



WHEN A PATENT CLAIM IS BROADER THAN THE DISCLOSURE:
THE FEDERAL CIRCUIT'S GAME HAS NO RULES

ROBERT L. HARMON

Abstract

The Federal Circuit has become much less willing to enforce a claim that is broader than the specific embodiments described in the patent. Unfortunately, its decisions provide no guidelines for identifying such situations. Nor is the court consistent in its attacks on the problem. Sometimes it simply construes the claim as limited to the specific embodiment and finds no infringement. Sometimes it invalidates the claim for want of an adequate written description or for insufficient scope of enablement. It is suggested that a careful use of the reverse doctrine of equivalents would create stability and predictability with respect to this very difficult issue.

Copyright © 2001 The John Marshall Law School

Cite as 1 J. MARSHALL REV. INTELL. PROP. L. 21

WHEN A PATENT CLAIM IS BROADER THAN THE DISCLOSURE: THE FEDERAL CIRCUIT'S GAME HAS NO RULES^a

ROBERT L. HARMON^b

INTRODUCTION

When I started as a patent lawyer many years ago, my job was to work. My first transition was from working to thinking. Soon thereafter, I graduated from thinking to worrying, which means I am now long past the point of doing any thinking or working. I don't mind worrying. It provides a decent living. What bothers me a little, though, is that the United States Court of Appeals for the Federal Circuit—which I have been following closely for the past fifteen years—seems to provide more subjects to worry about than it really should.¹ Some of these subjects are things that I never expected to have to worry about. Take *Markman* hearings.² Take *Wilson Sporting Goods*.³ Take *State Street Bank*.⁴ Take *Maxwell*.⁵ Take *Festo*.⁶ PLEASE!⁷

Traditionally, patent law provided that patent claims could be broader than just what the patent's specification contained. In other words, just because a particular embodiment of the invention did not appear in the patent did not mean that the claims did not cover it. Because of Federal Circuit decisions from the past few years,

^a This article was adapted from a speech given by Robert L. Harmon on June 15, 2001 to attorneys from Brinks Hofer Gilson & Lione, in Chicago, Illinois.

^b Robert L. Harmon retired in 1997 from Brinks Hofer Gilson & Lione in Chicago, Illinois, after thirty-two years of practicing patent law. He is the author of *Patents and the Federal Circuit*, the fifth edition of which was published by BNA in 2001. He has also served as a special master, expert witness, and consultant in patent litigation.

¹ Congress established the United States Court of Appeals for the Federal Circuit on October 1, 1982 by merging the Court of Customs and Patent Appeals and the Court of Claims into the Federal Circuit. S. REP. NO. 97-275, at 2 (1981), *reprinted in* 1982 U.S.C.C.A.N. 11, 12. The Federal Circuit has exclusive appellate jurisdiction over cases involving patent law. 28 U.S.C. §§ 1295(a)(1), 1338(a) (1994 & Supp. 1999).

² *Markman* hearings are evidentiary hearings in which courts construe the meaning of patent claims. See *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 372 (1996) (holding that claim construction is a question of law for the court rather than a question of fact for the jury); *Elf Atochem N. Am. v. Libbey-Owens-Ford Co.*, 894 F. Supp. 844, 857-58 (D. Del. 1995) (discussing *Markman* hearings and predicting their impact on patent litigation).

³ *Wilson Sporting Goods Co. v. David Geoffrey & Assocs.*, 904 F.2d 677 (Fed. Cir. 1990) (holding that there is no infringement under the doctrine of equivalents if the scope of equivalency covers what is already in the prior art).

⁴ *State St. Bank & Trust Co. v. Signature Fin. Group*, 149 F.3d 1368 (Fed. Cir. 1998) (holding that a process that applies an algorithm to produce a useful, concrete, tangible result without preempting other uses of the mathematical principle is patentable).

⁵ *Maxwell v. J. Baker, Inc.*, 86 F.3d 1098 (Fed. Cir. 1996) (holding that subject matter disclosed but not literally claimed cannot be covered by the doctrine of equivalents).

⁶ *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 234 F.3d 558 (Fed. Cir. 2000) (en banc) (holding that a complete bar exists to the application of the doctrine of equivalents where the patentee has made any narrowing amendment for any reason, voluntary or otherwise), *cert. granted*, 121 S. Ct. 2519 (2001).

⁷ *Cf. Henny Youngman*, at <http://www.infolplease.com/ipea/A0763381.html> (last visited Oct. 23, 2001) ("Take my wife . . . please!").

however, this basic principle must be reexamined. The Federal Circuit has started to do something that it has said, time after time, is totally improper. It has begun reading limitations from the specification into the claims during the claim construction process. The court is not doing so to save the validity of claims. Instead, it is doing so to avoid infringement.

This trend is difficult to see because the Federal Circuit is disguising its jurisprudence quite effectively in two different ways. First, the court continues to maintain, quite vigorously, that importing limitations from the specification is definitely forbidden. This has been the rule since the beginning. For example, in 1985 in one of its very early cases the Federal Circuit said:

If everything in the specification were required to be read into the claims, or if structural claims were to be limited to devices operated precisely as a specification-described embodiment is operated, there would be no need for claims. Nor could an applicant, regardless of the prior art, claim more broadly than that embodiment. Nor would a basis remain for the statutory necessity that an applicant conclude his specification with “claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.”⁸

The second disguise, which is much more difficult to penetrate, is the fact that the court is using several different techniques to obtain its desired results. These techniques are sometimes quite far afield from traditional claim construction.

This article discusses the several approaches that the Federal Circuit has taken in certain cases where claims literally read on embodiments that are not described in specifications. The first part of this article discusses “pure importation” cases, in which the Federal Circuit simply reads limitations from the specification into the claims during the claim construction process. The second part discusses several other techniques the court uses to achieve its desired results. These techniques include invalidating claims for inadequate written descriptions, scope of enablement deficiencies, and failure to claim “the subject matter which the applicant regards as his invention.”⁹ Finally, the third part of this article discusses a possible solution to this problem—use of the reverse doctrine of equivalents.

I. PURE IMPORTATION CASES

With increasing frequency, the Federal Circuit has begun to import limitations from the specification into the claims during claim construction, even though it insists that it is not doing so. A recent example of such a case is *SciMed Life Systems v. Advanced Cardiovascular Systems*,¹⁰ decided in March 2001. *SciMed* dealt with an

⁸ *SRI Int'l v. Matsushita Elec. Corp.*, 775 F.2d 1107, 1121 (Fed. Cir. 1985) (en banc) (quoting 35 U.S.C. § 112).

⁹ 35 U.S.C. § 112 (1994).

¹⁰ 242 F.3d 1337 (Fed. Cir. 2001).

angioplasty catheter that had two lumens.¹¹ The patent's specification described an embodiment that comprised coaxial lumens.¹² However, the claim at issue simply called for "an inflation lumen separate from the guide wire lumen."¹³ Furthermore, this recitation was in the preamble of a Jepson type claim¹⁴ and was not even part of the claimed improvement.¹⁵ The court held that the claim was limited to coaxial lumens, thus excluding the accused infringing structure, which employed side-by-side lumens.¹⁶

Another recent case where the Federal Circuit approved a claim limitation imported from the specification was *Watts v. XL Systems, Inc.*¹⁷ The claim at issue called for pipe joints having tapered threads that were "dimensioned such that one such joint may be sealingly connected directly with another such joint."¹⁸ The only technique described in the specification for achieving a sealing connection was to misalign the thread tapers, but it was clear there were many other ways to seal a joint.¹⁹ However, the court held that the claim was limited to misaligned thread tapers.²⁰

In 1999, the court decided *Wang Laboratories, Inc. v. America Online, Inc.*²¹ The invention in *Wang* related to an apparatus for retrieving selected frames of information from a central videotex supplier.²² The specification described only

¹¹ *Id.* at 1339. A lumen is a tubular passageway. *Id.* The invention's two lumens are used in sequence. *Id.* The first lumen guides the catheter through the arteries to the arterial restriction. *Id.* The second lumen is used to inflate the artery and compress the restriction, which would subsequently result in compressing the restriction to alleviate the blocked arterial restriction. *Id.*

¹² *Id.* A coaxial lumen consists of two lumens positioned side-by-side within the catheter. *Id.* The first lumen (the guide wire) runs inside the second lumen (the inflation tube). *Id.* In that configuration, the inflation lumen, viewed in cross-section, is annular in shape. *Id.*

¹³ *Id.* at 1340.

¹⁴ A Jepson claim is used in an "improvement patent." ROBERT L. HARMON, PATENTS AND THE FEDERAL CIRCUIT, § 5.6(g), at 234 n.390 (4th ed. 1998). The preamble of a Jepson claim is impliedly admitted to be prior art. *Id.* The transition then uses language such as "the improvement comprising." *Id.* Finally, the body of the claim states the new elements or improvement. *Id.* An example of a Jepson claim is:

In an instrument marker pen body including an ink reservoir and means for receiving a writing tip, the improvement comprising a pen arm holding means consisting of an integrally molded hinged member adapted to fold against a surface of the pen body and to be locked against said surface by engageable locking means and to receive and secure in place against said surface a pen arm when said hinged member is in its folded and locked position.

Pentec, Inc. v. Graphic Controls Corp., 776 F.2d 309, 312 (Fed. Cir. 1985). The PTO first approved the use of such claims in *Ex Parte Jepson*, 1917 C.D. 62, 243 O.G. 525 (Ass't Comm'r Pat. 1917), cited in CHISUM ON PATENTS at app. 21, ch. 450 (2000).

¹⁵ *SciMed*, 242 F.3d at 1340.

¹⁶ *Id.* at 1345.

¹⁷ 232 F.3d 877 (Fed. Cir. 2000).

¹⁸ *Id.* at 879.

¹⁹ *Id.* at 883.

²⁰ *Id.* at 882.

²¹ 197 F.3d 1377 (Fed. Cir. 1999).

²² *Id.* at 1379. "In typical videotex systems, textual and graphic information from a variety of sources (such as newspapers, retailers, or banks) is made available by a videotex supplier to a large number of subscribers via interactive two-way communication over the switched telephone network." U.S. Patent No. 4,751,669 (issued June 14, 1988). A user of a videotex system can

character-based systems.²³ There was, however, general agreement that the term “frame” could also be applied to bit-mapped display systems.²⁴ Nevertheless, the court imported the limitation from the specification and construed the term “frame” as limited to a character-based protocol.²⁵ The court’s construction thus excluded the accused bit-mapped system.²⁶

Another example occurred in 1999 in *The Toro Co. v. White Consolidated Industries, Inc.*²⁷ In *Toro*, the invention was a hand-held convertible vacuum-blower.²⁸ The specification described a cover fitted with a restriction ring that restricted the size of the air inlet opening when the device was being used in blower mode.²⁹ The operator would remove the cover, with attached ring, in the vacuum mode.³⁰ The claim, however, simply called for a cover “including” means—which was the ring—for “increasing pressure by said cover.”³¹ The court construed “including” means to require that the ring be fixed to the cover, as described in the specification.³² This construction excluded the accused structure, which had a removable ring.³³

These and other similar cases have several things in common. First, they are heavily influenced by the fact that the specification describes only a single embodiment for the claim element in question. Second, they usually cite the following language from *Modine Manufacturing Co. v. United States International Trade Commission*:³⁴ “when the preferred embodiment is described in the specification as the invention itself, the claims are not necessarily entitled to a scope broader than that embodiment.”³⁵ However, the patents and prosecution histories in these cases do not seem to describe the preferred embodiment as “the invention itself.” Third, the court tends to justify its results in these cases by pointing to

“review, retrieve, and store pages or ‘frames’ of data from many information suppliers.” *Wang Labs.*, 197 F.3d at 1379.

²³ *Wang Labs.*, 197 F.3d at 1380.

²⁴ *Id.* at 1381.

²⁵ *Id.* at 1380.

²⁶ *Id.*

²⁷ 199 F.3d 1295 (Fed. Cir. 1999).

²⁸ *Id.* at 1297. The hand-held convertible vacuum/blower can be used as a yard work tool to disperse or collect leaves and other debris. *Id.* “In both modes a centrifugal fan . . . moves air through the device in a constant direction, sucking air in through an air inlet, and blowing air out through an air outlet or exhaust.” *Id.* To use the device as a vacuum cleaner, an “operator connects a vacuum tube and nozzle to the air inlet and places a collection bag over the air outlet.” *Id.* The fan sucks in debris, mulches it, and then blows it through the air outlet into the collection bag. *Id.* To use the apparatus as a blower, an “operator connects a directing tube to the air outlet and places a protective cover over the air intake opening to keep hands, clothing and debris clear of the fan.” *Id.*

²⁹ *Id.* at 1298.

³⁰ *Id.*

³¹ *Id.*

³² *Id.* at 1302.

³³ *Id.*

³⁴ 75 F.3d 1545 (Fed. Cir. 1996).

³⁵ *Id.* at 1551.

isolated statements in the specification that can be viewed as having some limiting effect.³⁶

Indeed, the Federal Circuit has even begun to use statements in the abstracts of patents to justify its interpretations.³⁷ The court does so despite Rule 72(b) of the Rules of Practice in Patent Cases,³⁸ which expressly provides that “the abstract will not be used for interpreting the scope of the claims.”³⁹ This practice creates a special set of problems for drafters of patent applications. Drafters must be extremely careful to avoid language in the written description and the abstract that could, under any stretch of the interpretive imagination, be construed as characterizing the invention, or limiting it in any way. Drafters must also be as exhaustive as possible with respect to alternative embodiments. And here, drafters of patent applications must be nimble enough to avoid another pitfall. If an application does not specifically claim an embodiment, that embodiment may be outside the scope of equivalents under the doctrine of equivalents according to *Maxwell*.⁴⁰

The final common element in these cases is that the court has its eye firmly fixed on the accused infringing structure. Although the court has told us time and again that claims are to be construed without reference to the accused device,⁴¹ it is clear that the court is doing exactly this in many cases—construing the claims to cover or not cover a particular accused structure.

Even so, I could live with this state of affairs. This jurisprudence simply reflects a court that is determined to have the deciding voice on every issue that it can, factual or legal. Thus, although infringement is a factual inquiry, the court can take that matter into its own hands by manipulating the claim construction process, which is a legal determination.

It does make it more difficult for the person drafting patent applications to avoid even the hint of limiting language in the specification. It also makes it more problematic for the litigator, who now must face the reality that many, if not most, cases can be won or lost at the *Markman* hearing. But that is just the game of lawyering. Lawyers know the rules and do the best they can. But what if lawyers do not know the rules?

³⁶ See, e.g., *Watts*, 232 F.3d at 881-83; *Wang Labs.*, 197 F.3d at 1381-83; *Toro*, 199 F.3d at 1300-02; *Modine Mfg.*, 75 F.3d at 1551-54. An example of such a statement is “the present invention utilizes.” *Watts*, 232 F.3d at 883.

³⁷ See, e.g., *SciMed*, 242 F.3d at 1342; *Hill-Rom Co. v. Kinetic Concepts, Inc.*, 209 F.3d 1337, 1341 (Fed. Cir. 2000).

³⁸ Title and Abstract, 37 C.F.R. § 1.72(b).

³⁹ *Id.* The court justifies its interpretations because Rule 72(b) “governs the conduct of patent examiners in examining patent applications[, not] the process by which courts construe claims in infringement actions.” *Hill-Rom*, 209 F.3d at 1341 n.*. This practice ignores all the patent lawyers who have relied on Rule 72(b) in drafting abstracts.

In another context, the court chastised the PTO for asserting that the PTO may follow different rules for interpreting claim language than courts follow. See *In re Donaldson Co.*, 16 F.3d 1189, 1192-95 (Fed. Cir. 1994) (holding that the PTO must follow paragraph six of 35 U.S.C. § 112 and interpret means-plus-function claims in light of the specification). However, in *Donaldson*, the court was considering the effect of a statute. In contrast, Rule 72(b) governs patent practice in the PTO and is not binding on courts.

⁴⁰ *Maxwell*, 86 F.3d at 1106-07.

⁴¹ See, e.g., *Young Dental Mfg. Co. v. Q3 Special Prods.*, 112 F.3d 1137, 1141 (Fed. Cir. 1997).

II. OTHER TECHNIQUES THE FEDERAL CIRCUIT USES

The Federal Circuit has begun to approach the situation where claims literally read on embodiments not described in specifications in channels other than pure claim construction, and it seems to do so without warning. These approaches include invalidating claims for inadequate written description, scope of enablement deficiencies, and failure to claim “the subject matter which the applicant regards as his invention.”⁴² This is really what I am worried about. Let me see if I can worry you as well.

A. *Inadequate Written Description: The Gentry Problem*

One approach the Federal Circuit employs is to invalidate patents for inadequate written descriptions. I used to think that an applicant was entitled to claim as broadly as the prior art allows. I also used to think that that an applicant could claim more broadly than the embodiments disclosed in the specification. But now I am not sure on either point.

The Federal Circuit decided *Gentry Gallery v. Berkline Corp.*⁴³ in 1998. This case dealt with an invention of a sectional sofa with two reclining seats facing the same direction with a console between them.⁴⁴ The recliner controls were disclosed to be on the console, but the broader claims were not so limited.⁴⁵ The court concluded, more or less on its own, that “when viewed in its entirety, the disclosure [was] limited to sofas in which the recliner control [was] located on the console.”⁴⁶ The court could have construed the claims as requiring that limitation, as it has done in other cases.⁴⁷ But it did not do so. The court could even have invalidated the claims under paragraph two of § 112 for failure to claim that which the inventor regarded as the invention.⁴⁸ But it did not do so.

Instead, the court reached out and invalidated the broad claims for failure to comply with the written description requirement of paragraph one of § 112.⁴⁹ In other words, it invalidated the claims for lack of support in the specification.⁵⁰ In so doing, the court stated:

It is a truism that a claim need not be limited to a preferred embodiment. However, in a given case, the scope of the right to exclude may be limited by a narrow disclosure. . . . In sum, the cases . . . do not stand for the proposition that an applicant can broaden his claims to the extent that they

⁴² 35 U.S.C. § 112 (1994).

⁴³ 134 F.3d 1473 (Fed. Cir. 1998).

⁴⁴ *Id.* at 1475.

⁴⁵ *Id.*

⁴⁶ *Id.* at 1479.

⁴⁷ See *SciMed*, 242 F.3d at 1340; *Watts*, 232 F.3d at 883; *Toro*, 199 F.3d at 1301-02.

⁴⁸ See 35 U.S.C. § 112 (1994) (“The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.”).

⁴⁹ *Gentry*, 134 F.3d at 1479-80.

⁵⁰ *Id.*

are effectively bounded only by the prior art. Rather, they make clear that claims may be no broader than the supporting disclosure, and therefore that a narrow disclosure will limit claim breadth.⁵¹

This language seemed to indicate that the court would read the limitation into the claim and find no infringement. But instead, the court invalidated the patent for want of an adequate written description.⁵²

In a case decided about a year later, the Federal Circuit observed that *Gentry* “consider[ed] the situation where the patent’s disclosure makes crystal clear that a particular (i.e., narrow) understanding of a claim term is an ‘essential element of [the inventor’s] invention.’”⁵³ This observation is not helpful. What does the court mean by “crystal clear”?

In a much more recent case, *Reiffin v. Microsoft Corp.*,⁵⁴ a district court invalidated a patent, specifically relying on *Gentry*.⁵⁵ The Federal Circuit had a perfect chance to elaborate, but the majority found a way to duck the issue.⁵⁶ In a separate opinion, Judge Newman gave her view that *Gentry* is limited to a situation where the omitted element is the only possible embodiment, and where a variation

⁵¹ *Id.*

⁵² *Id.*

⁵³ *Johnson Worldwide Assocs. v. Zebco Corp.*, 175 F.3d 985, 983 (Fed. Cir. 1999) (second alteration in original) (quoting *Gentry*, 134 F.3d at 1473).

⁵⁴ 214 F.3d 1342 (Fed. Cir. 2000).

⁵⁵ *Id.* at 1345-46 (citing *Gentry*, 134 F.3d at 1479). The invention at issue was a “[c]omputer [s]ystem with [r]eal-time [c]ompilation.” *Id.* at 1344. The system involved “a combination of software and hardware [which] compiles a computer program concurrently with the program’s entry into an editor.” *Id.* The invention thus achieves “contemporaneous real-time entry and compilation of a source program.” *Id.*

The inventor filed his original application in 1982. *Id.* In 1985, he filed a continuation of this application. *Id.* In 1990, “[h]e filed another continuing application with additional text and modified claims . . . , describing the system as a ‘multithreaded computer application.’” *Id.* In 1994, he filed a continuing application based on the 1990 application. *Id.* In 1997, the PTO issued patents based on the 1990 and 1994 applications. *Id.* Both these patents share the same specification, but they have different claims. *Id.*

The patentee sued Microsoft for infringement. *Id.* at 1345. The patentee claimed that Microsoft infringed with its spell-check and grammar-check features of word processing programs, and parts of the Microsoft Windows® 98 operating system. *Id.* The district court held that the subject patents were invalid because they did not comply with the written description requirement of the first paragraph of 35 U.S.C. § 112. *Id.* The district court examined the written description of the 1982 grandparent application, rather than that of the applications that actually resulted in the issuance of the patents at issue. *Id.* at 1346.

⁵⁶ *See id.* at 1345-46. Instead of elaborating on the “omitted element test,” the court distinguished *Gentry*. *Id.* at 1346. The Federal Circuit held that the district court incorrectly examined the 1982 grandparent application. *Id.* The Federal Circuit reasoned that it is appropriate for a court to examine the disclosure of an ancestor application only where a party seeks the benefit of the filing date of the ancestor application under 35 U.S.C. § 120. *Id.* The court held that “claims to subject matter in a later-filed application not supported by an ancestor application . . . are not invalidated; they simply do not receive the benefit of the earlier application’s filing date.” *Id.* The court distinguished *Gentry*, in that in *Gentry*, “there were no prior applications and the ‘original disclosure’ was that of the issued patent.” *Id.* Thus, the Federal Circuit never reached the *Gentry* issue. *Cf. id.* (“Since the district court erred in looking to the 1982 specification for support under § 112 of the claims granted on the 1990 and 1994 specifications, we do not reach [the] challenge to the ‘omitted element test.’”).

would be outside the stated purpose of the invention.⁵⁷ Thus, Judge Newman is of the view that an element is essential when it is part of the only possible embodiment.⁵⁸ This, she says, is simply a reflection of the long-standing rule that claims that are broader than the disclosure are not allowable.⁵⁹ It is difficult to determine what this language means, however. The court in the past has held that an applicant is entitled to claims broader than the disclosure as long as the claimed subject matter did not run up against the prior art.⁶⁰

Thus, the court is deciding whether a disclosure of one specific structure for a particular element supports a claim that recites that element generically. This analysis promises to be extremely difficult, particularly in mechanical and electronic cases. This difficulty is illustrated by a comparison of the court's reasoning in *Tronzo v. Biomet, Inc.*⁶¹ with that in *Lampi Corp. v. American Power Products*.⁶² In *Tronzo*, the specification described a conical cup element in an artificial hip socket.⁶³ The claim at issue did not specify the shape of the cup.⁶⁴ The court held that the specification did not support the claim.⁶⁵ However, in *Lampi*, the claim included a housing having "two separable half-shells."⁶⁶ The specification described identical half-shells and indicated that this construction made for more efficient manufacture and assembly.⁶⁷ Despite this fact, and despite citing but not effectively distinguishing *Tronzo*, the court held that the claim was supported by the specification.⁶⁸ Cases such as *Tronzo* and *Lampi* fail to provide even a clue as to how to determine whether a written description is adequate.

⁵⁷ *Id.* at 1348 (Newman, J., concurring). Judge Newman felt that the court should have addressed the plaintiff's challenge to the "omitted element test":

The ground on which the district court based its ruling is not treated in this court's per curiam opinion, leaving the remand in procedural and substantive limbo. The sole basis of the district court's summary judgment was its adoption of the "omitted element test," which was in turn derived from Microsoft's incorrect statement of the law of written description. The issues concerning the "omitted element test" were fully presented on appeal, and our reversal of the summary judgment on a different ground does not answer the question that is central to this case. Our silence on whether this is a correct rule of law will be singularly mischievous, for it relates to [the plaintiff's] entitlement to his earlier filing date under 35 U.S.C. § 120, an issue that the parties expect to be raised on the case's return to the district court.

Id. at 1347 (footnote omitted).

⁵⁸ *See id.* at 1348.

⁵⁹ *Id.*

⁶⁰ *See, e.g., Lemelson v. United States*, 752 F.2d 1538, 1552 (Fed. Cir. 1985). In *Lemelson*, the omitted limitation in the patentee's broad claims was the only possible embodiment. *Id.* at 1552. A variation would have been outside the stated purpose of the invention. *Id.* However, the Federal Circuit did not invalidate the claims for lack of support. *Id.* at 1551-52.

⁶¹ 156 F.3d 1154 (Fed. Cir. 1998).

⁶² 228 F.3d 1365 (Fed. Cir. 2000).

⁶³ *Tronzo*, 156 F.3d at 1159.

⁶⁴ *Id.*

⁶⁵ *Id.*

⁶⁶ *Lampi*, 228 F.3d at 1369.

⁶⁷ *Id.* at 1376.

⁶⁸ *Id.* at 1378. Both *Tronzo* and *Lampi* involved the issue of entitlement to an earlier filing date rather than a facial attack on validity based upon an inadequate written description. *Lampi*, 228 F.3d at 1377-78; *Tronzo*, 156 F.3d at 1160. However, a patent must satisfy the same requirements of paragraph one of § 112 in either context. *See* 35 U.S.C. § 120 (requiring for benefit

I used to believe also that claims cover the recited invention and obvious variations. This notion is really at the heart of the doctrine of equivalents,⁶⁹ and it is the basis for obviousness-type double patenting.⁷⁰ However, in the context of the written description, the Federal Circuit has made it quite clear that “[a] disclosure in a parent application that merely renders the later-claimed invention obvious is not sufficient to meet the written description requirement.”⁷¹ The court requires “the disclosure [to] describe the claimed invention with all its limitations.”⁷² Thus, this concept does not provide a way out of the *Gentry* box.

Because of the Federal Circuit holding in *Gentry*, it appears that drafters of patent applications must become fortune tellers. Drafters must decide in each case where to draw the line between a disclosure that will support a claim that is broader than the specific embodiment taught, and one that will not. It may be possible to ease the task somewhat by adding boilerplate statements to the effect that “other possible alternatives are within the scope of the invention.” However, this approach obviously has limits.

B. Scope of Enablement Deficiency

Another tactic that the Federal Circuit uses to achieve its desired results concerns the scope of enablement. In the past, this issue has arisen mostly in cases involving complex chemical and biotechnology inventions. However, there are signs that the Federal Circuit may be starting to apply a scope of enablement analysis to other types of inventions also.

In the Patent and Trademark Office (“PTO”), a lack of enablement rejection under paragraph one of § 112 is appropriate where the written description fails to

of an earlier filing date that the earlier application disclose the invention “in the manner provided by the first paragraph of section 112”).

⁶⁹ Even where “[a]n accused device . . . does not literally infringe a claim[, it] may still infringe under the doctrine of equivalents if each limitation of the claim is met in the accused device either literally or equivalently.” *E.g.*, *Tate Access Floors, Inc. v. Maxcess Techs., Inc.*, 222 F.3d 958, 964 (Fed. Cir. 2000). The doctrine of equivalents protects patentees against infringers who make only insubstantial changes in patented inventions. *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 607 (1950). The Supreme Court noted the necessity of the doctrine of equivalents:

[T]o permit imitation of a patented invention which does not copy every literal detail would be to convert the protection of the patent grant into a hollow and useless thing. . . . Outright and forthright duplication is a dull and very rare type of infringement. To prohibit no other would place the inventor at the mercy of verbalism and would be subordinating substance to form. It would deprive him of the benefit of his invention. . . .

Id.

⁷⁰ “Obviousness-type double patenting is a judicially created doctrine intended to prevent improper timewise extension of the patent right by prohibiting the issuance of claims in a second patent which are not ‘patentably distinct’ from the claims of a first patent.” *In re Braat*, 937 F.2d 589, 592 (Fed. Cir. 1991) (emphasis omitted). Courts analyze this doctrine by asking the question: “Does any claim in the [second] application define merely an obvious variation of an invention disclosed and claimed in the [earlier-issued] patent?” *In re Vogel*, 422 F.2d 438, 441 (C.C.P.A. 1970). If so, then “a terminal disclaimer is required to prevent undue timewise extension of monopoly.” *Id.* at 442.

⁷¹ *Tronzo*, 156 F.3d at 1158 (citing *Lockwood v. American Airlines, Inc.*, 107 F.3d 1565, 1572 (Fed. Cir. 1997)).

⁷² *Id.*

teach those of ordinary skill in the art to make and use the invention as broadly as it is claimed without undue experimentation.⁷³ The Federal Circuit described this type of rejection as follows:

This rejection takes several forms. The PTO will make a scope of enablement rejection where the written description enables something within the scope of the claims, but the claims are not limited to that scope. See Manual of Patent Examining Procedures (“M.P.E.P.”) § 706.03(c), form P 7.31.03 (Rev. 3, July 1997). This type of rejection is marked by language stating that the specification does not enable one of ordinary skill to use the invention commensurate with the scope of the claims. On the other hand, if the written description does not enable any subject matter within the scope of the claims, the PTO will make a general enablement rejection, stating that the specification does not teach how to make or use the invention. See M.P.E.P. § 706.03(c), form P 7.31.02.⁷⁴

Two recent cases are examples of this concept. In 1999, the court decided *National Recovery Technologies, Inc. v. Magnetic Separation Systems, Inc.*,⁷⁵ in which the invention was a method of distinguishing and separating material items having different levels of absorption of penetrating electromagnetic radiation.⁷⁶ The court stated the law as: “The scope of the claims must be less than or equal to the scope of the enablement.”⁷⁷ It is difficult to understand the precise meaning of this test. However, the court apparently understands the meaning of the test, because the court held the claims invalid because the enablement was not as broad as the claims.⁷⁸

Another example occurred in *In re Cortright*,⁷⁹ where the invention was a new use of an old commercial product, “Bag Balm,” which had been used to soften the udders of cows.⁸⁰ The new use was to apply Bag Balm to the human scalp to promote hair growth and combat baldness.⁸¹ The court did not affirm the PTO’s rejection of

⁷³ *E.g.*, *In re Cortright*, 165 F.3d 1353, 1356 (Fed. Cir. 1999); *In re Goodman*, 11 F.3d 1046, 1050 (Fed. Cir. 1993). In *Goodman*, the PTO Board of Patent Appeals and Interferences rejected some of the applicant’s claims because the specification did not enable the invention for “all plants,” even though the specification did enable the invention for particular types of plant cells. *Goodman*, 11 F.3d at 1049. The Federal Circuit affirmed the Board’s decision, noting that “[t]he record . . . shows the need for extensive experimentation to practice the claimed method for just a few plants, let alone all plant cells as broadly claimed in the application.” *Id.* at 1052.

⁷⁴ *Cortright*, 165 F.3d at 1356.

⁷⁵ 166 F.3d 1190 (Fed. Cir. 1999).

⁷⁶ *Id.* at 1192. The invention “address[ed] the problem of separating recyclable plastic materials that are virtually indistinguishable to the human eye.” *Id.* Examples of these materials were polyester (“PET”) and polyvinyl chloride (“PVC”) containers. *Id.* The technique of the patent took advantage of the different chemical properties of the materials that caused the materials to absorb different amounts of electromagnetic radiation. *Id.* An example of this electromagnetic radiation is x-rays. *Id.*

⁷⁷ *Id.* at 1196.

⁷⁸ *Id.* at 1198.

⁷⁹ 165 F.3d 1353 (Fed. Cir. 1999).

⁸⁰ *Id.* at 1355.

⁸¹ *Id.*

the claims on the basis of inoperability.⁸² Instead, it rejected the claim on the basis of a failure to set forth an enabling description of how to use Bag Balm to achieve the claimed result.⁸³ However, the court discussed scope of enablement a great deal in this opinion, so it may actually be a scope of enablement case.⁸⁴ The bottom line here is that the court has yet to set forth any guidelines as to what it means by enabling “the invention as broadly as it is claimed.”⁸⁵

C. *What the Inventor Regards as the Invention*

Another approach the Federal Circuit may be considering is to invalidate claims based on paragraph two of § 112, which requires that “the claims particularly point[] out and distinctly claim[] the subject matter which the applicant regards as his invention.”⁸⁶ This approach would have worked very nicely in *Gentry*, for example, because the court regarded the invention described in the specification as “clearly” involving console-mounted recliner controls.⁸⁷

Paragraph two of § 112 has two prongs: (1) particularity and distinctness; and (2) “the subject matter regarded as the invention.”⁸⁸ Certainly the Federal Circuit has invalidated claims for lack of particularity and distinctness, which is normally referred to as “indefiniteness.”⁸⁹ However, the court has never held a patent invalid because it did not claim the subject matter that the inventor regarded as his or her invention.

The closest the court has come was in *Solomon v. Kimberly-Clark Corp.*,⁹⁰ where it reversed such a holding.⁹¹ The district court relied on the inventor’s deposition testimony in holding that the claims at issue were invalid for failing to claim the subject matter the inventor regarded as the invention.⁹² The Federal Circuit reversed this holding.⁹³ The court noted that reliance on inventor testimony on the question of what the inventor “regards as the invention” might be appropriate in the prosecution stages before a patent issues, where the question is one of patentability.⁹⁴ However, it held that such testimony should not be considered in litigation after the patent issues, where the question is one of validity.⁹⁵ The court reasoned that:

⁸² *Id.* at 1359.

⁸³ *Id.* at 1360.

⁸⁴ *See id.* at 1356-57.

⁸⁵ *Id.* at 1356.

⁸⁶ 35 U.S.C. § 112 (1994).

⁸⁷ *Gentry*, 134 F.3d at 1477.

⁸⁸ 35 U.S.C. § 112.

⁸⁹ *See, e.g., Union Pac. Res. Co. v. Chesapeake Energy Corp.*, 236 F.3d 684, 692 (Fed. Cir. 2001) (holding claims invalid for indefiniteness under § 112 where the meaning of the word “comparing” is ambiguous and not defined in the written description); *In re Hyatt*, 708 F.2d 712, 714-15 (Fed. Cir. 1983) (holding a single means claim invalid for indefiniteness).

⁹⁰ 216 F.3d 1372 (Fed. Cir. 2000).

⁹¹ *Id.* at 1382.

⁹² *Id.* at 1376.

⁹³ *Id.* at 1380.

⁹⁴ *Id.* at 1376 (citing *In re Conley*, 490 F.2d 972, 976 (C.C.P.A. 1974)).

⁹⁵ *Id.* at 1379.

A more limited range of evidence should be considered in evaluating validity as opposed to patentability . . . because the language of issued claims is generally fixed . . . , the claims are no longer construed as broadly as is reasonably possible, and what the patentee subjectively intended his claims to mean is largely irrelevant to the claim's objective meaning and scope.⁹⁶

The court in *Solomon* reasoned that because the issued patent speaks to one of ordinary skill in the art, the question is what that person, reading the patent, would believe the inventor regarded as the invention.⁹⁷ Thus, if the court had wished to approach *Gentry* in this way, it would simply have posed and answered the question whether a hypothetical person skilled in the art, having read the *Gentry* patent, would conclude that the inventor regarded a sofa with recliner controls on the console as his invention. If so, the patent would be invalid under paragraph two of § 112, because the claims were not directed to that invention.

In summary, where the claims literally read on embodiments that are not described in specification, the Federal Circuit sometimes imports the limitation directly into the claim during the claim construction exercise, despite vehement denials that it is doing such a thing. The court sometimes holds that the written description is inadequate to support the claim, thus resulting in invalidity, either directly under paragraph one of § 112 or indirectly due to intervening prior art. The court sometimes holds that the scope of enablement is too narrow, likewise resulting in an invalid patent under paragraph one of § 112. The court may also hold that the claim does not set forth that which the inventor regards as his or her invention, thus invalidating it under paragraph two of § 112.

III. A POSSIBLE SOLUTION: THE REVERSE DOCTRINE OF EQUIVALENTS

It is impossible to predict which, if any, of these approaches the court is likely to pursue in a given case. In view of this uncertainty, an alternative approach is necessary. A much more satisfactory solution would be for courts to apply the reverse doctrine of equivalents. Under the reverse doctrine of equivalents, where a

⁹⁶ *Id.* (citation omitted). The court further noted that “[t]he testimony of an inventor is often a self-serving, after-the-fact attempt to state what should have been part of his or her patent application.” *Id.* (quoting *Bell & Howell Document Mgmt. Prods. Co. v. Altek Sys.*, 132 F.3d 701, 706 (Fed. Cir. 1997)).

This issue of whether to consider inventor testimony is similar to the intrinsic-evidence/extrinsic-evidence dichotomy that arises in claim construction. *See, e.g.*, *Optical Disc Corp. v. Del Mar Avionics*, 208 F.3d 1324, 1334 (Fed. Cir. 2000). To construe a claim, a court examines intrinsic evidence before examining extrinsic evidence. *Id.* Intrinsic evidence includes “the patent itself, including the claims, the specification and, if in evidence, the prosecution history.” *Id.* Normally, examining only the intrinsic evidence allows the court to “resolve any ambiguity in a disputed claim term.” *Id.* However, if the intrinsic evidence does not resolve all such ambiguities, then the court may consider “extrinsic evidence . . . if needed to assist in determining the meaning or scope of technical terms in the claims.” *Id.*

⁹⁷ *Solomon*, 216 F.3d at 1378 (quoting *Personalized Media Communications, L.L.C. v. United States ITC*, 161 F.3d 696, 705 (Fed. Cir. 1998)).

person has literally infringed a patent, the person may nevertheless escape liability for infringement.⁹⁸ The person is not liable for infringement if the “device is so far changed in principle from [the] patented article that it performs the same or a similar function in a substantially different way, [even though it] falls within the literal words of the claim.”⁹⁹ An accused infringer invokes the reverse doctrine of equivalents as a defense where “claims are written more broadly than the disclosure warrants.”¹⁰⁰ A court restricts the scope of such claims . . . not only to avoid a holding of infringement [where the] court deems it appropriate, but often . . . to preserve the validity of claims with respect to their original intended scope.”¹⁰¹

The reverse-doctrine-of-equivalents approach has several advantages over the variety of approaches the court uses today. It does not require an importation of limitations from the specification to the claim. It does not result in the patent being invalid. It simply presents another factual question for the trier of fact:¹⁰² Is the accused product or process so far changed in principle that, despite literal readability, it performs the function of the claimed invention in a substantially different way?¹⁰³

However, the advantage of the reverse doctrine of equivalents being a question of fact may doom this approach. It does not appear likely that the Federal Circuit will be willing to give up the ultimate control it enjoys on legal questions such as claim construction and enablement and let a judge or jury decide essentially the same ultimate questions as matters of fact.¹⁰⁴ But let us at least hope that, whatever path it chooses, it begins to provide some roadsigns for use to follow. I regard this matter of breadth of claims versus fullness of disclosure as one of the truly difficult unresolved problems in modern patent law.

⁹⁸ *SRI Int'l v. Matsushita Elec. Corp.*, 775 F.2d 1107, 1123 (Fed. Cir. 1985) (en banc).

⁹⁹ *Id.* (quoting *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 608-09 (1950)). The reverse doctrine of equivalents is the opposite of the doctrine of equivalents, under which a person may be liable for infringement even if it “does not literally infringe a claim . . . if each limitation of the claim is met in the accused device either literally or equivalently.” *E.g.*, *Tate Access Floors, Inc. v. Maxcess Techs., Inc.*, 222 F.3d 958, 964 (Fed. Cir. 2000); *see also supra* note 71 (discussing the doctrine of equivalents). “Just as the purpose of the doctrine of equivalents is to prevent pirating of the patentee’s invention, so the purpose of the reverse doctrine is to prevent unwarranted extension of the claims beyond a fair scope of the patentee’s invention.” *Scripps Clinic & Research Found. v. Genentech, Inc.*, 927 F.2d 1565, 1581 (Fed. Cir. 1991) (citation and internal quotation marks omitted).

¹⁰⁰ *Texas Instruments, Inc. v. United States ITC*, 846 F.2d 1369, 1372 (Fed. Cir. 1988), *affg* 805 F.2d 1558 (Fed. Cir. 1986).

¹⁰¹ *Id.*

¹⁰² The question of the reverse doctrine of equivalents is a question of fact. *SRI Int'l*, 775 F.2d at 1124.

¹⁰³ *See, e.g., Graver Tank*, 339 U.S. at 608-09; *SRI Int'l*, 775 F.2d at 1123.

¹⁰⁴ Almost since the Federal Circuit was formed, critics have accused the court of stepping outside its role as an appellate court. William C. Rooklidge & Matthew F. Weil, *Judicial Hyperactivity: The Federal Circuit's Discomfort with its Appellate Role*, 15 BERKELEY TECH. L.J. 725, 729 (2000). “Disappointed litigants and commentators alike have criticized the court for fact-finding and other forms of hyperactive judging. Increasingly, the bar is expressing concern over the court’s decision-making procedures and its apparent willingness to take over the roles of patent examiner, advocate and trier of fact.” *Id.* at 729-30 (footnotes omitted).

And thus we have returned to where we started. I continue to worry, and the Federal Circuit continues to grope for full control over every issue in patent infringement cases, without being very clear as to how it intends to achieve that goal.