time of the Infringement

The assignee of the subject patent in the case of *Arachnid, Inc. v. Merit Industries, Inc.*\(^{447}\) had entered into a consulting agreement in 1980. The consulting agreement provided that any inventions conceived by the consultant's employees in the course of the project covered by the agreement would be the property of the patent assignee, and all rights to the invention "will be assigned" by the consultant to the patent assignee.\(^{448}\)

In November, 1982, several months after the consulting agreement was terminated, the consultant's employees filed an application for the subject patent. However, instead of assigning the patent application to the patent assignee, the consultant's employees assigned the patent application to the consultant.\(^{449}\)

In April, 1983, the patent assignee sued the consultant for breach of the 1980 consulting agreement, seeking an assignment of all right, title, and interest in the patent application (from which the subject patent had subsequently issued) that had been filed by the consultant's employees.\(^{450}\)

In April, 1987, the district court declared the patent assignee to have been and to be the lawful owner of all right, title, and interest in and to the patented invention since the conception of the invention.\(^{451}\) The district court ordered the consultant to assign all its right, title, and interest in the patent to the patent assignee.\(^{452}\)

In October, 1987, in accordance with the district court order, the consultant executed an assignment of all of its right, title, and interest in and to the patent to the patent assignee.\(^{453}\) The assignment did not include any assignment of the right to recover for past infringement.\(^{454}\)

Meanwhile, in May, 1985, the consultant had granted a nonexclusive license to practice the patented invention to the alleged in-

\(^{447}\) 939 F.2d 1574, 19 USPQ2D 1513 (Fed. Cir. 1991).

\(^{448}\) Id. at 1515.

\(^{449}\) Id.

\(^{450}\) Id.

\(^{451}\) *Arachnid*, 19 USPQ2D at 1516.

\(^{452}\) Id.

\(^{453}\) Id.

\(^{454}\) Id.
Beginning in December, 1985, and ending in June, 1986, the alleged infringer had manufactured and sold a device which admittedly fell within the scope of the patent claims. The alleged infringer argued that the patent assignee did not have standing to sue for an infringement that had occurred in 1985-86. The alleged infringer asserted that until October 1987 (when the consultant assigned the patent to the patent assignee), the patent assignee had only "equitable title" to the patent, not "legal title," and that such equitable title alone was not sufficient to confer standing to sue for money damages for infringement.

The patent assignee argued that it had acquired all legal and equitable rights to the patented invention when the consultant signed the consulting agreement in 1980. The patent assignee had therefore always been the legal and equitable owner of the patented invention, and on that basis the patent assignee had standing to sue the alleged infringer for the infringement occurring in 1985-86.

The Federal Circuit noted initially that an action to recover money damages for patent infringement is an action "at law," rather than an action "in equity." The general rule is that one seeking to recover money damages for patent infringement must have held the legal title to the patent during the time of the infringement.

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455. *Arachnid*, 19 USPQ2D at 1515.
456. *Id.*
457. *Id.*
458. *Id.* at 1516.
459. *Id.*
460. *Arachnid*, 19 USPQ2D at 1516.
461. *Id.*
462. *Id.*
463. *Id.*
464. An example of an action "in equity" is an action seeking an injunction for patent infringement.
infringement.\textsuperscript{465}

The Federal Circuit found that the 1980 consulting agreement was merely an agreement to assign, rather than an assignment.\textsuperscript{466} The statement in the agreement that all rights to inventions developed during the consulting period "will be assigned" to the patent assignee was not a present assignment of an existing invention and was not effective to transfer all legal rights to the patent assignee. The patent assignee therefore did not obtain legal title to the patent until October 1987, when the consultant executed an assignment of all of its right, title, and interest in and to the patent to the patent assignee.\textsuperscript{467}

The Federal Circuit further found that the 1987 district court order decreeing the patent assignee to have been the owner of the invention since the invention's conception may have validated the patent assignee's right to seek equitable relief against the consultant. However, the 1987 district court order did not retroactively divest the consultant of legal title to the patent during the 1985-86 timeframe and revest that legal title in the patent assignee for standing purposes.\textsuperscript{468}

Therefore, the Federal Circuit concluded that the district court had erred in directing a verdict of infringement in favor of the patent assignee, and reversed the judgment of the district court.\textsuperscript{469}

B. \textit{A Reasonable Royalty Under 35 U.S.C. § 284 Is Not Restricted to a Specific Figure Put Forth By One of the Parties}

The accused product in the case of \textit{SmithKline Diagnostics, Inc. v. Helena Laboratories Corporation}\textsuperscript{470} had been held to infringe

\textsuperscript{465} Crown Die & Tool Co. v. Nye Tool & Mach. Works, 261 U.S. 24, 67 L. Ed. 516, 43 S. Ct. 254 (1923). An exception to the general rule is recognized where the assignment of a patent is coupled with an assignment of a right of action for past infringement. Another exception to the general rule has been recognized which confers standing upon non-patent owners to join in infringement suits as co-plaintiffs with the patentee; \textit{see}, \textit{e.g.}, \textit{Kalman v. Berlyn Corp.}, 914 F.2d 1473, 16 USPQ2D 1093 (Fed. Cir. 1990) (sole licensee with clearly defined nexus to patentee); \textit{Weinar v. Rollform Inc.}, 744 F.2d 797, 223 USPQ 369 (Fed. Cir. 1984) (exclusive vendor of patented product), \textit{cert. denied}, 470 U.S. 1084, 105 S. Ct. 1844, 85 L. Ed. 2d 143 (1985).

\textsuperscript{466} \textit{Arachnid}, 19 USPQ2D at 1518.

\textsuperscript{467} \textit{Id.} at 1519.

\textsuperscript{468} \textit{Id.}

\textsuperscript{469} \textit{Id.} at 1519.

\textsuperscript{470} 926 F.2d 1161, 17 USPQ2D 1922 (Fed. Cir. 1991). \textit{See also SmithKline Diagnostics, Inc. v. Helena Laboratories Corp.}, 859 F.2d 878, 891, 8 USPQ2D 1468, 1479 (Fed. Cir. 1988).
the patent.\textsuperscript{471} The district court had concluded that the patentee had failed to establish the requirements for a damage award based upon lost profits.\textsuperscript{472}

The district court turned to the alternative damage remedy available under 35 U.S.C. § 284, namely, the calculation of damages based upon a "reasonable royalty".\textsuperscript{473} The district court entered a "reasonable royalty" damage award based upon a 25\% royalty for the infringer's sales of infringing goods.\textsuperscript{474}

The patentee appealed the judgment of the district court, urging that the district court had wrongly denied the patentee a greater amount calculated on the basis of the patentee's lost profits. The infringer cross-appealed, asserting that the district court's award based on the 25\% royalty figure could not be upheld because this figure was not specifically advocated by either party.\textsuperscript{475} The infringer asserted that the district court should have entered a "reasonable royalty" damage award based on only a 3\% royalty figure, since this was the royalty figure at which the infringer had licensed other, similar products.\textsuperscript{476}

On appeal, the Federal Circuit noted that the amount of a prevailing party's damages is a finding of fact.\textsuperscript{477} Consequently, if the amount of a prevailing party's damages is fixed by the district court, then the damage award is reviewed in accordance with the "clearly erroneous" standard of Fed. R. Civ. P. 52(a).\textsuperscript{478}

The Federal Circuit then affirmed the district court's finding that the patentee had failed to prove, by a preponderance of the evidence, its entitlement to recover its lost profits as actual damages.\textsuperscript{479}

With respect to the district court's determination of a reasonable royalty, the Federal Circuit ruled that a district court is not restricted in finding a reasonable royalty to a specific figure put forth by one of the parties.\textsuperscript{480} The district court may reject the figures proffered by the parties and may substitute an intermediate figure as a matter of the district court's judgment based upon all of

\begin{itemize}
\item \textsuperscript{471} SmithKline, 17 U.S.P.Q.2d at 1923.
\item \textsuperscript{472} Id. at 1924.
\item \textsuperscript{473} Id.
\item \textsuperscript{475} SmithKline, 17 U.S.P.Q.2d at 1924.
\item \textsuperscript{476} Id.
\item \textsuperscript{477} Id.
\item \textsuperscript{478} Id. at 1925.
\item \textsuperscript{479} Id.
\item \textsuperscript{480} Radio Steel & Mfg. Co., 788 F.2d at 1556-57, 229 U.S.P.Q. at 433 (Fed. Cir. 1986).
\end{itemize}
the evidence.\textsuperscript{481}

In \textit{SmithKline}, the record showed that the infringer had entered licenses for products similar to the infringing product at royalty rates as low as 3\% and 5\%.\textsuperscript{482} However, the record also showed that the infringer had competed with lower priced competitors than the patentee. Furthermore, the evidence showed that the patented product had achieved immediate commercial success, that the patented product had satisfied a long felt need, that the patentee had never licensed the patented technology, and that the patentee had intended to maintain its exclusivity of the patented technology by refusing to grant licenses under the patent.\textsuperscript{483}

The Federal Circuit concluded that the finding of 25\% as a reasonable royalty had been based on all of the evidence and was not clearly erroneous. Consequently, the Federal Circuit affirmed the 25\% royalty as reasonable.\textsuperscript{484}

\textbf{C. Lost Profit Damages Must Be Based on Infringing Sales}

The subject patent in the case of \textit{Standard Havens Products, Inc. v. Gencor Industries, Inc.}\textsuperscript{485} was directed to a "counterflow" method of producing asphalt compositions.\textsuperscript{486} The patentee had charged the alleged infringer with contributing to or inducing infringement of the patent via the sale of the alleged infringer's asphalt-producing "Ultraplant," which plant allegedly performed the claimed "counterflow" method.\textsuperscript{487}

The district court found that the alleged infringer had contributed to and induced infringement of the patent, and that the patentee had suffered lost profit damages.\textsuperscript{488} The district court based the amount of lost profit damages upon the alleged infringer's sale of ten asphalt plants.\textsuperscript{489} Judgment was entered against the alleged infringer, and the alleged infringer appealed.

On appeal, the alleged infringer argued that the damage award should be vacated because the patentee had never bid on two of the ten asphalt plant sales used to calculate the damage award.\textsuperscript{490}

\begin{footnotes}
\footnote{481. \textit{SmithKline}, 17 USPQ2D at 1926.}
\footnote{482. \textit{Id.} at 1928.}
\footnote{483. \textit{Id.}}
\footnote{484. \textit{Id.} at 1928.}
\footnote{485. 953 F.2d 1360, 21 USPQ2D 1321 (Fed. Cir. 1991).}
\footnote{486. \textit{Id.} at 1323.}
\footnote{487. \textit{Id.} at 1324.}
\footnote{488. \textit{Id.} at 1325.}
\footnote{489. \textit{Id.}}
\footnote{490. \textit{Standard Havens}, 21 USPQ2D at 1325.}
\end{footnotes}
However, the Federal Circuit found that there were no acceptable noninfringing substitutes for asphalt plants that used the patented "counterflow" process. Consequently, it was not of controlling significance that the patent owner did not bid on every one of the infringing sales, since this fact did not show that the patentee could not or would not have made those sales if the infringer had not infringed. Thus, the Federal Circuit did not view the fact that the patentee had not bid on two of the ten asphalt plant sales included in the damage award as a basis for overturning the award.

The alleged infringer further argued that four of the ten asphalt plant sales were improperly included in the damage award, since three of the sales were of noninfringing asphalt plants, and one sale had been made to a foreign customer located in England.

Regarding the three noninfringing asphalt plant sales, the patentee argued that the alleged infringer's bids for those sales had included the infringing "counterflow" asphalt plant, and it was only after the bid had been accepted that the alleged infringer substituted a noninfringing "parallel flow" asphalt plant. Because of that substitution, the patentee contended that it had lost sales of its "counterflow" asphalt plant. However, because an infringing "counterflow" asphalt plant had never actually been sold, the Federal Circuit concluded that there had been no direct infringement and, therefore, no contributory infringement.

Regarding the sale to the foreign customer, the patentee asserted that the sale had been made in the U.S. However, the Federal Circuit observed that the patent claimed a method for producing asphalt, not an apparatus for implementing that process. Consequently, the sale in the U.S. of the unpatented apparatus alone did not make the alleged infringer a contributory infringer of the patented method.

Moreover, there was no evidence that the foreign customer had used the asphalt plant in the U.S., or that the foreign customer had shipped products back to the U.S. made abroad by the patented

491. Id.
493. Standard Havens, 21 USPQ2D at 1326.
494. Id. at 1328.
495. Id.
496. Id. at 1329.
498. Standard Havens, 21 USPQ2D at 1330.
Consequently, infringement by the foreign customer had not been shown and, in the absence of direct infringement, there can be no inducement of infringement or contributory infringement.\textsuperscript{500}

The Federal Circuit therefore vacated the patent damage award and remanded the case for redetermination of the proper award for lost profits based on the six infringing asphalt plant sales.\textsuperscript{501}

D. \textit{A Patent Owner Establishing All Four Panduit Requirements Has Sustained the Burden of Proving Entitlement to Lost Profits for All Infringing Sales}

Under 35 U.S.C. § 284, a district court is required to award damages adequate to compensate the patent owner for infringement, but in no event less than a reasonable royalty. Generally, in determining whether a patent owner is entitled to obtain damages for lost profits caused by the infringement, the district court must conclude (1) that the patent owner would have made the sales of the patented product but for the occurrence of the infringement, and (2) that proper evidence supporting the computation of lost profits was presented at trial.\textsuperscript{502}

The only specific test approved by the Federal Circuit in determining whether a patent owner is entitled to obtain damages for lost profits caused by the infringement was introduced in the case of \textit{Panduit Corp. v. Stahlin Brothers Fibre Works, Inc.}\textsuperscript{503} The Panduit test has four requirements. To obtain damages for lost profits, the patent owner must prove (1) a demand for the patented product, (2) the marketing and manufacturing capability to exploit the demand, (3) an absence of acceptable noninfringing substitutes for the patented product, and (4) the amount of profit which the patent owner would have made.\textsuperscript{504}

During the accounting phase of litigation in the case of \textit{Kaufman Company, Inc. v. Lantech, Inc.}\textsuperscript{505} the district court, applying

\textsuperscript{499} Id.
\textsuperscript{500} Id. at 1331.
\textsuperscript{501} Id. at 1332.
\textsuperscript{503} 575 F.2d 1152, 197 USPQ 726 (6th Cir. 1978).
\textsuperscript{504} Id. at 730.
the *Panduit* test, had concluded that the patent owner was entitled
to lost profit damages for only 8 of 44 infringing sales.\textsuperscript{506} The
district court had concluded that lost profit damages should not be
awarded for 36 of the infringing sales because the third *Panduit*
element had not been satisfied for these sales (i.e., the patent owner
had failed to show an absence of acceptable noninfringing substi-
tutes for these 36 infringing sales).\textsuperscript{507} This finding was based on the
fact that the patent owner had presented specific evidence of the
absence of acceptable noninfringing substitutes for 8 of the infring-
ing sales, but had failed to present specific evidence of the absence
of acceptable noninfringing substitutes for the remaining 36 infring-
ing sales.\textsuperscript{508} Because the district court found that acceptable nonin-
fringing substitutes for the patented product did exist, the court
denied lost profit damages for 36 of the 44 infringing sales.\textsuperscript{509}

On appeal, a threshold issue was whether the district court had
applied the correct rule of law in finding that there existed accepta-
ble noninfringing substitutes for the patented product.\textsuperscript{510}

The Federal Circuit noted that to be deemed acceptable, a non-
infringing substitute must not have a disparately higher price than,
or possess characteristics significantly different from, the patented
product.\textsuperscript{511} In *Kaufman*, the allegedly noninfringing substitutes did
not possess all of the beneficial characteristics of the patented prod-
uct, nor were they priced as low as the patented product.\textsuperscript{512} The
district court therefore erred when it concluded that the allegedly
noninfringing substitutes were "acceptable" noninfringing substi-
tutes.\textsuperscript{513} The district court should have found that there were no
acceptable noninfringing substitutes, and therefore should have
found that all four factors of the *Panduit* test had been satisfied.\textsuperscript{514}

The Federal Circuit further ruled that because the patent
owner had established all four *Panduit* requirements, the patent
owner had sustained the burden of proving entitlement to lost prof-
its for all infringing sales.\textsuperscript{515} In other words, because all four

\textsuperscript{506} *Kaufman*, 17 USPQ2D at 1829.
\textsuperscript{507} Id.
\textsuperscript{508} Id.
\textsuperscript{509} Id. at 1830.
\textsuperscript{510} Id.
\textsuperscript{511} Gyromat Corp. v. Champion Spark Plug Co., 735 F.2d 549, 553, 222 USPQ 4, 7
(Fed.Cir. 1984).
\textsuperscript{512} *Kaufman*, 17 USPQ2D at 1830.
\textsuperscript{513} Id.
\textsuperscript{514} Id. at 1832.
\textsuperscript{515} See, e.g., Bio-Rad Laboratories, Inc. v. Nicolet Instrument Corp., 739 F.2d 604,
616, 222 USPQ 654, 663 (Fed. Cir.), cert. denied, 469 U.S. 1038, 83 L. Ed. 2d 405, 105 S. Ct.
Panduit requirements were satisfied, it was reasonable to infer that the patent owner probably would have made all 44 of the infringing sales but for the occurrence of the infringement. The burden should then be placed upon the infringer to show that it is unreasonable to infer that some or all of the infringing sales probably caused the patent owner to suffer lost profits. Any doubts regarding the calculatory precision of the damage amount are resolved against the infringer.

According to the Federal Circuit, the reasonableness of the inference that the patent owner probably would have made all 44 of the infringing sales was not negated by evidence showing a customer preference for the infringer's services over those of the patent owner. Nor was the reasonableness of the inference negated by the patent owner's admission that it would not have competed with the infringer for every one of the 44 infringing sales.

The Federal Circuit reversed and remanded this case for the district court to calculate and award to the patent owner those profits lost on all 44 infringing sales.

E. Damages May Not Be Increased Under the Second Paragraph of 35 U.S.C. § 284 to Rectify a Perceived Inadequacy in an Actual Damage Award

The infringer in the case of Beatrice Foods Co. v. New England Printing and Lithographing Co. had intentionally destroyed evidence, thereby hindering the patentee in proving infringement and making it more difficult to accurately determine the actual damages. The district court decided to triple the damage award, explaining that the damage award was tripled not as a penalty, but to provide the patentee with adequate compensation for the infringement.

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516 (1984). The patent owner is only required to show that there was a "reasonable probability" that it would have made the infringing sales but for the occurrence of the infringement. The patent owner is not required to negate every possibility that a purchaser might not have bought another product other than the patented product absent the infringement. Gyromat Corp. v. Champion Spark Plug Co., 735 F.2d 549, 554, 222 USPQ 4, 8 (Fed. Cir. 1984).

517. Id.
518. Kaufman, 17 USPQ2D at 1832.
519. Id.
520. Id.
521. 923 F.2d 1576, 17 USPQ2D 1553 (Fed. Cir. 1991).
522. Id.
The principal issue on appeal was whether the district court had improperly tripled the damages on the theory that the increased award was necessary to adequately compensate the patentee for the infringement.523

The Federal Circuit noted that the provision of the patent laws governing the award of damages for infringement is 35 U.S.C. § 284.524 The first paragraph of 35 U.S.C. § 284 requires the district court to award damages "adequate to compensate for the infringement." The second paragraph of 35 U.S.C. § 284 authorizes the district court to increase the damages up to threefold. The statute does not state the basis upon which a district court may increase damages. However, case authority states that increased damages may be awarded only as a penalty for an infringer's willful infringement or bad faith.525

The Federal Circuit held that the adequacy of the damage award must be measured by actual damages pursuant to the first paragraph of § 284, rather than by increased damages pursuant to the second paragraph of § 284.526 If, as in Beatrice, the infringer's own conduct makes it difficult or impossible for the patentee to accurately determine the actual damages, then a district court may resolve all doubts against the infringer and determine the actual damages based upon the best available evidence.527 However, a district court may not increase the actual damage award under 35 U.S.C. § 284, second paragraph, in order to rectify what the district court views as an inadequacy in the actual damage award.528 A district court may increase the actual damage award under 35 U.S.C. § 284, second paragraph, only as a penalty for an infringer's willful infringement or bad faith.529

The Federal Circuit in Beatrice therefore affirmed the judgment of the district court insofar as it awarded actual damages, but

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523. The case was before the district court on remand from the Federal Circuit for the purpose of determining the patentee's damages. See Beatrice Foods Co. v. New England Printing and Lithographing Co., 899 F.2d 1171, 1176, 14 USPQ2D 1020, 1024 (Fed. Cir. 1990).

524. Beatrice, 17 USPQ2D at 1554.


526. Beatrice, 17 USPQ2D at 1556.


528. Beatrice, 17 USPQ2D at 1557.

529. Id.
vacated the judgment insofar as it awarded increased damages.\footnote{Id. at 1557.}

F. \textit{A Reduction of Lost Profit Damages Can Not Be Based Solely on Market Share}

The district court in the case of \textit{Uniroyal, Inc. v. Rudkin-Wiley Corp.}\footnote{939 F.2d 1540, 19 USPQ2D 1432 (Fed. Cir. 1991).} had found the infringer liable for patent infringement. In assessing damages, the district court had found that no acceptable non-infringing substitutes for the patented product existed in the relevant market.\footnote{Id. at 1434.} The district court had further found that, in the absence of the infringing sales, the patentee would have possessed an 80\% market share.\footnote{Id. at 1435.} The district court therefore awarded the patentee damages for lost profits on only 80\% of the infringing sales.\footnote{Id. at 1436.} The patentee appealed the judgment on the grounds that the district court had erred as a matter of law in reducing the damage award by 20\%.\footnote{See \textit{Uniroyal, Inc. v. Rudkin-Wiley Corp.}, 721 F. Supp. 28, 13 USPQ2D 1192 (Conn. June 26, 1989, Aug. 21, 1989).}

On appeal, the Federal Circuit agreed that the district court had erred. The Federal Circuit stated that the mere existence of a competing product in the market does not necessarily make that product an "acceptable substitute." For example, a competing product which lacks the advantages of the patented product is not an acceptable substitute to a customer seeking those advantages.\footnote{TWM Mfg. Co. v. Dura Corp., 789 F.2d 895, 901, 229 USPQ 525, 529 (Fed. Cir.), cert. denied, 479 U.S. 852, 93 L. Ed. 2d 117, 107 S. Ct. 183 (1986); Radio Steel & Mfg. Co. v. MTD Prods., Inc., 788 F.2d 1554, 1556, 229 USPQ 431, 432-33 (Fed. Cir. 1986).} Consequently, merely because a share of the market is held by competitors, it does not necessarily follow that acceptable non-infringing substitutes exist in the market.\footnote{\textit{Uniroyal}, 19 USPQ2D at 1437.} The Federal Circuit further stated that in determining whether a reduced damage award for lost profits is justified, the controlling issue is not whether there are other competitors in the market, but instead whether such competitors sell an acceptable non-infringing substitute.\footnote{Id.} The district court had found that there were no competitors selling an acceptable non-infringing substitute, and this finding was not clearly erroneous.\footnote{Id.} Thus, the patentee should

\footnote{\textit{Id.}}
have been awarded a profit on all of the infringing sales.\textsuperscript{540} The district court's reduction of lost profits based solely on market share was inconsistent with the finding of an absence of acceptable non-infringing substitutes.\textsuperscript{541}

The Federal Circuit therefore vacated and remanded for the entry of a judgment for damages reflecting the patentee's lost profits on all of the infringing sales.\textsuperscript{542}

G. A District Court Determination Denying Enhanced Damages May Not Be Overturned Absent A Clear Showing of Abuse of Discretion

After finding infringement, the district court in the case of State Industries, Inc. v. Mor-Flo Industries, Inc.\textsuperscript{543} had awarded the patentee lost profits on some infringing sales and a royalty on the remaining sales.\textsuperscript{544} The district court had also found that the infringement had not been willful and had denied enhanced damages under 35 U.S.C. § 284.\textsuperscript{545}

The Federal Circuit had affirmed the district court's judgment insofar as it had awarded lost profits and a royalty.\textsuperscript{546} The Federal Circuit had vacated the district court's judgment insofar as it had denied increased damages, and remanded to the district court to reconsider whether a finding of willful infringement and enhanced damages was justified.\textsuperscript{547}

On remand, the district court concluded that a finding of willful infringement and enhanced damages was not justified, and entered an order denying them.\textsuperscript{548} Because the district court's order left its damage award unchanged, the patentee appealed.

The patentee argued on appeal that the district court's failure to find willfulness was clearly erroneous, and that the district court had erred in not awarding enhanced damages.\textsuperscript{549}

On appeal, the Federal Circuit noted that a district court's analysis of whether to increase damages is a two-step process. First, the district court must determine whether willful infringement has

\textsuperscript{540}. Id.
\textsuperscript{541}. Id. at 1438.
\textsuperscript{542}. Id. at 1439.
\textsuperscript{543}. 948 F.2d 1573, 20 USPQ2D 1738 (Fed. Cir. 1991).
\textsuperscript{544}. Id. at 1739.
\textsuperscript{545}. Id.
\textsuperscript{546}. Id.
\textsuperscript{547}. Id. at 1740.
\textsuperscript{548}. State Industries, 20 USPQ2D at 1740.
\textsuperscript{549}. Id.
been proven. Second, if the district court finds that willful infringement has been proven, then it must still determine whether or not, under the totality of the circumstances, increased damages are warranted.\textsuperscript{550} This determination is committed to the sound discretion of the district court.\textsuperscript{551} A finding of willfulness, though a sufficient basis for an award of enhanced damages, does not compel such an award.\textsuperscript{552} The district court’s determination may not be overturned absent a clear showing of abuse of discretion.\textsuperscript{553}

The Federal Circuit found that the patentee in \textit{State Industries} was unable to point to any basis on which clear error in the district court’s willfulness finding could be shown.\textsuperscript{554} Moreover, even if the finding of no willfulness was overturned, that would not mandate reversal of the district court’s discretionary decision to deny enhanced damages.\textsuperscript{555}

Because the district court did not abuse its discretion in denying enhanced damages, the Federal Circuit affirmed. And because the Federal Circuit found the patentee’s appeal to be frivolous as filed and as argued, the Federal Circuit imposed sanctions pursuant to Fed.R.App.P. 38.\textsuperscript{556}


A. Restitution of Fee Award Under 35 U.S.C. § 285 May Be Inferred From Appellate Opinion

The district court in the case of \textit{Sun-Tek Industries, Inc. v. Kennedy Sky Lites, Inc.}\textsuperscript{557} had originally held that no “exceptional case” under 35 U.S.C. § 285 had been established, and had entered final judgment.\textsuperscript{558} Seven months later, the District Court reversed its determination and entered an amended final judgment which awarded the plaintiff attorney fees under 35 U.S.C. § 285.\textsuperscript{559} The defendant appealed to the Federal Circuit and challenged the district court’s authority to reverse its original final judgment and

\textsuperscript{550} Id.
\textsuperscript{551} Id.
\textsuperscript{553} \textit{State Industries}, 20 USPQ2D at 1740.
\textsuperscript{554} \textit{Id.} at 1742.
\textsuperscript{555} \textit{Id.}
\textsuperscript{556} \textit{Id.}
\textsuperscript{557} 929 F.2d 676, 18 USPQ2D 1332 (Fed. Cir. 1991).
\textsuperscript{558} \textit{Id.} at 1333.
\textsuperscript{559} \textit{Id.}
enter an amended final judgment awarding attorney fees. 560

While that appeal had been pending, the defendant had been unable to maintain the bond required by the district court in order to stay execution of the amended final judgment. 561 As a result, the plaintiff had satisfied the amended final judgment against the defendant through execution on the proceeds of a sale of the defendant's assets. 562

Thereafter, the Federal Circuit ruled that the district court had been without jurisdiction and authority to reverse its original final judgment. 563 The Federal Circuit vacated that portion of the district court's amended final judgment which had awarded attorney fees to the plaintiff. 564

The district court then determined that the mandate of the Federal Circuit did not include any stated requirement to order the plaintiff to make restitution of the attorneys' fees awarded in the amended final judgment. 565 The district court therefore ruled that (1) the plaintiff did not have to repay the attorney fees it had received pursuant to the amended final judgment, and (2) the proceedings in the district court following the amended final judgment supported a new finding of an "exceptional case" under 35 U.S.C. § 285 entitling the plaintiff to additional attorney fees.566 The defendant appealed both rulings of the district court.

On appeal, the Federal Circuit acknowledged that the district court may have been technically correct in stating that the Federal Circuit's mandate did not include an explicit requirement to order restitution. 567 However, the Federal Circuit's prior opinion had held that the district court did not have authority to amend its original final judgment, and that the district court's reversal of the original final judgment had been improper. 568 Consequently, the award of attorney fees under 35 U.S.C. § 285 after the original final judgment had been entered had been a nullity. 569 The Federal Circuit concluded that, under these circumstances, the district court had

560. Id.
561. Id.
562. Sun-Tek, 18 USPQ2D at 1333.
563. Id. at 1333-34.
565. Sun-Tek, 18 USPQ2D at 1334.
566. Id.
567. Id.
568. Id.
569. Id.
been given more than sufficient guidance to be able to infer the Federal Circuit's intention to order restitution.\textsuperscript{570} Thus, under the Federal Circuit's previous holding that attorney fees were improperly awarded, the Federal Circuit required the plaintiff to repay all it had collected in the grant of attorney fees, plus interest to the date of repayment.\textsuperscript{571} With respect to the district court's award of additional attorney fees for the defendant's post-judgment conduct, the Federal Circuit observed that a district court may properly award attorney fees under § 285 to prevent "gross injustice" when a party has litigated vexatiously.\textsuperscript{572}

The district court had based its award of additional attorney fees on the defendant's post-judgment litigation tactics, including the defendant's violation of the bond reduction order and attempts to defeat the plaintiff's execution on the amended final judgment.\textsuperscript{573} The district court had evaluated the defendant's post-judgment conduct in light of the defendant's previous litigation tactics.\textsuperscript{574} The Federal Circuit found that it was proper for the district court to take into consideration the pattern established by the defendant during the trial in determining whether the defendant's post-judgment conduct had been vexatious.\textsuperscript{575} The Federal Circuit could not say that the district court's conclusion that the defendant's post-judgment actions were vexatious had been improper.\textsuperscript{576} Accordingly, the Federal Circuit found that the district court's award of additional attorney fees for post-judgment vexatious conduct had not been an abuse of discretion.\textsuperscript{577}

XIV. **TIME LIMITATION ON DAMAGES - 35 U.S.C. § 286**

A. **A Patentee's Delay In Bringing Suit Does Not Alone Create a Presumption of Prejudice**

The patentee in the case of *A.C. Aukerman Company v. R.L. Chaides Construction Co.*\textsuperscript{578} had advised the accused infringer of the

\textsuperscript{570} Sun-Tek, 18 USPQ2D at 1334.
\textsuperscript{571} Id.
\textsuperscript{572} See Beckman Instruments, Inc. v. LKB Produkter AB, 892 F.2d 1547, 1552, 13 USPQ2D 1301, 1304 (Fed. Cir. 1989); Machinery Corp. of America v. Gullf sleeper AB, 774 F.2d 467, 227 USPQ 368 (Fed. Cir. 1985); Rohm & Haas Co. v. Crystal Chem. Co., 736 F.2d 688, 222 USPQ 97 (Fed. Cir. 1984).
\textsuperscript{573} Sun-Tek, 18 USPQ2D at 1335.
\textsuperscript{574} Id.
\textsuperscript{575} Id.
\textsuperscript{576} Id.
\textsuperscript{577} Id.
\textsuperscript{578} 18 USPQ2D 1618 (Fed. Cir. 1991).
alleged infringement in 1979.\textsuperscript{579} Essentially no further contact had occurred between the parties for approximately eight and one-half years.\textsuperscript{580} In 1988 the patentee filed suit for infringement.

The accused infringer responded by raising the defenses of laches and estoppel. The accused infringer asserted that the patentee's delay in filing suit had created a presumption that the delay was unreasonable and prejudicial, and the burden of proving the reasonableness of the delay or lack of prejudice was thereby shifted to the patentee.\textsuperscript{581}

The district court granted summary judgment in favor of the accused infringer, holding that the doctrines of laches and estoppel blocked the patentee's recovery of any damages.\textsuperscript{582}

On appeal, the Federal Circuit noted that 35 U.S.C. § 286 permits a patentee to sue for damages even though the first act of infringement had occurred more than six years prior to filing suit.\textsuperscript{583} However, in such a case, any damage award is limited to acts of infringement which occurred within the preceding six years.\textsuperscript{584} The Federal Circuit further observed that the issue of what presumptions arise from a patentee's delay exceeding the six year period of § 286 is a matter about which there is some confusion.\textsuperscript{585}

In the case of Cornetta v. United States\textsuperscript{586} (a non-patent case), the Federal Circuit, sitting \textit{en banc}, emphasized that delay alone does not constitute laches.\textsuperscript{587} The Federal Circuit rejected the idea that a defendant asserting a laches defense can rely on a presumption of prejudice, or shift the burden to the plaintiff to show lack of prejudice, merely because the delay is long.\textsuperscript{588}

However, in the case of Leinoff v. Louis Milona & Sons, Inc.,\textsuperscript{589} the Federal Circuit stated that a delay of more than six years in bringing an infringement action after the infringement is "noticed" is a presumptively unreasonable delay, and a patentee who waits for

\textsuperscript{579} Id. at 1625.
\textsuperscript{580} Id.
\textsuperscript{581} See, for example, Jamesbury Corp. v. Litton Indus. Prods., 839 F.2d 1544, 5 USPQ2d 1779 (Fed. Cir.), cert. denied, 488 U.S. 828 (1988).
\textsuperscript{582} A.C. Aukerman, 18 USPQ2d at 1625.
\textsuperscript{583} Id. at 1622.
\textsuperscript{584} "Except as otherwise provided by law, no recovery shall be had for any infringement committed more than six years prior to the filing of the complaint or counterclaim for infringement in the action." 35 U.S.C. § 286.
\textsuperscript{585} A.C. Aukerman, 18 USPQ2d at 1622.
\textsuperscript{586} 851 F.2d 1372, 1375 (Fed. Cir. 1988).
\textsuperscript{587} Id.
\textsuperscript{588} Id.
\textsuperscript{589} 726 F.2d 734, 220 USPQ 845 (Fed. Cir. 1984).
more than six years before filing suit must explain the delay.\textsuperscript{590} If the patentee fails to explain the delay, then a district court may find that the period of time alone to be sufficient evidence of undue delay.\textsuperscript{591} Moreover, a delay of six years raises a presumption of material injury, and places on the patentee the additional burden of proving a lack of injury to the infringer caused by the delay.\textsuperscript{592}

In \textit{Aukerman}, the Federal Circuit adopted the rule in \textit{Cornetta} and specifically rejected the notion that a presumption of prejudice arises due to the mere fact that the patentee delayed bringing suit.\textsuperscript{593} The Federal Circuit ruled that prejudice requires a showing that the patentee's delay was both unreasonable and inexcusable.\textsuperscript{594} Furthermore, the burden of proof in establishing the defenses of laches and estoppel remains with the accused infringer who alleges the defenses.\textsuperscript{595}

The Federal Circuit therefore concluded that the district court had erred in placing the burden on the patentee to rebut the presumption of prejudice, and had erred in concluding that the patentee was barred by the defenses of laches or estoppel.\textsuperscript{596} Accordingly, the Federal Circuit vacated the grant of summary judgment and remanded.

(Subsequent to rendering the above decision in the case of \textit{A.C. Aukerman Company v. R.L. Chaides Construction Co.}, the Federal Circuit vacated the decision and granted a rehearing.)\textsuperscript{597}

\section*{XV. Request for Reexamination - 35 U.S.C. § 302}

\textbf{A. Extrinsic Evidence May Be Considered In a Reexamination to Explain the Meaning of a Reference}

The subject patent in the case of \textit{In re Baxter Travenol Labs}\textsuperscript{598} was directed to a system for collecting, processing and storing components of blood. The claimed invention included a blood bag containing DEHP, a plasticizer.\textsuperscript{599}

The patentee had filed a request for reexamination based upon a prior art article, written by an employee of the patentee, which

\begin{footnotesize}
\begin{enumerate}
\item[590.] \textit{Id.}
\item[591.] \textit{Id.}
\item[592.] \textit{Id.} at 850.
\item[593.] \textit{A.C. Aukerman}, 18 USPQ2D at 1623-24.
\item[594.] \textit{Id.} at 1624.
\item[595.] \textit{Id.}
\item[596.] \textit{Id.} at 1625.
\item[597.] \textit{Id.}
\item[598.] 952 F.2d 388, 21 USPQ2D 1281 (Fed. Cir. 1991).
\item[599.] \textit{Id.} at 1283.
\end{enumerate}
\end{footnotesize}
described a blood bag system similar to the commercial blood bag system produced by the patentee.\textsuperscript{600} At the time the prior art article had been published, the commercial blood bag system produced by the patentee contained a blood bag plasticized with DEHP. The prior art article did not, however, contain any express mention of DEHP.\textsuperscript{601}

The patentee had discovered the prior art article during preparation for an interference proceeding. Testimony taken during the interference proceeding was also submitted as part of the reexamination.\textsuperscript{602}

The PTO Board concluded that, since the prior art article described the patentee's commercial system, and the patentee's commercial system utilized a DEHP plasticized blood bag, the skilled artisan would understand the prior art article as describing a blood bag plasticized with DEHP. Consequently, the Board found that the prior art article anticipated the claimed invention under 35 U.S.C. § 102(b).\textsuperscript{603}

On appeal to the Federal Circuit, the dispositive question regarding anticipation was whether a skilled artisan would reasonably understand or infer from the prior art article that the blood bag described therein was plasticized with DEHP.\textsuperscript{604}

The patentee argued that the testimony taken during the interference proceeding, upon which the Board had relied in affirming the § 102(b) rejection, was extrinsic evidence which should not have been considered in determining the anticipatory teachings of the prior art article.\textsuperscript{605} The Federal Circuit rejected this argument, holding that extrinsic evidence may be considered when it is used to explain, rather than to expand, the meaning of a reference.\textsuperscript{606} In the case of \textit{In re Baxter Travenol}, the testimony taken during the interference was used to identify the material employed in the patentee's commercial blood bags, thereby explaining what the language in the prior art article would have meant to the skilled artisan.\textsuperscript{607} The testimony showed that the skilled artisan, reading the prior art article, would have understood the article to be

\textsuperscript{600.} \textit{Id.}
\textsuperscript{601.} \textit{Id.}
\textsuperscript{602.} \textit{Id.}
\textsuperscript{603.} \textit{Baxter}, 21 USPQ2d at 1284.
\textsuperscript{604.} \textit{Id.}
\textsuperscript{605.} \textit{Id.}
\textsuperscript{606.} Scripps Clinic & Research Foundation v. Genentech, Inc., 927 F.2d 1565, 1576-77, 18 USPQ2d 1001, 1010 (Fed. Cir. 1991).
\textsuperscript{607.} \textit{Baxter}, 21 USPQ2d at 1284.
describing a blood bag plasticized with DEHP.\textsuperscript{608}

The patentee further argued that the skilled artisan would not necessarily have thought that the blood bag disclosed in the prior art article was plasticized with DEHP, since there were other, non-DEHP plasticizers available at the time the article had been published.\textsuperscript{609} The Federal Circuit found this argument unpersuasive, since the prior art article specifically described the patentee's commercial blood bag, and the patentee's commercial blood bag was known to be plasticized with DEHP.\textsuperscript{610} Consequently, the Federal Circuit concluded that the prior art article disclosed all of the elements of the claimed invention, and this disclosure was unaffected by the availability of other, alternative elements.\textsuperscript{611}

The Board's finding that the claims were anticipated by the prior art article was therefore affirmed by the Federal Circuit.\textsuperscript{612}

\textbf{B. Claims Are Not Deemed Substantively Changed As a Matter of Law When Amended During Reexamination Following a Rejection Based on Prior Art}

During reexamination of the subject patent in the case of \textit{Lairtram Corporation v. NEC Corporation},\textsuperscript{613} the examiner had rejected the patent claims under 35 U.S.C. \textsection 102(b) and \textsection 103 in view of certain newly cited references.\textsuperscript{614} In response to the rejection, the patent owner had amended the claims and had pointed out how the teachings of the references differed from the amended claims.\textsuperscript{615} The examiner allowed the claims, as amended.\textsuperscript{616}

In a subsequent suit for patent infringement, the alleged infringer asserted that because the amendment to the claims during reexamination had been made to overcome a rejection based on prior art, the amendment had been substantive as a matter of law.\textsuperscript{617} Consequently, the patent owner could not recover damages for the alleged infringement during the period between the date of issuance of the original patent and the date of issuance of the reexamined patent, because the original and reexamined claims were not

\textsuperscript{608. Id.}
\textsuperscript{609. Id.}
\textsuperscript{610. Id.}
\textsuperscript{611. Id.}
\textsuperscript{612. Baxter, 21 USPQ2D at 1284.}
\textsuperscript{613. 952 F.2d 1357, 21 USPQ2D 1276 (Fed. Cir. 1991).}
\textsuperscript{614. Id. at 1277.}
\textsuperscript{615. Id.}
\textsuperscript{616. Id. at 1278.}
\textsuperscript{617. Id.}
“identical” in scope, as required by 35 U.S.C. § 252.618

The patent owner responded by asserting that the amendment to the claims during reexamination had been done to more particularly define the invention, and that the words added by amendment stated inherent details and did not change the scope of the claims.619

The district court did not decide the question of whether the changes to the claims were in fact substantive, or discuss the scope of the claims before and after amendment.620 The district court ruled summarily that any amendment to overcome a rejection on prior art is substantive as a matter of law.621 The district court's grant of partial summary judgment in favor of the alleged infringer was certified for immediate appeal.

On appeal, the issue was whether amendments made to patent claims during reexamination of the patent are substantive as a matter of law, when the amendments are made following a rejection based on prior art.622

The Federal Circuit initially noted that the word “identical” in § 252 does not mean verbatim.623 Instead, the word “identical” in § 252 means, at most, without substantive change.624

The Federal Circuit noted further that the cases relied upon by the alleged infringer were cases in which prosecution history estoppel limited application of the doctrine of equivalents.625 The Federal Circuit observed that each of these cases had been decided on its particular facts, taking into account relevant evidence of the specification, prosecution history, prior art, and other pertinent circumstances.626 Consequently, none of these cases supported the per se rule urged by the alleged infringer.627

Thus, with respect to the issue of infringement under the doctrine of equivalents, Federal Circuit precedent had rejected the proposition that any amendment to a claim acts as a per se estop-
pel. By analogy, in the case of Laitram, where the issue was substantive change on reexamination, the Federal Circuit similarly declined to adopt a rule of per se estoppel.

The Federal Circuit held that when claims are amended during reexamination following a rejection based on prior art, the claims are not deemed substantively changed as a matter of law. Instead, to determine whether a claim change is substantive, it is always necessary to analyze the claims of the original and the reexamined patents in light of the particular facts, including the prior art, the prosecution history, other claims, and any other pertinent information.

The Federal Circuit therefore reversed the grant of summary judgment and remanded the case for further proceedings.

XVI. DISTRICT COURT JURISDICTION AND PROCEDURE

A. The Proper Focus in Determining Subject Matter Jurisdiction Is Whether the Plaintiff Has Pledged the Elements Required for a Patent Infringement Claim

The Official Gazette of the PTO had listed the subject patent in the case of Exxon Chemical Patents, Inc. v. Lubrizol Corporation as being issued on September 19, 1989. On that same date the patentee had filed suit against the alleged infringer in district court.

However, for a substantial period of time after September 19, 1989 the patent document had not been printed, the patent grant had not been signed by or on behalf of the Commissioner, the official seal had not been affixed, a copy of the specification and claims had not been available to the public, and access to the prosecution history had been denied.

Based upon these facts, the alleged infringer argued that the subject patent had not in fact issued on September 19, 1989 and that as of that date there had been no valid patent on which to sue. The alleged infringer therefore moved to dismiss the infringement suit for lack of subject matter jurisdiction.

The district court denied the alleged infringer’s motion to dismiss for lack of subject matter jurisdiction, and the alleged infringer

629. Laitram, 21 USPQ2D at 1281.
630. 935 F.2d 1263, 19 USPQ2D 1061 (Fed. Cir. 1991).
631. Id. at 1061-62.
632. Id. at 1062.
633. Id.
appealed.634

On appeal, the Federal Circuit noted that jurisdiction of the
district court is governed by 28 U.S.C. § 1338(a), which grants the
district court original jurisdiction of any civil action “arising under
any Act of Congress relating to patents.” Jurisdiction under
§ 1338(a) exists when a well-pleaded complaint establishes that fed-
eral patent law creates the cause of action or that the plaintiff’s
right to relief necessarily depends on resolution of a substantial
question of federal patent law.635 Therefore, under the “well-
pleaded complaint” rule, the proper focus in determining subject
matter jurisdiction is on whether the plaintiff actually pleaded the
elements required by the patent laws for a patent infringement
claim.636

In Exxon, the Federal Circuit found that the patentee’s com-
plaint had pleaded a valid patent infringement claim. This “well-
pleaded” complaint thereby established proper jurisdiction as a
matter of law. The alleged infringer’s challenge to jurisdiction was,
in fact, directed only to the merits of a question of patent validity
(including the date of patent validity). This question of patent va-
idity remained to be resolved at trial. The Federal Circuit therefore
held that the district court had correctly assumed jurisdiction under
§ 1338(a) on the basis of the well-pleaded complaint.637

B. A Post-filing Covenant Not to Sue May Be Considered In
Evaluating Whether an Actual Controversy Exists

The patentee in the case of Spectronics Corporation v. H.B.
Fuller Company, Inc.638 had sent a letter to various competitors,
including the alleged infringer, announcing the issuance of the sub-
ject patent. After receiving the letter, the alleged infringer had filed
suit against the patentee under the Declaratory Judgment Act, 28
U.S.C. § 2201, seeking a declaratory judgment that the patent was
invalid or not infringed by the alleged infringer.639

After suit had been filed, the patentee entered into a covenant

634. Id. at 1062-63.
635. Christianson v. Colt Industries Operating Corp., 486 U.S. 800, 808-09, 7 USPQ2d
1109, 1113 (1988).
636. Kunkel v. Topmaster International, Inc., 906 F.2d 693, 695, 15 USPQ2d 1367,
1369 (Fed. Cir. 1990).
637. Exxon, 19 USPQ2D at 1063.
639. The Declaratory Judgment Act, 28 U.S.C. § 2201(a), provides in pertinent part: “In
a case of actual controversy within its jurisdiction, . . . any court of the United States, upon
the filing of an appropriate pleading, may declare the rights and other legal relations of any
interested party seeking such declaration, whether or not further relief is or could be sought.”
not to sue the alleged infringer for infringement of the patent claims. The patentee also submitted the patent to the PTO for reissue. The patentee then filed a motion to dismiss the alleged infringer’s complaint for lack of jurisdiction under 28 U.S.C. § 2201 due to the absence of an “actual controversy.” The district court granted the patentee’s motion to dismiss, and the alleged infringer appealed.640

On appeal, the Federal Circuit initially observed that the existence of an “actual controversy” is an absolute requirement for proper jurisdiction under 28 U.S.C. § 2201.641 In cases in which an alleged infringer seeks a declaratory judgment of patent invalidity or non-infringement, the courts apply a two-pronged test for determining whether an “actual controversy” exists. First, the accused infringer must have actually produced or prepared to produce an allegedly infringing product.642 Second, the patentee’s conduct must create an objectively reasonable apprehension on the part of the accused infringer that the patentee will initiate suit if the allegedly infringing activity continues.643

In the case of Spectronics, the alleged infringer argued that the required apprehension that the patentee will initiate suit should be determined at the time the complaint is filed, and that later events (such as a patentee’s covenant not to sue) can not influence the jurisdiction of the district court under 28 U.S.C. § 2201.644

The Federal Circuit agreed that a party seeking a declaratory judgment must plead facts sufficient to establish the existence of an actual controversy at the time the complaint is filed, and that later events may not create jurisdiction where none existed at the time the complaint is filed. However, the Federal Circuit ruled that an actual controversy must be present at all stages of review, not merely at the time the complaint is filed, and that the burden is upon the alleged infringer to establish that an actual controversy existed at, and has continued since, the time the complaint was filed.645

640. Id. at 1547.
644. Spectronics, 19 USPQ2D at 1548.
filed.645

In the case of Spectronics, the covenant not to sue, forever prevented the patentee from asserting the patent claims against the alleged infringer, and the alleged infringer had thereby effectively "won" the non-infringement case pleaded in its complaint. The Federal Circuit concluded that the post-filing covenant not to sue was properly considered by the district court in evaluating whether an actual controversy existed.646

The alleged infringer further argued that, irrespective of the covenant not to sue, the potential grant of a reissue patent placed the alleged infringer at risk of further litigation on the subject matter contained in the patent.647

However, the Federal Circuit found no guarantee that the reissue patent would eventually issue. Moreover, even if the alleged infringer could establish an objectively reasonable apprehension that the patentee would initiate suit based upon the reissue patent, the alleged infringer could not demonstrate that its present activity was potentially infringing of any reissue patent claims, since no reissue patent claims yet existed by which infringement could be measured.648

The Federal Circuit therefore affirmed the judgment of the district court granting the patentee's motion to dismiss for lack of jurisdiction.649

C. A Grantee of All Substantial Patent Rights May Sue for Infringement In Its Own Name Without Joining the Patent Owner As a Party

The district court in the case of Vaupel Textilmaschinen KG v. Meccanica Euro Italia S.P.A.650 found that the subject patent had been infringed. The infringer appealed, alleging that the suit should have been dismissed because the plaintiff was a mere patent licensee and could not maintain an infringement action without joining the patent owner as a party.651

On appeal, the Federal Circuit noted that a patent license gives

646. Spectronics, 19 USPQ2d at 1551.
647. Id. at 1549.
648. Id.
649. Id. at 1551.
650. 944 F.2d 870, 20 USPQ2D 1045 (Fed. Cir. 1991).
651. Id. at 1046.
the licensee no title in the patent and no right to bring suit in its own name for infringement.\textsuperscript{652} If a licensee brings suit for infringement, then the licensee must join the patent owner as a party, so that the possibility of two separate suits on the same patent against a single infringer is eliminated.\textsuperscript{653}

Whether a particular transfer of patent rights constitutes an assignment or a license is determined by the substance of the transaction, rather than by the name given to the transaction by the parties.\textsuperscript{654} If it appears from the agreement and the surrounding circumstances that the parties intended that the patent owner surrender all substantial rights to the invention, then the transfer will be considered an assignment.\textsuperscript{655}

In the case of \textit{Vaupel}, the patent owner had transferred to the plaintiff all but four rights to the invention.\textsuperscript{656} The Federal Circuit concluded that none of these four rights reserved by the patent owner was so substantial as to reduce the transfer to a mere license or indicate an intent not to transfer all substantial rights.\textsuperscript{657}

One of the rights transferred by the patent owner to the plaintiff was the right to sue for infringement. Consequently, the Federal Circuit found that the suit provided complete relief between the plaintiff and the infringer, and there was no substantial risk that the infringer would incur double obligations to both the patent owner and the plaintiff. Therefore, the suit did not undermine the policy of eliminating the possibility of two suits on the same patent against a single infringer.\textsuperscript{658}

The Federal Circuit therefore concluded that the agreement between the plaintiff and the patent owner, although not constituting a formal assignment, was a grant of all substantial rights and permitted the plaintiff to sue without joining the patent owner. The district court's ruling that the plaintiff had standing to sue for infringement without joining the patent owner as a party was there-

\begin{itemize}
\item \textsuperscript{652} Waterman v. Mackenzie, 138 U.S. 252, 255, 34 L. Ed. 923, 11 S. Ct. 334 (1891).
\item \textsuperscript{654} Waterman, 138 U.S. at 256.
\item \textsuperscript{655} Bell Intercontinental Corp. v. United States, 381 F.2d 1004, 1011, 152 USPQ 182, 184 (1967).
\item \textsuperscript{656} The patent owner retained: 1) a veto right on sublicensing by the plaintiff; 2) the right to obtain patents on the invention in other countries; 3) a reversionary right to the patent in the event of bankruptcy or termination of production by the plaintiff; and 4) a right to receive infringement damages.
\item \textsuperscript{657} Vaupel, 20 USPQ2D at 1049.
\item \textsuperscript{658} \textit{Id.}
\end{itemize}
fore affirmed.\textsuperscript{659}

D. A Member of the Public Who Perceives They Will Be Harmed By an Issued Patent Which They Believe to Be Invalid Does Not Necessarily Have Standing to Sue

In the case of \textit{Diamond v. Chakrabarty},\textsuperscript{660} the U.S. Supreme Court held that non-naturally occurring man-made living microorganisms fall within the definition of patentable subject matter under 35 U.S.C. § 101.\textsuperscript{661} In the case of \textit{Ex Parte Allen},\textsuperscript{662} the PTO Board applied \textit{Chakrabarty} to hold that § 101 was not a bar to patentability for a specific non-naturally occurring genetically altered strain of polyploid oysters.\textsuperscript{663}

Shortly after the Board's decision in \textit{Allen}, the PTO had issued a Rule which stated, in part, that the PTO "now considers non-naturally occurring, non-human multicellular organisms, including animals, to be patentable subject matter within the scope of 35 U.S.C. § 101."\textsuperscript{664}

In the case of \textit{Animal Legal Defense Fund v. Quigg},\textsuperscript{665} various plaintiffs (including nonprofit organizations whose goal is the protection of animals) had filed suit in district court challenging the Rule on procedural and substantive grounds. The goal of these plaintiffs was to stop issuance of patents for animals.

The PTO Commissioner filed a motion to dismiss the complaint under Fed. R. Civ. P. 12(b)(6) for failure to state a claim. The motion was granted by the district court, and the plaintiffs appealed.\textsuperscript{666}

In a first cause of action the plaintiffs had alleged that the Rule declaring animals to be patentability subject matter exceeded the

\textsuperscript{659} \textit{Id.}
\textsuperscript{660} \textit{447} U.S. 303, 65 L. Ed. 2d 144, 100 S. Ct. 2204 (1980).
\textsuperscript{661} § 101 Inventions patentable

\textit{Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.}


\textsuperscript{662} 2 USPQ2D 1425 (Bd. Pat. App. & Int. 1987), aff'd, 846 F.2d 77 (Fed. Cir. 1988).
\textit{See also Ex Parte Hibberd, 227 USPQ 443 (Bd. Pat. App. & Int. 1985).}

\textsuperscript{663} \textit{Chakrabarty}, 447 U.S. at 305.

\textsuperscript{664} See 1077 Official Gazette 24 (April 21, 1987).

\textsuperscript{665} 932 F.2d 920, 18 USPQ2D 1677 (Fed. Cir. 1991).

authority delegated to the Commissioner under the patent statute. As relief for this alleged violation, the plaintiffs sought a declaration that animals are not patentable subject matter under § 101 and an injunction against the issuance of any patents directed to animals. 667

The plaintiffs had asserted essentially two types of personal injuries from the Commissioner's allegedly erroneous interpretation of § 101: (1) having to pay increased costs in the form of royalties on patented animals, and (2) suffering decreased profits because of competition from more productive non-naturally occurring animals.668

The Federal Circuit found that these alleged economic injuries were highly speculative and not "fairly traceable" to the Commissioner's allegedly erroneous interpretation of the statute.669 The Federal Circuit further found that the "zone of interests" of the patent laws is not so broad as to encompass any member of the public who perceives they will be harmed by an issued patent which they believe to be invalid. The Federal Circuit therefore concluded that the plaintiffs had failed to allege facts sufficient to give them standing to sue on the first cause of action.670

In a second cause of action the plaintiffs had asserted that the PTO Commissioner had violated the Administrative Procedure Act by failing to publish a notice of the proposed Rule in the Federal Register, by failing to allow interested persons an opportunity to submit public comment, and by failing to state the basis and purpose of the Rule following consideration of public comment.671 The plaintiffs sought to enjoin the PTO from approving or issuing any patents on multicellular living organisms, including animals, or taking any action to effectuate the Rule, until the PTO complied with these procedural requirements.672

667. Id.
668. Id.
670. To establish standing to sue, a party must show (1) "that he personally has suffered some actual or threatened injury as a result of the putatively illegal conduct" (personal injury), (2) that "the injury fairly can be traced to the challenged action" (causation), and (3) that the injury "is likely too be redressed by a favorable decision" (effective relief). Valley Forge Christian College v. Americans United for Separation of Church and State, Inc., 454 U.S. 464, 472, 70 L. Ed. 2d 700, 102 S. Ct. 752 (1982). In addition to these requirements for standing, the Supreme Court has further limited standing to those parties within the "zone of interests" a particular statute addresses. Air Courier Conference of America v. American Postal Workers Union, 112 L. Ed. 2d 1125, 111 S. Ct. 913, 59 U.S.L.W. 4140, 4142 (Feb. 26, 1991).
671. See 5 U.S.C. § 553(b) and (c).
672. Animal Legal Defense Fund, 18 USFQ2D at 1687.
On appeal, the Federal Circuit observed that prior public notice and comment regarding certain agency actions is required under § 553 of the Administrative Procedure Act. However, notice and public comment is not required for interpretative rules, general statements of policy, or rules of agency organization, procedure, or practice.

The Federal Circuit noted that the subject Rule clearly corresponded with the interpretation of § 101 set out in Allen and Chakrabarty. Thus, the Federal Circuit viewed the Rule as being merely interpretative of previous valid administrative actions and not representing a change in the law by the Commissioner. The Federal Circuit therefore concluded that the Commissioner's Rule fell within the "interpretative" exception to the § 553 public notice and comment requirement, and that the plaintiffs consequently had no standing to assert the second cause of action.

The Federal Circuit therefore affirmed the district court's ruling on the ground that the plaintiffs had lacked standing to sue.


The subject patent in the case of Chapman v. Manbeck had lapsed because the patentee had failed to pay maintenance fees required under 35 U.S.C. § 41(b). The Commissioner had denied the patentee's petition to reinstate the lapsed patent pursuant to 35 U.S.C. § 41(c)(1). The patentee then filed an action under 5 U.S.C. § 701-06 in federal district court in Virginia to compel the Commissioner to reinstate the patent. The Virginia district court ordered the Commissioner to reinstate the patent.

Previously, the patentee had filed suit against an accused infringer in federal district court in New Jersey. Immediately after the Virginia district court ordered the Commissioner to reinstate the patent, the patentee amended the complaint in the New Jersey suit to charge the accused infringer with infringement of the rein-
stated patent. The New Jersey district court thereafter issued an order preventing the accused infringer from raising a lapsed patent defense against the new infringement claim.\(^{677}\)

The accused infringer then moved to intervene as a third party in the patentee's suit for reinstatement against the Commissioner in the Virginia district court. The Virginia district court denied the accused infringer's motion to intervene, and the accused infringer appealed that denial to the Federal Circuit.

On appeal, the Federal Circuit noted that intervention by third parties is governed by Rule 24 of the Federal Rules of Civil Procedure. Under subsection (a), Rule 24 permits intervention of right: "When the applicant claims an interest relating to the property or transaction which is the subject of the action and the applicant is so situated that the disposition of the action may as a practical matter impair or impede the applicant's ability to protect that interest, unless the applicant's interest is adequately represented by existing parties.\(^{678}\)"

The Federal Circuit found that the decision of the Virginia district court ordering reinstatement of the patent was not binding upon the New Jersey district court. If the New Jersey district court prevented the accused infringer from raising a lapsed patent defense, then the decision of the New Jersey district court could be challenged by the accused infringer via an appeal to the Federal Circuit. The Virginia district court action therefore did not impair the accused infringer's ability to fully litigate its rights. Consequently, the Virginia district court's denial of intervention did not "impair or impede" the accused infringer's interest "as a practical matter.\(^{679}\)"

The Federal Circuit therefore affirmed the Virginia district court's denial of the accused infringer's motion to intervene.


The subject patents in the case of Foster v. Hallco Manufacturing Co., Inc.\(^{680}\) had come into dispute between the same parties in an prior infringement litigation. The parties had entered a settlement agreement of that prior litigation, under which the alleged in-

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677. Id.
679. The Federal Circuit additionally found that the Virginia district court had not abused its discretion in denying permissive intervention. Chapman, 18 USPQ2D at 1565.
fringer had obtained a nonexclusive royalty bearing license under the patents. The parties had terminated the prior litigation by the entry of a consent judgment in which the alleged infringer had acknowledged the validity and infringement of the patents.  

About four years after entry of the consent judgment, the alleged infringer began producing and marketing new models of the accused products. The alleged infringer took the position that the new accused products did not infringe the patents in the license agreement, and therefore the alleged infringer had no obligation to pay royalties to the patentee on sales of the new accused products. The patentee disagreed, taking the position that the new accused products were covered by the license agreement, and demanded royalty payments on the new accused products.

The alleged infringer then filed suit, seeking a declaration that the patents were invalid and unenforceable. The patentee moved for partial summary judgment, on the ground that the alleged infringer was precluded from raising the issues of validity and enforceability by reason of the consent judgment entered in the prior litigation between the parties, which stated that the patents were valid and enforceable. The alleged infringer responded by asserting that the consent judgment was itself unenforceable because the consent judgment was equivalent to an agreement not to challenge the validity of a patent. The alleged infringer based its position on the case of *Lear v. Adkins*, in which the Supreme Court held that patent licensees are not precluded from challenging the validity of licensed patents because of the federal policy favoring full and free use of ideas in the public domain.

The district court held that the provision in the consent judgment with respect to the validity and enforceability of the patents contravened the federal patent policies recognized by the Supreme Court in *Lear v. Adkins* and, thus, the consent judgment did not preclude the alleged infringer from raising the issues of validity and enforceability.

On appeal, the issue was whether the patent policy expressed in *Lear v. Adkins* overrides the res judicata effect which would

681. *Id.* at 1242.
682. *Id.*
684. *Foster*, 20 USPQ2D at 1244.
685. Res judicata precludes the relitigation of a cause of action, or any possible defense to the cause of action, which is ended by a judgment of the court. Res judicata applies whether the judgment of the court is rendered after a trial and imposed by the court, or the
otherwise result from a consent judgment which declared a patent valid and enforceable.

The Federal Circuit observed that the issue considered by the Supreme Court in *Lear* involved the right of a patent licensee to challenge the validity of a licensed patent in a suit for royalties under a contract. The issue therefore involved a conflict between federal patent policy and state contract law. The Supreme Court in *Lear* concluded that federal patent policy should prevail, and therefore ruled in favor of precluding restrictions on attacks on patent validity. 686

However, the Supreme Court in *Lear* did not deal with the specific fact situation presented in *Foster*, in which prior litigation had been terminated by a consent judgment that expressly acknowledged a patent's validity. In such a situation, the Federal Circuit found that other strong competing policy considerations came into play, namely, preserving the finality of judgments as well as the strong public policy of encouraging settlements. Moreover, unlike *Lear*, where there was a conflict between federal patent policy and state contract law, in *Foster* these strong competing policies did not involve questions of the primacy of federal law over state law. 687

The Federal Circuit concluded that the patent policy expressed in *Lear v. Adkins* did not override the res judicata effect which would otherwise result from a consent judgment that declared a patent valid and enforceable. 688 The Federal Circuit therefore reversed the district court's ruling based on *Lear* and held that a consent judgment respecting validity and enforceability may bar future litigation of those issues. However, because there were genuine issues of fact and law respecting the application of principles of res judicata, the Federal Circuit remanded to the district court for reconsideration of those issues. 689

G. *Fed. R. Evid. 705 Is Applicable to Opinion Testimony on Infringement of Means-Plus-Function Claims*

The case of *Symbol Technologies, Inc. v. Opticon, Inc.* 690 involved several patents directed to methods and devices employing judgment is entered upon the consent of the parties in a consent judgment. *Foster*, 20 USPQ2D at 1244.

686. *Id.*
687. *Id.*
688. *Id.*
689. *Id.*
690. 935 F.2d 1569, 19 USPQ2D 1241 (Fed. Cir. 1991).
lasers to read bar codes.\textsuperscript{691}

At trial, the patentee had offered the testimony of an expert witness, accompanied by charts and drawings, to demonstrate infringement of the asserted claims, each of which contained "means plus function" limitations as permitted under 35 U.S.C. § 112, \textsuperscript{692}6. The patentee's expert stated that, in his opinion, each claim limitation was met by a corresponding structure in the accused device.\textsuperscript{692} At trial, the patentee had suggested that, under Fed. R. Evid. 705,\textsuperscript{693} the district court receive the exhibits representing the expert's testimony without foundation, thereby avoiding the need to go through lengthy testimony explaining with each infringing device how the expert found that each element was infringed. The infringer raised no objection, and failed to cross-examine the patentee's expert on the issue.

The district court found infringement,\textsuperscript{694} and the infringer appealed the judgment. On appeal, the infringer argued that the patentee had failed to present sufficient evidence during its case-in-chief to establish a prima facie showing of infringement. The infringer contended that a party asserting infringement of claims containing "means plus function" limitations must demonstrate how each structure in the accused device, asserted to meet a functional claim limitation, is the same as or equivalent to a corresponding structure disclosed in the specification.\textsuperscript{695} The infringer argued that the patentee's expert had testified on the ultimate issue of infringement, but had failed to discuss in detail the equivalency between the structure of the accused device and the structure disclosed in the patent specification.\textsuperscript{696}

The Federal Circuit observed, however, that the purpose of

\textsuperscript{691} Id. at 1242.
\textsuperscript{692} Id.
\textsuperscript{693} Rule 705 provides:

\textbf{Disclosure of Facts or Data Underlying Expert Opinion}

The expert may testify in terms of opinion or inference and give reasons therefor without prior disclosure of the underlying facts or data, unless the court requires otherwise. The expert may in any event be required to disclose the underlying facts or data on cross-examination.


\textsuperscript{695} See \textit{Pennwalt Corp. v. Durand-Wayland, Inc., 833 F.2d 931, 934, 4 USPQ2d 1737, 1739 (Fed. Cir. 1987), cert. denied, 485 U.S. 961, 108 S. Ct. 1226 (1988).} In \textit{Pennwalt} the Federal Circuit stated: "Where the issue is raised, it is part of the ultimate burden of proof of the patent owner to establish, with respect to a claim limitation in means-plus-function form, that the structure in the accused device which performs that function is the same as or an equivalent of the structure disclosed in the specification." Id.

\textsuperscript{696} \textit{Symbol Technologies, 19 USPQ2D at 1241.}
Rule 705 is to abbreviate trials by permitting expert witnesses to state opinions without first specifying the data upon which the opinion is based. The Federal Circuit confirmed that Rule 705 is fully applicable to patent trials and to opinion testimony on infringement of claims under 35 U.S.C. § 112, ¶6.

The patentee was therefore permitted, under Rule 705, to rest its prima facie case on the expert's testimony that the patents were infringed. The Rule provided the infringer with the opportunity to demonstrate by cross examination that the expert's opinion testimony was factually incorrect. However, the infringer chose not to cross examine the patentee's expert on this issue. The Federal Circuit concluded that under Fed. R. Evid. 705 the patentee had made a prima facie showing of infringement and affirmed the judgment of the district court.697

H. The Purpose of Requiring a Respondent to Post a Bond With the ITC Is to Protect the Complainant As Well As the Public Interest

The complainant in the case of Biocraft Laboratories, Inc. v. U.S. International Trade Commission698 alleged that the respondent had violated § 337 of the Tariff Act of 1930699 by importing and selling crystalline cefadroxil monohydrate (cefadroxil), an antibiotic covered by the complainant's U.S. patent.700

The Commission had issued a temporary cease and desist order against the respondent. The temporary relief order had required the respondent to post a bond with the Commission to allow the respondent to sell cefadroxil which the respondent had imported prior to the temporary relief order. The temporary relief order stated that specific conduct otherwise prohibited by the order would be permissible if such specific conduct was authorized by the complainant in writing. Pursuant to the temporary relief order, the respondent posted a bond with the Commission.

The Commission subsequently concluded its § 337 investigation and issued a permanent cease and desist order against the respondent.701 Shortly after the Commission issued the permanent relief order, the complainant and the respondent settled a separate district court litigation concerning the subject patent. The district

697. Id.
698. 947 F.2d 483, 20 USPQ2D 1446 (Fed. Cir. 1991).
700. Biocraft, 20 USPQ2D at 1447.
701. Id.
court settlement agreement provided that the complainant would, if requested by the respondent, join in any petition by the respondent to obtain a return of the bond posted by the respondent with the ITC.\textsuperscript{702}

The respondent then requested that the Commission return the bond. Pursuant to the district court settlement agreement, the complainant submitted a letter joining the respondent's petition. The Commission denied the respondent's request to return the bond, and the respondent appealed.\textsuperscript{703}

On appeal, the respondent argued that the district court settlement agreement constituted the written authorization required by the temporary relief order, and thereby made the bonding requirement inapplicable. The respondent also pointed out that the purpose of the respondent's bond was to protect the complainant, and the complainant here had agreed to the Commission's return of the bond.\textsuperscript{704}

The Commission, on the other hand, argued that the district court settlement between the respondent and the complainant had occurred after the respondent had made the sales covered by the bond, and that the temporary relief order required the complainant to provide written authorization prior to such sales being made.\textsuperscript{705}

The Federal Circuit, agreeing with the respondent, found that once the sales in question had been authorized, the sales became exempt from the bond and were no longer a justification for the Commission to attempt to enforce the bond. The Federal Circuit observed that settlement of conflicts is in the public interest and should be encouraged. Where the complainant, whose competitive position was being protected by the bond, agreed to its return as part of a district court settlement agreement, return of the bond was consistent with the intent of the parties, thereby encouraging settlement. An opposite result would tend to discourage settlement.\textsuperscript{706}

The Federal Circuit therefore held that where a complainant agrees as part of a settlement agreement to the return of a bond, the bond itself states that it does not apply to sales authorized by the complainant, and the purpose of the bond is to protect the complainant as well as the public interest, it is an abuse of discretion for the Commission to decline to return the bond merely because of

\textsuperscript{702} Id. at 1448.
\textsuperscript{703} Id.
\textsuperscript{704} Id. at 1449.
\textsuperscript{705} Biocraft, 20 USPQ2D at 1448.
\textsuperscript{706} Id. at 1449.
sales by a respondent of goods known to the complainant at the time of the settlement agreement. The Federal Circuit therefore reversed the Commission's denial of the respondent's request for return of the bond posted pursuant to the temporary relief order.  

XVII. APPELLATE COURT JURISDICTION AND PROCEDURE

A. The Path of Appeal to the Federal Circuit Is Determined By the Basis of Jurisdiction in the District Court

The case of Abbott Laboratories v. Brennan arised from an interference proceeding in the PTO involving a patent application of Brennan and a patent owned by Abbott. The Board had awarded priority of invention to Brennan.  

Abbott had then brought a civil action in district court pursuant to 35 U.S.C. § 146, seeking to set aside the award of priority to Brennan. Brennan had brought a counterclaim in the district court action for fraudulent misrepresentation, abuse of process, tortious interference with economic relations, antitrust violations, violation of the RICO Act, and intentional infliction of emotional distress.  

The district court had awarded priority of invention to Brennan. The district court had also denied Brennan's motion for sanctions under Rule 11 and had denied Brennan's motion for a new trial on his counterclaim of tortious interference with economic relations. The district court had further denied Abbott's motion for JNOV or a new trial on the issue of abuse of process, and had partially denied Abbott's alternative motion for remittitur.  

Brennan and Abbott sought review by the Federal Circuit of various aspects of the judgment of the district court. However, Abbott did not seek review of the district court decision awarding priority of invention to Brennan.  

The Federal Circuit observed that, in view of Abbott's omission of appeal on the issue of priority of invention, no issues arising under the patent law remained on appeal, and none had been referred to in the notice of appeal. The remaining issues on appeal were either matters of state law based on pendent jurisdiction, or issues of federal law that were not within the exclusive assignment of the Federal Circuit, but that had been properly included at

707. Id. at 1450.
708. 952 F.2d 1346, 21 USPQ2D 1192 (Fed. Cir. 1991).
709. Id. at 1193.
710. Id.
711. Id.
The threshold question was therefore whether the Federal Circuit had jurisdiction over the appeal.\textsuperscript{713}

The Federal Circuit noted that the path of appeal is determined by the basis of jurisdiction in the district court, and is not controlled by the district court's decision or the substance of the issues that are appealed.\textsuperscript{714} Thus, the direction of appeal to the Federal Circuit does not change during or after trial, even when the only issues remaining are not within the exclusive assignment of the Federal Circuit.\textsuperscript{715}

Abbott's civil action had been properly brought under 35 U.S.C. § 146. The district court's jurisdiction had therefore arisen, in part, under the patent statute, Title 35, and thus satisfied the requirement of 28 U.S.C. § 1338(a).\textsuperscript{716} All appeals in such circumstances are assigned exclusively to the Federal Circuit under 28 U.S.C. § 1295(a)(1).\textsuperscript{717}

The path of the appeal in Abbott had been established with the filing of the civil action to obtain a patent in accordance with 35 U.S.C. § 146. Although the § 146 issue was not appealed, the Federal Circuit concluded that the appeal of the other issues had been correctly taken to the Federal Circuit.\textsuperscript{718}

B. To Be Considered "Final", an Order Must Be Effectively Unreviewable on Appeal From a Final Judgment

During the pre-trial stages in the case of Quantum Corporation v. Tandon Corporation\textsuperscript{719} the patentee had moved to compel the alleged infringer to produce documents relating to opinion letters of counsel. The alleged infringer had countermoved for a separate trial on the issue of willfulness after the conclusion of a trial on liability and damages, and for deferral of discovery of the attorney

\textsuperscript{712} Id.
\textsuperscript{713} Abbott, 21 USPQ2d at 1192.
\textsuperscript{714} Id.
\textsuperscript{715} See, e.g., Technicon Instruments Corp. v. Alpkem Corp., 866 F.2d 417, 419-20, 9 USPQ2d 1540, 1541-42 (Fed. Cir. 1989); Atari, Inc. v. JS&A Group, Inc., 747 F.2d 1422, 1427, 223 USPQ 1074, 1077 (Fed. Cir. 1984) (en banc).
\textsuperscript{716} 28 U.S.C. § 1338(a) provides that "The district courts shall have original jurisdiction of any civil action arising under any Act of Congress relating to patents . . . ."
\textsuperscript{717} 28 U.S.C. § 1295(a)(1) provides that "The United States Court of Appeals for the Federal Circuit shall have exclusive jurisdiction . . . of an appeal from a final decision of a district court of the United States . . . if the jurisdiction of that court was based, in whole or in part, on section 1338 of this title . . . ."
\textsuperscript{718} Abbott, 21 USPQ2d at 1192.
\textsuperscript{719} 940 F.2d 642 (Fed. Cir. 1991).
opinion letters until after the trial on liability and damages.  

The district court had granted the patentee's motion to compel production of the attorney opinion letters, and had denied the alleged infringer's motion to defer the trial on willfulness. The alleged infringer then sought to appeal the orders of the district court compelling production of the attorney opinion letters and deferring the trial on willfulness. The patentee moved to dismiss the appeal, arguing that the orders appealed from were not final and therefore were not appealable.

The Federal Circuit noted that before a district court order may be considered final, the order must (1) conclusively determine the disputed question, (2) resolve an important issue completely separate from the merits of the action, and (3) be effectively unreviewable on appeal from a final judgment.

The Federal Circuit found that the two orders appealed from in Quantum did not satisfy the third requirement, because the two orders were effectively reviewable on appeal from a final judgment. Consequently, the Federal Circuit concluded that the two orders were not presently appealable, and granted the patentee's motion to dismiss.

C. The Sufficiency of the Evidence Underlying Presumed Jury Findings Cannot Be Challenged on Appeal Where a Motion for a Directed Verdict Was Not Made at the Close of the Evidence

The case of Jurgens v. McKasy involved an appeal from a district court judgment in a jury case involving patent infringement. The judgment awarded damages and injunctive relief to the patent owner for infringement of a patent directed to a windsock device.

In Jurgens, the infringer had failed to bring a motion for a directed verdict at the close of the evidence. Where a motion for a directed verdict is not made at the close of the evidence, the sufficiency of the evidence underlying presumed jury findings cannot be

720. Id. at 643.
721. Id.
723. Quantum, 940 F.2d at 642.
724. 927 F.2d 1552, 18 USPQ2D 1031 (Fed. Cir. 1991).
725. Id.
challenged on appeal.\textsuperscript{726} Accordingly, when the infringer failed to move for a directed verdict at the close of the evidence, the infringer waived its right to challenge the presumed jury findings as unsupported by substantial evidence. That failure dramatically changed the standard of review on appeal with respect to fact issues decided by the jury.\textsuperscript{727}

For example, on appeal the infringer challenged the district court's finding of patent validity under 35 U.S.C. § 103 in view of two prior art references. Before the district court the patent owner had argued that the first of these two prior art references was not analogous art, and that the second of these two prior art references did not show a windsock.\textsuperscript{728}

The question of what constitutes analogous art, as well as the question of what a reference teaches, are questions of fact for the jury to decide. On appeal, it is presumed that the jury decided these fact questions in favor of the patent owner, concluding that the first reference was not analogous art and that the second reference did not show a windsock.\textsuperscript{729}

Because the infringer had failed to move for a directed verdict, the infringer could not challenge these presumptions on appeal. Consequently, the Federal Circuit was required to presume that the first reference was not analogous art and that the second reference did not disclose a windsock. In accordance with these presumptions, the Federal Circuit concluded that the first reference could have no bearing on the validity of the patent under 35 U.S.C. § 103, and that the second reference would not have rendered the patent invalid under 35 U.S.C. § 103.\textsuperscript{730}

On appeal, the infringer also challenged the district court's finding of patent infringement under the doctrine of equivalents. The infringer asserted that if infringement was present under the doctrine of equivalents, then the patent would encompass the prior art.\textsuperscript{731} More specifically, to cover the infringing windsocks literally, the hypothetical claim would define a windsock which would have been obvious in view of the second reference.

However, for the reasons stated above, the Federal Circuit was

\begin{itemize}
\item \textsuperscript{726} Smith v. Ferrel, 852 F.2d 1074, 1075 (8th Cir. 1988); Hubbard v. White, 755 F.2d 692, 695-96 (8th Cir.), cert. denied, 474 U.S. 834, 88 L. Ed. 2d 87, 106 S. Ct. 107 (1985).
\item \textsuperscript{727} \textit{Jurgens}, 18 USPQ2D at 1031.
\item \textsuperscript{728} \textit{Id}.
\item \textsuperscript{729} \textit{Id}.
\item \textsuperscript{730} \textit{Id}.
\end{itemize}
required to presume that the second reference did not disclose a windsock. In accordance with this presumption, the Federal Circuit concluded that the hypothetical claim, viewed as a whole, would not have been obvious in view of the second reference and that the second reference therefore did not bar infringement by equivalents. The judgment of the district court was therefore affirmed.

D. A Post-verdict Motion Is a Prerequisite to Appellate Review of the Sufficiency of the Evidence Underlying a Jury Verdict

At the conclusion of testimony in the case of Biodex Corporation v. Loredan Biomedical, Inc., the patentee had orally moved for a directed verdict. The patentee had not made a specific assertion that the alleged infringer's evidence in support of invalidity or non-infringement had been insufficient, although judgment had been requested on both issues as a matter of law. The district court never ruled upon the patentee's motion.

Both parties had requested and submitted various jury instructions. The district court, however, drafted its own instructions, to which the patentee had objected.

The district court submitted the case to the jury with multiple special verdict forms. In the special verdicts, the jury found that one patent had been proven invalid and that the other patent had not been infringed. The district court entered judgment on the jury verdicts. The patentee made no post-verdict motions, either by renewing its motion for a directed verdict, moving for a new trial, or by moving for judgment non obstante veredicto ("JNOV"). The patentee appealed the judgment of the district court.

On appeal, the patentee argued that neither special verdict had been supported by substantial evidence.

The Federal Circuit viewed the issue on appeal as being whether a post-verdict motion is a prerequisite to appellate review of the sufficiency of the evidence underlying a jury verdict. In Biodex, the patentee had made an oral motion for a directed verdict at the conclusion of the evidence. However, the patentee had not re-submitted or renewed the motion in any form after the verdict.

The Federal Circuit reasoned that a requirement for an express post-verdict motion by the potential appellant assists appellate re-

733. Id. at 1253.
734. Id.
view. A rule that requires explicit formulation and specification of the preserved issues after the verdict requires the prospective appellant to present the preserved issues to the district court in a well-known and defined format after the verdict.\textsuperscript{735}

The Federal Circuit therefore concluded that it could not review the sufficiency of the evidence after a jury verdict absent some post-verdict motion. The patentee's failure to present the district court with a post-verdict motion precluded appellate review of the sufficiency of the evidence, and was thereby dispositive of that portion of the appeal directed to whether there was substantial evidence to support the special verdicts.\textsuperscript{736}

On appeal, the patentee also contended that the district court's failure to give the patentee's requested jury instructions was prejudicial error.\textsuperscript{737} The Federal Circuit noted that jury instructions must be both legally correct and sufficiently comprehensive to address factual issues for which there is disputed evidence of record. To succeed on appeal, the patentee must (1) prove that the jury instructions, read in their entirety, were incorrect or incomplete as given, and (2) demonstrate that the jury instructions suggested by the patentee could have cured the error. The Federal Circuit concluded that the patentee had failed in both tasks.\textsuperscript{738}

Since the Federal Circuit concluded that it may not review for sufficiency of the evidence, and since there was no prejudicial legal error, the Federal Circuit affirmed the judgment of the district court.

E. \textit{Prejudicial Legal Error Must Be Shown to Vacate a Judgment Where No Motion for JNOV or a New Trial Was Made After a Jury Verdict}

Before the district court, the appellants in the case of \textit{Acoustical Design, Inc. v. Control Electronics Company, Inc.}\textsuperscript{739} had failed to move for a directed verdict after the close of testimony, had failed to move for judgment notwithstanding the verdict (JNOV), and had failed to move for a new trial. The district court entered final judgment holding the appellants liable for patent infringement and enjoining them from further infringement.

On appeal, the issue was whether the Federal Circuit should

\textsuperscript{735} Id.
\textsuperscript{736} Id.
\textsuperscript{737} \textit{Biodex}, 20 USPQ2D at 1252.
\textsuperscript{738} Id.
\textsuperscript{739} 932 F.2d 939, 18 USPQ2D 1707 (Fed. Cir. 1991).
vacate and remand for a new trial a judgment rendered on a jury verdict when no motions for directed verdict, JNOV, or new trial were made before the district court.

Rule 50(b) of the Federal Rules of Civil Procedure permits a motion for JNOV only when a party has previously moved for a directed verdict. If no motions for JNOV or new trial are made in the district court after a jury verdict, then the appellant is required to show that prejudicial legal error occurred in the conduct of the trial in order for the Federal Circuit to vacate the judgment of the district court and remand for a new trial.\textsuperscript{740}

The Federal Circuit concluded that the appellants had not demonstrated that prejudicial legal error occurred in the conduct of the trial. Consequently, the Federal Circuit affirmed the judgment of the district court.

F. Sanctiions May Be Appropriate Where an Appeal Is “Frivolous as Filed” or “Frivolous as Argued”

The appeal in the case of \textit{Finch v. Hughes Aircraft Company}\textsuperscript{741} resulted from a history of over twelve years of litigation by the appellant against the appellee.

The appellant and the appellee had originally been co-defendants in a federal district court action in which the appellant had filed a cross-claim against the appellee. After filing the cross-claim, the appellant filed a separate complaint, in the same district court, asserting claims identical to those in the cross-claim. All of the counts alleged in both the complaint and the cross-claim were disposed of by summary judgment for the appellee.

The appellant then filed a separate complaint against the appellee in the same district court, substantially identical to the cross-claim. The appellee moved for a dismissal of the complaint, and the appellant did not oppose the motion. The district court granted the appellee’s unopposed motion to dismiss the new complaint, holding that the complaint was duplicative of the proffered cross-claim and that each count of the new complaint was barred by res judicata.

On appeal, the Federal Circuit affirmed the district court’s order dismissing the complaint because the appellant had failed to oppose the motion to dismiss, because the complaint was duplicative, and because each claim in the complaint was barred by res judicata.


\textsuperscript{741} 926 F.2d 1574, 17 USPQ2D 1914 (Fed. Cir. 1991).
Having determined that the district court’s judgment must be affirmed, the Federal Circuit then addressed the appellee’s request for sanctions.

The Federal Circuit noted that there are two distinct bases on which an appeal may be deemed frivolous, either one of which alone is sufficient to support sanctions. First, an appeal may be deemed “frivolous as filed” if the judgment of the district court is so plainly correct and the legal authority contrary to the appellant’s position is so clear that there is no appealable issue. Second, an appeal may be deemed “frivolous as argued” where genuinely appealable issues may exist, but the appellant’s contentions in prosecuting the appeal are frivolous.

In the case of Finch, the Federal Circuit found the appellant’s appeal to be both frivolous as filed and frivolous as argued. Because the appellant had no arguable basis in fact or in law for filing the appeal and had made numerous arguments in support of the appeal that were without any basis, the Federal Circuit granted the appellee’s request for sanctions under Rule 38 of the Federal Rules of Appellate Procedure and required the appellant to pay the appellee double its costs.

742. See, e.g., In re Perry, 918 F.2d 931, 935 (Fed. Cir. 1990); Octocom Systems, Inc. v. Houston Computer Servs., Inc., 918 F.2d 937, 943, 16 USPQ2d 1783 (Fed. Cir. 1990); Synan v. Merit Systems Protection Bd., 765 F.2d 1099, 1102 (Fed. Cir. 1985).