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**Comment: Deciphering Means-Plus-Function Claim
Limitation Infringement under § 112, Paragraph 6: Finding
Certainty in the Uncertain Case Law**

*Chad S.C. Stover*¹

I. Abstract

The development of a technology-centered economy has increased the importance of patent rights. In order for these patent rights to have value, patentees must be able to ascertain the metes and bounds of their patent claims. In recent years the Federal Circuit has muddled means-plus-function claim limitation infringement analysis governed by 35 U.S.C. § 112, ¶ 6. Because the Federal Circuit uses different approaches to decide claims, it has become impossible to know the metes and bounds means-plus-function (MPF) limitations create.

For example, in two recent cases, *Kemco Sales, Inc. v. Control Papers Co., Inc.* and *IMS Technology, Inc. v. Haas Automation, Inc.*, the Federal Circuit has used divergent approaches to analyze MPF claim limitation infringement. In *Kemco*, the court used the narrow approach to § 112, ¶ 6 infringement analysis, focusing on the structural equivalence of the accused structure to the patented structure. In *IMS*, the court used the contextual approach to infringement, looking at the claim limitation's position in the context of the overall invention. This inconsistency unjustly forces inventors to rely on litigation to decide the scope of their patents' rights to exclude.

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In order to promote innovation, the more logical interpretation of 35 U.S.C. § 112, ¶ 6 is a narrow approach focusing on a simple structural equivalence comparison. This Comment shows the benefits of the narrow approach over the more complicated contextual approach.

II. Introduction and Background

As technology develops at the center of an interdependent world economy, the importance of the patent as a means to carve out a part of this new economy increases. Patent claims define the metes and bounds of an invention, thereby defining the scope of patent protection and determining the worth of the right to exclude granted by the patent. Patent claims written in “means-plus-function” or “step-plus-function” format (hereafter “MPF format”) define a claim limitation by what it does rather than by its structure.²

The MPF format may provide advantages over ordinary structural claims for certain types of inventions. MPF language is generally used where the function or action, rather than the specific structure that accomplishes the action, is important.³ 35 U.S.C. § 112, ¶ 6 governs MPF claim limitations.⁴ MPF format incorporates into the limitations of the claim the embodiment

² PETER S. CANELIAS, *PATENT PRACTICE HANDBOOK*, at §12.06 (2001).

³ ROBERT C. FABER, *LANDIS ON MECHANICS OF PATENT CLAIM DRAFTING*, at § 34 (2000).

⁴ 35 U.S.C. § 112, para. 6 (1994) (stating “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.”).

disclosed in the specification and all of its equivalents, provided there is a clear link in the specification or prosecution history between the function recited in the claim and a particular structure in the disclosure.⁵ In order to broaden the scope of means limitations, the claim drafter should expressly recite various alternative structural features corresponding to the means limitation.⁶ Means limitations place on the drafter a burden to draft a broad specification.⁷

Section 112, ¶ 6 was enacted as part of the Patent Act of 1952, likely in response to *Halliburton Oil Well Cementing Co. v. Walker*.⁸ *Halliburton* forbade the use of MPF language at the point of novelty because the Court thought MPF elements were overbroad and ambiguous.⁹ Perhaps in response to *Halliburton*, Congress enacted § 112, ¶ 6 as part of the Patent Act of 1952, permitting the use of MPF language but providing “a standard to make the broad claim language more definite.”¹⁰ The words of the statute read:

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

⁵ FABER, *supra* note 3, at § 34 (“The duty to link or associate structure to function is the quid pro quo for the convenience of employing § 112, [¶] 6.”).

⁶ See, e.g., *Ishida Co. v. Taylor*, 221 F.3d 1310, 1316 (Fed. Cir. 2000).

⁷ FABER, *supra* note 3, at § 34 (“...if the claim drafter recognizes the possible equivalency issue early enough, the specification can be written to express enough alternatives to give broad scope to a § 112, paragraph 6 limitation.”).

⁸ *Halliburton Oil Well Cementing Co. v. Walker*, 329 U.S. 1 (1946).

⁹ *Valmont Indus., Inc. v. Reinke Mfg. Co.*, 983 F.2d 1039, 1042 (Fed. Cir. 1993); *In re Donaldson Co.*, 16 F.3d 1189, 1194 (Fed. Cir. 1993).

¹⁰ *Valmont*, 983 F.2d at 1042.

structure, material, or acts described in the specification and equivalents thereof.¹¹

Apparent from this language, the purpose of § 112, ¶ 6 is to grant the inventor a fair scope that is not dependent on a catalogue of alternative embodiments in the specification.¹² In addition to granting a fair scope to patent grants, there is some evidence to support the hypothesis that Congress intended § 112, ¶ 6 to codify the application of the judicially-created doctrine of equivalents to MPF claim limitations.¹³ Unfortunately, as this Comment will show, the interpretation of the statute has not provided the definiteness anticipated by its drafters.¹⁴ Uncertainty over the legislative intent of § 112, ¶ 6 exists; the interpretation of § 112, ¶ 6 that the plain meaning of the statute is a codification of the doctrine of equivalents has been both accepted and rejected.¹⁵ This Comment will argue that the plain meaning of the statute rightly should separate the doctrine of equivalents and the § 112, ¶ 6 inquiries.

The Federal Circuit has developed a general test for MPF claim literal infringement under § 112, ¶ 6. Provided all other limitations of a claim are literally met, an accused structure is said to literally infringe a MPF claim limitation if two elements are present: (1) the accused infringing structure contains the equivalent

¹¹ See *supra* note 4.

¹² ROBERT L. HARMON, PATENTS AND THE FEDERAL CIRCUIT, at § 6.3(a)(iv) (5th ed. 2001).

¹³ See Julia Hodge, Comment, *112, ¶ 6 Claim Interpretation and the Doctrine of Equivalents: An Invitation to Confused Thinking*, 17 Computer & High Tech. L.J. 203, 218 (2000).

¹⁴ *Id.*

¹⁵ See *id.*

structure to that disclosed in the section of the specification corresponding to the MPF limitation,¹⁶ and (2) the relevant structure in the accused infringing device and the structure in the corresponding specification perform the identical function and are insubstantially different from the MPF limitation.¹⁷

Doctrine of equivalents non-literal infringement developed in the common law as a way to protect the substance of a patentee's right to exclude when literal infringement fails. It does so by ensuring that merely colorable differences or slight improvements beyond the literal scope of a claim do not prevent infringement.¹⁸ The Federal Circuit in *Kraft v. International Trading Co.* stated:

Equivalence is shown by evidence that the accused device contains an element that is not "substantially different" from any claim element that is literally lacking ... or that the claimed limitation and the accused component "perform substantially the same function in substantially the same way to achieve substantially the same result."¹⁹

¹⁶ HARMON, *supra* note 12.

¹⁷ See *Cortland Line Co. v. Orvis Co.*, 203 F.3d 1353, 1358 (Fed. Cir. 2000). See also *Mas-Hamilton Group v. LaGard, Inc.*, 156 F.3d 1206, 1211-12 (Fed. Cir. 1998).

¹⁸ HARMON, *supra* note 12.

¹⁹ *Kraft Foods, Inc. v. Int'l Trading Co.*, 203 F.3d 1362, 1371 (Fed. Cir. 2000) (quoting *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*, 520 U.S. 17, 40 (1997) and *Ethicon Endo-Surgery, Inc. v. United States Surgical Corp.*, 149 F.3d 1309, 1321 (Fed. Cir. 1998)).

Under the tripartite function/way/result test of the doctrine of equivalents, the fact finder must consider factors such as the prosecution history, the pioneer-non-pioneer status of the invention, and the prior art to make a determination of infringement. Determination of the importance of the limitation to the invention as a whole, often referred to as whether the limitation is at the “point of novelty,” also has been used as a factor in doctrine of equivalents infringement determinations.²⁰

Even though § 112, ¶ 6 and the doctrine of equivalents seem very similar, there are significant differences between the two inquiries. Equivalence analysis under § 112, ¶ 6 is essentially the application of the doctrine of equivalence in a limited role.²¹ § 112, ¶ 6 analysis uses the same tripartite function/way/result test of the doctrine of equivalents, but § 112, ¶ 6 literal infringement stresses functional identity, not equivalency.²² Thus, § 112, ¶ 6 equivalence is narrower than the doctrine of equivalents.²³

In addition, there is a temporal distinction between the statutory and common law equivalence inquiries.²⁴ The literal meaning of a claim fixes upon issuance, and, as such, equivalence analysis under § 112, ¶ 6 only can concern technology in existence at the time of issuance.²⁵ As Donald Chisum states in his treatise,

²⁰ See *Warner-Jenkinson*, 520 U.S. at 40.

²¹ See, e.g., *Warner-Jenkinson*, 520 U.S. at 40; see also MANUAL OF PATENT EXAMINING PROCEDURE § 2186 (2000).

²² See *Odetics Inc. v. Storage Technology Corp.*, 185 F.3d 1259, 1267 (Fed. Cir. 1999).

²³ *Id.*

²⁴ See *Al-Site Corp. v. VSI Int'l, Inc.*, 174 F.3d 1308, 1320 (Fed. Cir. 1999).

²⁵ See *Chiuminatta Concrete Sys., Inc. v. Cardinal Indus., Inc.*, 145 F.3d 1303, 1310-11 (Fed. Cir. 1998) (stating “Even if such an element [corresponding structure in the accused infringer] is found not to be a § 112, ¶ 6, equivalent

however, “if the accused technology was developed after the patent issued, infringement exists, if at all, under the common law doctrine of equivalents. In short, a threshold determination must be made as to when the technology embodied in the accused product was available—pre- or post-issuance.”²⁶

Following from this, doctrine of equivalents analysis is precluded for MPF limitations after a § 112, ¶ 6 finding of no literal infringement if the technology of the accused device existed at the time of patent issuance.²⁷ The courts never have held that § 112, ¶ 6 codified the doctrine of equivalents, but the courts’ struggle to define the differences has led to confusion in MPF claim limitation infringement as illustrated in the following cases.

III. Case Summaries

A. *Kemco Sales, Inc. v. Control Papers Co.*²⁸

Kemco owns U.S. Patent 5,405,197 for plastic security envelopes.²⁹ The envelopes indicate whether the envelope has been opened and has had its valuables removed. Previous envelopes considered as prior art were not secure because the adhesive securing the flaps could be heated, the contents could be read, and the adhesive could be reapplied without any indication

because it is not equivalent to the structure disclosed in the patent, this analysis should not foreclose it from being an equivalent under the doctrine of equivalents.”).

²⁶ DONALD S. CHISUM ET AL., PRINCIPLES OF PATENT LAW 950 (2d ed. 2001).

²⁷ *Chiuminatta*, 145 F.3d at 1311.

²⁸ *Kemco Sales, Inc. v. Control Papers Co.*, 208 F.3d 1352 (Fed. Cir. 2000).

²⁹ *See id.* at 1354–55.

that the envelope had been opened.³⁰ Kemco's new envelope utilizes two sealing means. One sealing means is extremely temperature sensitive to show tampering, and the other sealing means physically seals the envelope.³¹

Control Papers also made a security envelope. This accused infringing envelope also utilized two adhesive layers. The only difference in Control Papers' accused infringing envelope was its use of a dual-lip structure rather than the single-lip structure disclosed in Kemco's patent.³²

Kemco sued for infringement in United States District Court for the District of New Jersey. The district court granted partial summary judgment in favor of Control Papers. Kemco appealed, placing the infringement determination in the hands of the Court of Appeals for the Federal Circuit.³³

After determining the meanings of various phrases in the patent, the court began the infringement analysis relevant to this discussion. The court stated that a two-pronged test governed the analysis. First, the accused infringing product must have identical function to the disclosed structure in the patent. Second, the accused infringing product must be otherwise insubstantially different with respect to structure.³⁴ The court advocated the modified function/way/result test partially borrowed from doctrine of equivalents analysis.³⁵

The court said a key difference between the § 112, ¶ 6 infringement analysis under the modified function/way/result test

³⁰ *Id.* at 1355.

³¹ *Id.*

³² *Id.* at 1357.

³³ *See id.* at 1354.

³⁴ *Id.* at 1364.

³⁵ *Id.*

and the doctrine of equivalents was that the doctrine of equivalents requires substantially similar function while § 112, ¶ 6 requires identical function.³⁶ The analysis under the way and result prongs of the doctrine of equivalents function/way/result test and the modified function/way/result test were held to be the same.³⁷ The inquiry did not analyze the interchangeability of the two structures as known by persons of ordinary skill in the art, an inquiry typical of equivalency analysis under the doctrine of equivalents.³⁸ Although the court explicitly used the modified tripartite test and an analysis of substantial similarity to decide this case, its inquiry focused mainly on the structural equivalency. Thus, the court implicitly used a structural test narrowly construing § 112, ¶ 6 to require structural equivalency.

In this case, the Federal Circuit found that the accused dual-lip envelope utilized a different way and result than the single-lip envelope.³⁹ The way was not equivalent because the Control Papers envelope met together and bound via an internal adhesive. The result was not equivalent because both of Kemco's seals attach outside the envelope, while the first sealing means of the Control Papers envelope attaches internally. Because the way and result prongs show non-equivalence, infringement failed under both § 112, ¶ 6 and the doctrine of equivalents.⁴⁰ Thus, the appeals court upheld the district court ruling.

³⁶ *Id.*

³⁷ *Id.*

³⁸ *See, e.g.,* Multiflex Desiccants Inc. v. Medzam Ltd., 133 F.3d 1473 (Fed. Cir. 1998).

³⁹ *Kemco*, 208 F.3d at 1365.

⁴⁰ *Id.*

*B. IMS Technology, Inc. v. Haas Automation, Inc.*⁴¹

IMS has the rights to U.S. Patent 4,477,754 relating to a control system for a CNC mill (computer numerically controlled machine tool).⁴² The invention allows employees to interactively program the mill on the machine floor. Prior art methods required two steps: programming the desired milling operation at a remote location, and running the program on the mill. IMS's patented system recorded the user's inputs during interactive mill use and saved the "session" on a physical cassette tape for future use.⁴³ Haas's potentially infringing device utilized a floppy disk drive and disk to save the program instead of a cassette tape.⁴⁴

The United States District Court for the Eastern District of Virginia granted summary judgment of noninfringement against IMS. The Court of Appeals for the Federal Circuit remanded to determine genuine issues of material fact, affirming in part and vacating in part.⁴⁵

The bulk of the opinion dealt with issues of claim construction, but the court conducted an infringement analysis after the claim interpretation was found incorrect.⁴⁶ As in *Kemco*, functional identity was required as part of a modified function/way/result test for § 112, ¶ 6 equivalence.⁴⁷ Evidence of

⁴¹ *IMS Technology, Inc. v. Haas Automation, Inc.*, 206 F.3d 1422 (Fed. Cir. 2000).

⁴² *See id.* at 1425–26.

⁴³ *Id.* at 1426.

⁴⁴ *Id.*

⁴⁵ *Id.* at 1425.

⁴⁶ *See id.* at 1430 (holding that problems with the District Court's claim construction qualify as reversible errors).

⁴⁷ *IMS*, 206 F.3d at 1435.

known interchangeability within the relevant art was probative but not conclusive in the analysis.⁴⁸ The most significant part of the analysis was the use of the invention's context to decide infringement.⁴⁹ The court held that if the physical part of the invention under consideration is important to the overall structure, then a broader range of equivalents should be found to infringe.⁵⁰ The court further noted that the equivalency between the two structures need not be structural equivalence and expounded the fact that equivalent structure is not structural equivalence.⁵¹ Having literally the same structure is not required for literal infringement; only equivalent structure is needed for literal infringement. Due to errors in claim construction and infringement analysis, the court overturned summary judgment regarding the equivalence of the disk and tape.⁵²

The *IMS* decision differs from the *Kemco* decision in that the *IMS* court used the context of the claim to the overall invention and the interchangeability of the two structures. Neither of these inquiries was used by the *Kemco* court. The *Kemco* decision also implied that structural equivalence should be the primary inquiry, while the *IMS* court used a confusing definition of equivalent structure and rejected structural equivalency as a valid inquiry. The lack of a uniform standard for analyzing MPF claims

⁴⁸ See *id.* at 1435 (stating "Evidence of known interchangeability between structure in the accused device and the disclosed structure has also been considered an important factor.").

⁴⁹ See *id.* at 1436 (holding "the context of the invention should be considered when performing a § 112, ¶ 6 equivalence analysis just as it is in a doctrine of equivalents determination.").

⁵⁰ *Id.*

⁵¹ *Id.*; see 35 U.S.C. § 112, para. 6 (1994).

⁵² See *IMS*, 206 F.3d at 1425.

necessitates a closer look to see what approach should be used to increase certainty and stimulate innovation.

IV. Discussion

A. The Narrow Approach and the Contextual Approach

A focus on structural equivalence and a deconstruction or dissection of the structures characterize the narrow approach.⁵³ Analysis of structure is the proper construction of “structure” in § 112, ¶ 6 under the narrow approach’s point of view.⁵⁴ A majority of recent decisions, including *Kemco*, support this approach.⁵⁵ The narrow approach promotes innovation and predictability of intellectual property rights in the interpretation of

⁵³ See *Odetics, Inc. v. Storage Tech. Corp.*, 185 F.3d 1259, 1277 (Fed. Cir. 1999) (Lourie, J., dissenting).

⁵⁴ See *id.* (stating “Analyzing any of these structures for comparison with other structures requires analysis of their component parts. We need to focus on the real meaning of this statutory term if we are to serve our function of clarifying the law.”).

⁵⁵ See *Chiuminatta Concrete Concepts, Inc. v. Cardinal Indus., Inc.*, 145 F.3d 1303, 1309 (Fed. Cir. 1998) (noting that § 112, ¶ 6 equivalence is not shown by merely the same function, equivalency of structure must also be shown). See also *Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931, 934 (Fed. Cir. 1987) (en banc) (holding “To determine whether a claim limitation is met literally, where expressed as a means for performing a stated function, the court must compare the accused structure with the disclosed structure, and must find equivalent structure as well as identity of the claimed function for that structure.”); *Kemco Sales, Inc. v. Control Papers Co.*, 208 F.3d 1352, 1364 (Fed. Cir. 2000) (ruling that a § 112, ¶ 6 equivalent must “(1) perform the identical function and (2) be otherwise insubstantially different with respect to structure.”).

claims written in means-plus-function format, thus decreasing the breadth of potential infringement.

The contextual approach used in *IMS* focuses on the MPF claim's position in the context of the "point of novelty" of the invention. If an MPF claim is at the "point of novelty," then a broader range of equivalents will infringe. Conversely, a MPF claim covering any other part of the invention will have a narrow range of equivalents and a broad range of structures which will not infringe. This Comment argues that the range of equivalents provided by the contextual approach is too broad. In addition, the contextual approach improperly makes the analysis under § 112, ¶ 6 and under the doctrine of equivalents almost identical.⁵⁶

B. Why the Narrow Approach Is More Certain, More Logical, and More Equitable

Patent laws are designed to encourage innovation.⁵⁷ Certainty fosters innovation because if a patentee has prospective knowledge of her/his patent rights, then she/he is more likely to put energy into the innovation that leads to a patentable invention.⁵⁸ In addition, if competitors to a company with patent rights do not know the boundaries of the competitor's patents, they will not

⁵⁶ See *IMS*, 206 F.3d at 1436 (Fed. Cir. 2000) (stating "In light of the similarity of the tests for equivalence under § 112, ¶ 6 and the doctrine of equivalents, the context of the invention should be considered when performing a § 112, ¶ 6 equivalence analysis just as it is in a doctrine of equivalents determination").

⁵⁷ *Paulik v. Rizkalla*, 760 F.2d 1270, 1276 (Fed. Cir. 1985).

⁵⁸ *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1573 (Fed. Cir. 1996) (stating that the ability of the public to design around the language in patent claims and build non-infringing products is one of the important public benefits that justifies the patent grant of the right to exclude).

develop better substitutes for fear of expensive infringement suits.⁵⁹

If certainty fosters innovation, then the next logical step is to show that the narrow approach is more certain than the contextual approach. The narrow approach is more certain because it focuses on structural equivalency, which is easier to apply. It is relatively easy to look at two structures and make one determination about structural equivalency. It is much more complicated, and therefore uncertain, to apply a contextual approach which attempts to determine if the accused structure falls within a broad or narrow equivalence scope deduced from a two-pronged “point of novelty” inquiry. The contextual approach has two subjective inquiries: (1) determining the point of novelty and (2) determining if the accused structure is substantially similar given the disposition of (1). Determining the novelty of an invention is one main factor that makes writing a patent difficult.⁶⁰ The narrow approach, however, has only one inquiry: the substantial similarity of the two structures. Therefore, the narrow approach is more certain because the patentee can know her/his level of protection and competitors can innovate without fear of infringing a vague patent.

⁵⁹ Anat Hakim et al., *Western District of Wisconsin Proves a Speedy and Affordable Venue for Patent Litigation*, INTELL. PROP. TODAY, October 2001, at 34 (“According to a 2001 survey conducted by the American Intellectual Property Lawyer’s Association (AIPPLA), a patent litigant can expect to spend at least \$500,000 and up to \$6 million to try a patent case. On average, a patent suit in which \$1 - \$25 million is at risk costs \$797,000 through discovery and just under \$1.5 million through trial, with some litigants reporting costs in excess of \$2.5 million. For those cases in which more than \$25 million is at risk, the average litigant can expect to spend \$1.5 million through discovery and roughly \$3 million if there is a trial.”).

⁶⁰ HARMON, *supra* note 12, at 17.

Another reason the narrow approach to § 112, ¶ 6 is the more logical interpretation is that it does not consume the doctrine of equivalents. While § 112, ¶ 6 infringement is literal infringement, the contextual approach makes § 112, ¶ 6 infringement almost identical to non-literal infringement under the doctrine of equivalents (DOE).⁶¹ The courts have repeatedly held that there are differences between § 112, ¶ 6 and the DOE.⁶²

Since the courts have decided that § 112, ¶ 6 and the DOE are both to coexist in their own spheres of jurisdiction, § 112, ¶ 6 should be constructed to have effect.⁶³ The narrow approach gives meaning to § 112, ¶ 6 by restricting it to the literal infringement of structural comparisons.⁶⁴ The contextual approach, conversely, allows § 112, ¶ 6 and DOE analysis to overlap in a way that destroys the judicially-created differences between the two inquiries.

The primary reasons the two inquiries melt into one under the contextual approach are the contextual approach's use of the "point of novelty" of the MPF claim limitation and the use of known interchangeability of the two structures. These are both

⁶¹ See *IMS* at 1436 (stating "In light of the similarity of the tests for equivalence under § 112, ¶ 6 and the doctrine of equivalents, the context of the invention should be considered when performing a § 112, ¶ 6 equivalence analysis just as it is in a doctrine of equivalents determination").

⁶² See the discussion of differences between the two inquiries in Section IV-A. and *supra* notes 19-21.

⁶³ See *Kimberley-Clark Corp. v. Proctor & Gamble Distrib. Co.*, 973 F.2d 911, 915 (Fed. Cir. 1992) (stating that Congress does not legislate unnecessarily and, therefore, an interpretation rendering a statute redundant is to be avoided).

⁶⁴ See *Odetics, Inc. v. Storage Tech. Corp.*, 185 F.3d 1259, 1277 (Fed. Cir. 1999) (Lourie, J., dissenting).

classic inquiries under the DOE.⁶⁵ The narrow approach uses neither of these two factors and thus correctly limits § 112, ¶ 6 to literal infringement only. The Federal Circuit has held, “It is only when the changes are so insubstantial as to result in a fraud on the patent that equitable [DOE] becomes desirable.”⁶⁶ Structural changes governed by § 112, ¶ 6 are substantial; therefore, application of the DOE to structural changes is unnecessary. The contextual approach effectively applies the DOE, not a plain meaning § 112, ¶ 6 analysis, to structural changes. This is unnecessary and incorrect.

Patents are statutory grants of a limited monopoly to an inventor by the government in return for a full disclosure of the invention.⁶⁷ Since patent rights originated in the legislative branch, control over patent laws should remain true to the spirit of congressional intent in drafting § 112, ¶ 6.⁶⁸ The narrow approach takes power away from judges when deciding infringement cases by limiting their inquiry to a comparison of the structure disclosed in the specification with its equivalents.⁶⁹ In contrast, the contextual approach gives judges much more power to decide

⁶⁵ *Graver Tank & Mfg. Co. v. Linde Air Prod. Co.*, 339 U.S. 605, 609 (1950) (stating in relation to a DOE determination: “what constitutes equivalency must be determined against the context of the patent, the prior art, and the particular circumstances of the case. Equivalency, in patent law, is not a prisoner of formula and is not an absolute to be considered in a vacuum.”).

⁶⁶ *Slimfold Mfg. Co. v. Kinkad Indus. Inc.*, 932 F.2d 1453, 1457 (Fed. Cir. 1991).

⁶⁷ See generally *HARMON*, *supra* note 12, at §§ 1.1(a) and 18.2.

⁶⁸ But see *Hodge*, *supra* note 13, at 218.

⁶⁹ See *Signtech USA Ltd. v. Vutek Inc.*, 174 F.3d 1352, 1358 (Fed. Cir. 1999) (stating “[B]ecause of the statutory limitations governing the meaning of means-plus-function elements, courts must limit the scope of these claim elements to the corresponding structure disclosed in the specification and its equivalents”).

cases in a result-oriented way by granting them an essentially non-literal infringement inquiry. The power to bail out bad patent drafting with a contextual approach to infringement analysis should not be given to the judiciary.

C. Problems With the Narrow Approach Dispelled

A potential problem of the narrow approach is that its application, with its focus on structure, could allow trivial substitutes by competitors to avoid infringement.⁷⁰ While it is true that the narrow approach puts a greater demand on the patent drafter to include alternatives in the specification,⁷¹ the narrow approach does not preclude the use of the DOE in all circumstances.⁷² The DOE is precluded from use where the technology of the accused infringer existed at the time the patent was written.⁷³ However, where the technology did not exist at the time of filing, the DOE applies in full force to protect the inventor from anything but substantial changes that have a nonequivalent function, way, or result.⁷⁴ The seemingly inequitable result when proper alternatives are not included in the specification is a small

⁷⁰ Eva M. Ogielska, *Means-Plus-Functions Claims: IMS Technology, Inc. v. Haas Automation, Inc. & Kemco Sales, Inc. v. Control Papers Co.*, 16 Berkeley Tech. L.J. 71 (2001).

⁷¹ See FABER, *supra* note 3.

⁷² See *Chiuminatta Concrete Concepts, Inc. v. Cardinal Indus., Inc.*, 145 F.3d 1303, 1310 (Fed. Cir. 1998) (holding that where the equivalence issue involves a later-developed technology, a § 112, ¶ 6 finding of nonequivalence does not preclude a subsequent doctrine of equivalents inquiry).

⁷³ See *id.*

⁷⁴ See, e.g., *Kraft Foods, Inc. v. Int. Trading Co.*, 203 F.3d 1362, 1371 (Fed. Cir. 2000).

price to pay for certainty. Proper specification drafting can eliminate the problem entirely.

Another seeming inequity of the narrow approach is that it discriminates against inventions better suited to structural claims. While including alternatives for every MPF limitation used in the claims may seem tedious, it is the price for the privilege of using MPF language.⁷⁵ Some commentators have suggested using structural claims with detailed “definitions” sections to eliminate the need to use MPF claim construction at all.⁷⁶ The use of a “definitions” section would define non-generic terms and eliminate the advantage of structural claim usage possessed by an invention with generically describable parts.

D. Application of the Narrow Approach to IMS Technology, Inc. v. Haas Automation, Inc.

In 1981, at the time of the IMS patent filing, both cassette tapes and diskettes were used to store information. As such, both should have been included in the specification of the IMS patent.⁷⁷ They were not, and because they were not, a court using the narrow approach would find no infringement in *IMS*.

The courts should not give a windfall to the patentee by expanding the scope of the patent beyond what is included in the

⁷⁵ See FABER, *supra* note 3.

⁷⁶ CHISUM, *supra* note 26, at 950.

⁷⁷ *IMS Tech., Inc. v. Haas Automation, Inc.*, 206 F.3d 1422, 1426 (Fed. Cir. 2000) (finding “In the embodiment disclosed in the written description of the ’754 patent, a program may be stored permanently on a tape cassette by means of a tape cassette transport included in the control. The written description of the ’754 patent does not specify that programs are stored in any particular storage format”).

specification.⁷⁸ As stated previously, this puts a burden on the drafter, but not a burden disproportionate to the benefit of using the MPF limitation format.⁷⁹

This analysis of the *IMS* case assumes that IMS could not prove that the technology was not in existence at the time of the patent filing. If the patentee could convince the fact-finder that disks did not exist at the time of the filing, the DOE would work to bail out the patentee and compel the use of the DOE to analyze infringement. Infringement under the DOE, in this case, would likely lead to a finding of infringement.⁸⁰

E. Why the Kemco Court's Narrow Approach Yielded a Logical Decision That Promotes Innovation

The internal attachment means used by the accused infringer in *Kemco* was substantially different and structurally not equivalent to the internal attachment means disclosed in the patent.⁸¹ From looking at the two structures, they were not equivalent.⁸² The contextual approach would likely cause a court to labor over determining the point of novelty of the inventions and deciding whether they are pioneering. It is anyone's guess what

⁷⁸ *D.M.I., Inc. v. Deere & Co.*, 755 F.2d 1570, 1574 (Fed. Cir. 1985) (holding that a court may not read narrow claim limitations into broader claims to escape infringement).

⁷⁹ See *FABER*, *supra* note 3.

⁸⁰ Since the contextual approach and the DOE are essentially similar, the court's finding of infringement under the contextual approach in *IMS* suggests a finding of infringement under the same facts if DOE analysis is applied.

⁸¹ *Kemco Sales, Inc. v. Control Papers Co.*, 208 F.3d 1352, 1365 (Fed. Cir. 2000).

⁸² *Id.* ("[I]t is clear that the fold-over flap structure disclosed in the '197 patent specification is not identical to the dual-lip structure in the accused device").

the outcome would be under a contextual approach, and this author does not need to speculate an outcome.

The accused infringer in *Kemco* was able to design around the patented means and find a different way to achieve the same function.⁸³ This displays how the narrow approach fosters innovation by allowing a competitor to design a dissimilar structure and improve on the old way of accomplishing a function.

If the difference between the two structures was insubstantial, the accused structure should have been an alternative disclosed in the specification.⁸⁴ The logical conclusion, and the conclusion reached by the court in *Kemco*, is that the change from a single-lip structure to a dual-lip structure was substantial and the accused structure does not infringe.

V. Conclusion

As shown by the inconsistencies between *IMS* and *Kemco*, the Federal Circuit has muddled the treatment of MPF claim limitations. These two decisions use two different approaches to analyze infringement of MPF claim limitations under § 112, ¶ 6. *IMS* used the contextual approach to infringement, looking at the claim limitation's position in the context of the overall invention. *Kemco* used the narrow approach to § 112, ¶ 6 infringement analysis, focusing on the structural equivalence of the accused structure to the patented structure. The court must decide on a single approach to infringement of MPF limitations to provide certainty in the negative right to exclude granted by patents.

⁸³ *Kemco*, 208 F.3d at 1365 (holding that the function of the two structures is identical, but the way and result of accomplishing the function used by the accused structure is substantially different).

⁸⁴ See *FABER*, *supra* note 3.

In order to promote innovation through certainty in patent scope, the logical interpretation of 35 U.S.C. § 112, ¶ 6 is a narrow one focusing on a simple structural equivalence comparison. This Comment advocates the narrow approach over the more complicated contextual approach. The narrow approach is more certain because its structural equivalence comparison is more objective than the contextual approach. The burden on the patentee to draft her/his claims more carefully is a small price to pay for a patent with definite value. Additionally, the narrow approach allows the doctrine of equivalents and § 112, ¶ 6 infringement analyses to remain separate judicial inquiries, thereby construing the statute in a meaningful way. Finally, the narrow approach takes away the judiciary's power to legislate which would exist under the contextual approach.

