

Senate May Want To Reconsider Section 112(f) Patent Reform

By **Eric Blatt** (June 25, 2019, 12:13 PM EDT)

Congress is considering broadening the language of Section 112(f) of the Patent Act — a provision that governs the complex and unpredictable mode of claim construction applied to “means-plus-function” claims — so that this provision would apply to a larger number of claim terms. Most notably, the draft language for Section 112(f) would remove the reference to “means or step for,” potentially abrogating the presumption under *Williamson v. Citrix Online LLC*[1] that a limitation lacking the word “means” shall not be construed under Section 112(f).



Eric Blatt

Testimony on this proposed reform has focused principally on its substantive effects — that is, advocates have focused on what the scope of a functional claim limitation is or should be, rather than when that scope should be knowable with reasonable confidence. Proponents argue that Section 112(f) should be expanded to combat the assertion of overbroad claims that may follow if eligibility law under Section 101 is made more permissive. Opponents argue that claim construction under Section 112(f) can be unduly narrowing, and that expanding the application of this provision would make it difficult for patentees to protect the full scope of their inventions.

Sens. Chris Coons, D-Del., and Thom Tillis, R-N.C., recently **summarized these arguments** in an article published on Law360, submitting that Section 112 should “prevent inventors from claiming all possible solutions to a problem while also serving to protect inventors against those seeking to profit on trivial modifications.”

To date, the procedural effects of the proposed reform have received far less attention, though they could be tremendously consequential. In this article, I argue that Section 112(f) codifies a mode of central claiming that generates much greater uncertainty than does the mode of peripheral claiming that is otherwise used.

Because this uncertainty is not resolved until a patent is litigated through claim construction and possibly trial, it has the potential to increase litigation expenses, hinder business planning, and perhaps most significantly to proponents of the proposed reform, undermine the effectiveness of Sections 102 and 103 in combating the meritless assertion of overbroad claims. Were the application of Section 112(f) expanded, the scope of its accompanying uncertainty would be likewise increased.

Legal Framework Applied Under Section 112(f)

Determining whether an accused device falls within the scope of a claim term that colorably invokes Section 112(f) is a complex process involving as many as six analytical steps. First, a court must determine whether the claim language properly invokes Section 112(f). A claim element that recites the word “means” is presumed to invoke Section 112(f), and that presumption will be overcome and Section 112(f) not applied only if the claim also recites structure sufficient to perform the claimed function. Conversely, the absence of the word “means” creates a rebuttable presumption that Section 112(f) is not invoked, and this negative presumption will be rebutted only if the court is persuaded that no structure is recited.

Upon determining that Section 112(f) is invoked, the court must construe the claim term using a two-step process. “The court must first identify the claimed function. Then, the court must determine what structure, if any, disclosed in the specification corresponds to the claimed function.” If no structure is disclosed, the claim will be found invalid as indefinite.

Finally, after the claim has been construed, the factfinder must weigh the question of infringement, which itself can involve as many as three analytical steps. Specifically, the factfinder must first determine whether the accused structure performs the identical function recited by the claim. If so, the accused structure will infringe only if it is identical or equivalent to the corresponding structure disclosed in the specification. Equivalence, in turn, is found where: (i) the accused structure performs the claimed function in substantially the same way as the corresponding structure disclosed in the specification; and (ii) the performance of this function by the accused structure achieves substantially the same result as that achieved by the disclosed structure.

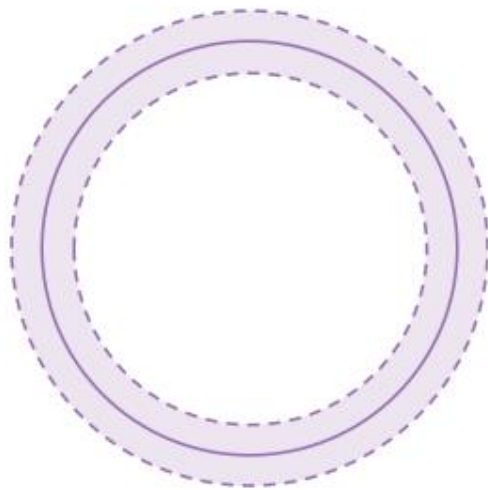
Claim Construction Under Section 112(f) Is Comparatively Less Certain

Both peripheral and means-plus-function claims generate claim scope uncertainty, but the nature and magnitude of that uncertainty differ in the two claim formats. In a peripheral claim, the boundaries of a claim are drawn in words, and uncertainty arises from the inherent limits of precision in written language.

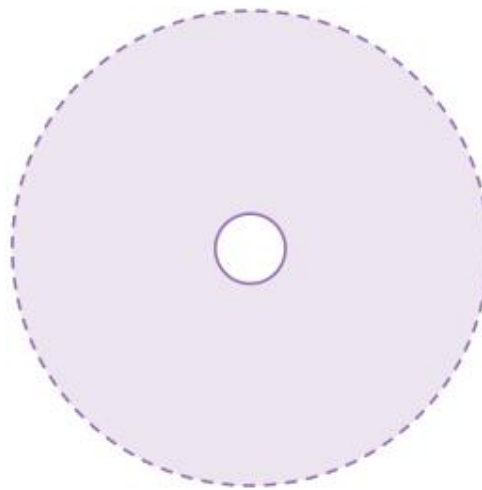
In a means-plus-function claim, uncertainty manifests at each juncture of the legal analysis. Even assuming that the outcome of the first four steps — invocation of Section 112(f), identification of function, identification of corresponding structure, and identity between the function recited in the claim and that performed by the accused structure — could be known *ex ante*, the equivalence analysis presents unavoidable uncertainty. Whether two related but non-identical structures are sufficiently similar to be considered equivalent lies largely in the discretion of the factfinder.

Peripheral and means-plus-function claim formats thus present different patterns of uncertainty. These patterns are illustrated in the diagrams below in which the areas inside and outside the circles respectively indicate infringement and noninfringement, and the shaded areas represent zones of uncertainty. A peripheral claim establishes a boundary, and linguistic ambiguities present a zone of uncertainty immediately around that boundary. By contrast, a means-plus-function claim establishes a central embodiment, and the equivalence analysis projects a zone of uncertainty emanating outward from the central embodiment.

Peripheral Claiming



Means-Plus-Function Claiming

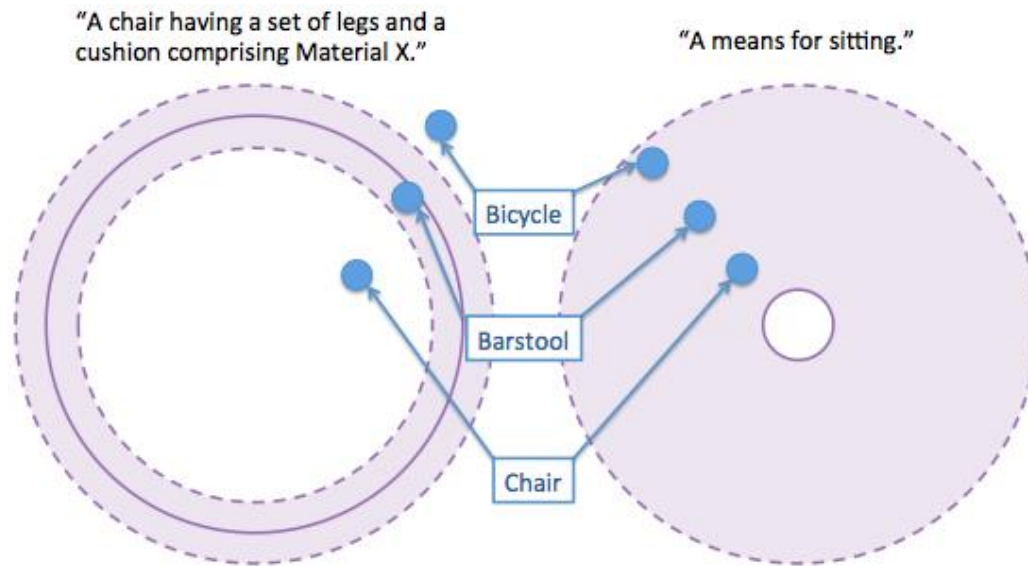


The differences between the two patterns of uncertainty can have very practical consequences. For example, say a business owner is considering commercializing a series of products — a three-legged chair, a single-legged barstool and a bicycle — each having cushions made from Material X, and she discovers a patent disclosing a four-legged chair with a cushion made from Material X. The patent claims “a chair having a set of legs and a cushion comprising Material X.”

In this peripheral claim, it is arguably unclear whether the term “set of legs” requires more than one leg. The barstool has only one leg, and so the business owner may reasonably wonder whether commercializing the barstool will risk infringement. While the barstool stands in uncertain relation to the claim, the chair and bicycle do not. The chair has three legs and will infringe; the bicycle is not a chair and has no legs, so it will not infringe. The peripheral claim is uncertain in the immediate area around its boundaries but provides clarity as devices move in either direction away from those boundaries.

Let us reconsider the above hypothetical with a means-plus-function claim reciting “a means for sitting.” This claim will cover the corresponding structure — the disclosed four-legged chair with a cushion made from Material X — and equivalents thereof. This means-plus-function claim stands in uncertain relation to each of the three devices that the business would like to commercialize. The three-legged chair and one-legged barstool might be equivalents to the disclosed four-legged chair, or perhaps the trier of fact will determine that varying the number of legs constitutes a substantial difference in this context.

Even the bicycle could be found to infringe since it is arguably a means for sitting and it features a cushion made from Material X. The result of each equivalence analysis lies within the discretion of the trier of fact and cannot be known with confidence at the time that the business decision to commercialize is made.



For any given claim that colorably invokes Section 112(f), litigants can take diametrically opposed positions as to what that claim covers. A party whose interests lie in construing the claim broadly — whether to advance infringement or invalidity arguments — can credibly argue that the claim covers any structure that performs the recited function. The opposite party can likewise argue credibly for a limited claim scope that covers little more than the precise embodiment disclosed in the specification. Between these two extremes lies a vast zone of uncertainty that will likely remain unresolved until a court enters a claim construction order, and which may not be fully resolved until a jury reaches a verdict on equivalence.

Economic Implications

Claim scope uncertainty, including that generated by the application of Section 112(f), impacts the decisions of economic actors in a number of ways. Most notably, uncertainty undermines the notice function of the published patent document. If investors cannot confidently predict what a company's patents will be construed to cover, they cannot accurately assess the value of that company. Likewise, where a company cannot determine whether a product will infringe a competitor's patent, the company cannot predict the consequences of commercializing that product.

Uncertainty may also impede settlement and the efficient resolution of meritless patent assertions. Litigants tend to demonstrate optimism bias — that is, both sides to a dispute tend to believe their positions are relatively strong, and the median outcome tends to lie somewhere between the parties' expectations. As uncertainty increases, the parties' positions may diverge farther apart, rendering agreement progressively less likely.

Consider, for example, a case in which a defendant has found what she believes to be knockout prior art and has sent a letter to the plaintiff explaining that the lawsuit is meritless because the asserted patent is invalid, threatening to seek attorneys' fees under Section 285, and demanding that the litigation be dropped. If the asserted claim is in peripheral format, the letter is likely to have a significant impact on the plaintiff's settlement demand. If the asserted claim will be construed under Section 112(f), however, the plaintiff will very likely have his own views for why the claim does not encompass the asserted prior art, and the letter may have a more muted effect.

In addition to making an agreement more difficult to reach, the uncertainty arising from construction under Section 112(f) presents specific barriers to defendants who wish to use inter partes review proceedings to efficiently combat the assertion of overbroad claims. Where claim scope is uncertain, a defendant cannot confidently predict whether her prior art challenges under Sections 102 and 103 will prevail in an IPR.

Moreover, proposing constructions for means-plus-function terms — which may be necessary to obtain institution of the IPR — risks undermining any indefiniteness challenges the defendant might have wished to bring before the district court (indefiniteness challenges are not permitted in an IPR), and mapping the means-plus-function claim terms to structures disclosed in the prior art will invariably involve making equivalence admissions that could be problematic to the defendant's noninfringement position. Application of Section 112(f) can very quickly turn a case that would have been efficiently resolved in an IPR to one in which the defendant is forced to either settle or litigate through claim construction and summary judgment.

Further, the uncertainty and complexity attendant to construction under Section 112(f) may increase the rate of erroneous judgments — a likelihood corroborated by existing evidence. In a well-known study, Judge Kimberly A. Moore (then a law professor at George Mason University) sampled all claim construction appeals to the U.S. Court of Appeals for the Federal Circuit from 1996 to 2000, and found that district court constructions of means-plus-function claim terms were reversed in 33% of the cases where they were appealed, whereas only 28% of peripheral claim constructions were reversed. Moore specifically credited the elevated reversal rate to the complexity of the law applied under Section 112(f), noting that “[i]n light of the complexity attendant the construction of means-plus-function elements, it is not surprising that the error rate is higher for these terms.”

Finally, claim scope uncertainty likely produces many of the economic inefficiencies and unjust results that frequently arise in contexts where property rights are poorly defined. The presence of uncertain rights encourages litigation, rewards parties for engaging in strategic gamesmanship, and allows wealthy parties to exploit the inability of poorer litigants to engage in costly, protracted legal battles. The potential for gamesmanship may also inhibit the ability of patentees, particularly smaller companies, to confidently plan business ventures that would depend on valid and enforceable patent rights.

In sum, application of Section 112(f) generates significantly more uncertainty than does the mode of peripheral claiming that is otherwise used by patentees. This uncertainty may undermine public notice, invite and extend litigation, impose strategic challenges on defendants seeking to challenge overbroad patents under Sections 102 and 103 in IPR proceedings, and increase the likelihood of erroneous outcomes. As Congress weighs whether Section 112(f) should be expanded, it should consider not only whether this provision desirably “prevent[s] inventors from claiming all possible solutions to a problem,” but also whether Section 112(f) confers property rights in a way that is predictable and promotes efficient economic decisions.

Eric Blatt is an associate at Rothwell Figg Ernst & Manbeck PC

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[1] Williamson v. Citrix Online LLC , 792 F.3d 1339 (Fed. Cir. 2015).