Five General Principles of Method Claiming

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Are you infringing claim 10 of U.S. Patent No. 6,049,811? The claim reads:

> 10. A method by computer for drafting a patent application having at least sections including claims, a summary of the invention, an abstract of the disclosure, and a detailed description of a preferred embodiment of the invention, said method comprising the steps of:
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> requesting and storing primary elements (PE) of the invention that define the invention apart from prior technology before drafting the claims;
>
> drafting the claims before drafting the summary of the invention, abstract, and the detailed description of a preferred embodiment of the invention; and
>
> drafting the sections in a predetermined order prohibiting jumping ahead to draft a latter section.

The point of this paper is not to provide an infringement analysis of this claim. Rather, the claim is presented here to demonstrate that an issued method claim can be very powerful. This claim probably causes most conscientious patent attorneys to think about their own methods of writing patent applications.

In discussing method claims, the U.S. Supreme Court has stated that it is the transformation or reduction an article to a different state or thing that is the essence of a method claim -- and the key to its patentability.[2]

While the Supreme Court has established a general theoretical foundation for what a method claim should be, I have outlined five principles for method claiming, from a less theoretical, and more practical, point of view.

Principle 1: Use method claims to avoid the baggage of "means plus function" interpretations.

Method claims can be used to enjoy the benefits of the breadth of functional language, and still avoid being pinned with narrow 35 U.S.C. §112, ¶ 6, constructions.

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[1] The views expressed herein are solely those of the author and do not necessarily reflect the views of Merchant & Gould.

[2] Gottschalk v. Benson, 409 U.S. 63 (1972).

In the past few years, it has become difficult to construe means plus function language. For example, the Federal Circuit held that just because a claim limitation contains the term "means", it does not necessarily invoke 35 U.S.C. § 112, ¶ 6, if the claim limitation does not link the term "means" to a specific function.[3] Further, the Federal Circuit has held, in certain cases, that even when a claim element uses language that falls under means plus function format, § 112, ¶ 6 still does not apply if the claim limitation itself recites sufficient structure for performing the specified function.[4] Conversely, in some Federal Circuit cases, the lack of using "means for" language did not necessarily prevent a limitation from being construed under § 112, ¶ 6.[5]

If the court determines that the claim utilizes means plus function language and, as such, it should be construed according § 112, ¶ 6, then the court will construe that the claim limitation to be limited to the particular structure disclosed in the specification and any equivalents. Depending on how the specification is written, this can be a much narrower interpretation than your client should have been entitled. Even worse is the result of being broadsided by the § 112, ¶ 6 construction if you utilized claim language that you did not believe would invoke such a construction.

Although the U.S. Patent and Trademark Office has issued examination guidelines[6] to be used by examiners in their review of patent applications to determine whether a claim limitation does invoke § 112, ¶6, these examination guidelines are interpretive rules and general statements of policy; as such, they do not have the force of law. While the guidelines may be of general assistance to patent holders during future litigation, they do lack the force of law; only the appropriate amount of reliance is warranted.

Although much of the case law has forced a narrow claim interpretation on functional language used in apparatus claims, by and large, this has not carried through to method claims. For example, in O.I. Corp. v. Tekmar Co. Inc.,[7] the Federal Circuit stated that, in method claims, a § 112, ¶ 6 construction is implicated only when steps plus function, without acts, are present.[8] In explaining that claiming a step by itself, or even a series of steps, does not implicate a § 112, ¶ 6 construction, the Court stated: "Merely claiming a step without recital of a function is not analogous to a means plus function."[9]

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[3] York Prods., Inc. v. Central Tractor Farm & Family Ctr., 99 F.3d 1568, 1574 (Fed. Cir. 1996).

[4] See, e.g., Rodime PLC v. Seagate Tech., Inc., 174 F.3d 1294, 1303-04 (Fed. Cir. 1999); Cole v. Kimberly-Clark Corp., 102 F.3d 524, 531 (Fed. Cir. 1996).

[5] Mas-Hamilton Group v. LaGard, Inc., 156 F.3d 1206, 1213 (Fed. Cir. 1998).

[6] 1236 TMOG 98, July 25, 2000.

[7] 115 F.3d 1576 (Fed. Cir. 1997).

[8] Id. at 1583.

[9] Id.

In the Tekmar case, there were two claims litigated. One claim was an apparatus claim, while the other claim was a method claim. The apparatus claim used a series of means plus function limitations. The apparatus claim read:

> 17. An apparatus for removing water vapor from an analyte slug passing between a sparge vessel, trap and analytical instrument, comprising:
>
> (a) first means for passing the analyte slug through a passage heated to a first temperature higher than ambient, as the analyte slug passes from the sparge vessel to the trap; and
>
> (b) second means for passing the analyte slug through the passage that is air cooled to a second temperature below said first temperature but not below ambient, as the analyte slug passes from the trap to the analytical instrument.

The method claim was written in a manner that paralleled the apparatus claim. The method claim, however, did not use the language "step for" followed by function. The method claim read:

> 9. A method for removing water vapor from an analyte slug passing between a sparge vessel, trap and gas chromatograph, comprising the steps of:
>
> (a) passing the analyte slug through a passage heated to a first temperature higher than ambient, as the analyte slug passes from the sparge vessel to the trap; and
>
> (b) passing the analyte slug through the passage that is air cooled to a second temperature below said first temperature but not below ambient, as the analyte slug passes from the trap to the gas chromatograph.

The Court applied a § 112, ¶ 6 construction to the apparatus claim, but declined to apply this construction to the parallel method claim.[10]

From reviewing this case and the claims at issue, it can be appreciated that the interpretation of § 112, ¶ 6 can be avoided by using method claims. You can obtain a claim for your client that includes broad functional recitations, in the form of a method claim, which will not necessarily be ensnared by the limiting interpretation of § 112, ¶ 6.

Principle 2: Use method claims to avoid structural limitations.

In some instances, particularly stubborn examiners are not willing to allow a claim of the breadth to which you believe your client is entitled. In that situation, you have the choice of appealing, and waiting for years to have a decision, of which there is

[10] Id.

no guarantee that the Board of Appeals won't issue a brand new rejection of some sort; or to take the subject matter that the examiner is willing to allow. In these types of situations, method claims can sometimes successfully be used to obtain broader coverage from stubborn examiners. If not originally presented and examined with the apparatus claims, the method claims may be precluded from examination due to election by original presentation. In those cases, a divisional application would need to be pursued.

Consider the invention of a child-proof cap for a pill box, as described in U.S. Patent No. 5,718,347. The patentee secured both apparatus claims and method claims. The apparatus claims included recitation of the structure that resulted in the child-proof container. See, for example, claim 20 of the '347 patent:

> 20. A closure assembly for a container, said closure comprising:
>
> a lid;
>
> a skirt portion, said lid being joined to said skirt portion by a first living hinge;
>
> a latch joined to said lid by a second living hinge at a position opposite from said first living hinge;
>
> a recess in said skirt portion, said recess being configured to receive therein said latch when said lid is in a closed position on said container;
>
> a detent on said latch to inhibit said lid from being forced from said closed position while said latch is received in said recess;
>
> a cavity between said latch and said skirt when said latch is received in said recess, a notch on said latch and a well in said recess cooperating to form said cavity;
>
> a flexible portion of said latch being deflectable into said cavity by a user to dislodge a first portion of said latch from said recess; and
>
> a pressure region on said skirt which when pressed by said user dislodges a second portion of said latch from said recess after said first portion of said latch is dislodged from said recess such that said latch can be grasped by a user to pull said lid from said closed position and thereby open said container;
>
> wherein said lid, said skirt and said latch are integrally molded from plastic.

Compare this to the method claim secured in this patent. Claim 21 reads:

> 21. A method of opening a container comprising the steps of:
>
> pressing a flexible portion of a latch into a cavity between said latch and a sidewall of said container, said latch being initially seated within a recess on said sidewall of said container and said

pressing thereby dislodging a first portion of said latch from said recess;

squeezing a region of said sidewall to dislodge a second portion of said latch from said recess;

pulling said latch upwardly and thereby lifting a closure connected to said latch by a first living hinge from sealing engagement with said container, said closure being joined to said container by a second living hinge located at a position opposite from said first living hinge on said closure.

In the method claim, the patentee was able to capture the essence of the operation of the child-proof container. By focusing on the way the container worked, the patentee was able to avoid many of the same structural limitations that were included in the apparatus claim.

To further point out the lack of structure in the independent method claims, dependent method claims can be used to demonstrate breadth of the independent claim due to the doctrine of claim differentiation. If you have successfully avoided the use of structure in your independent method claim, the dependent method claims can be used to introduce some of the structure. For example, in the method claim of the '347 patent, the steps of pressing, squeezing, and pulling could each be further defined in method claims to include more of the specific structure described in the '347 patent.

Dependent method claims can also be used to recite the order of steps for carrying out the independent method claim. In the case of the child-proof pill box of the '347 patent, the order of steps is implied in the independent claim, because the step of squeezing could not be done until after the step of pressing; similarly, the step of pulling could not be done until after the steps of squeezing and pressing. In many cases, however, the order of steps in the independent method claim is not required nor implied. An excellent use for a dependent method claim requires the order of steps, thus demonstrating the breadth of your independent claim.

Principle 3: Use method claims to protect the replacement part.

Your client probably has not hired you to craft the theoretically possible best patent for him. Rather, what your client wants, ultimately, is to protect its profits. It is important to learn your client's business so that you can pursue claims to protect the "cash cow." A corollary to this principle is: Follow the money.

Suppose, for example, your client makes shavers, including a handle and a replaceable blade. From interviewing your client, you learn that the profit is in the sales of the replacement part (the replaceable blade). Suppose, however, the blade by itself is not patentable, but the interaction of the blade with the handle is patentable. Apparatus claims on the combination of the blade and handle may not be able to protect your client

from its competitor making sales of the blade itself.[11] But, you can try to prevent your client's competition from selling the replacement blade by writing a claim to the method of replacement. An example of such a claim is in U.S. Patent No. 6,052,903. Claim 12 of the '903 patent reads:

> 12. A method of connecting a replaceable razor cartridge to a handle in a proper orientation, comprising:
>
> aligning a key structure on a handle connecting structure of said handle on one side of a connection axis but not the other side with a cutaway portion functioning as a keyway on a cartridge connecting structure of said cartridge on one side of said connection axis but not the other side,
>
> moving said handle connecting structure toward said cartridge connecting structure along said connection axis,
>
> mating said key structure on said handle connecting structure with said cutaway portion on said cartridge connecting structure, and
>
> connecting said handle connecting structure to said cartridge connecting structure.

A claim such as this one should be able to prevent the patent holder's competition from selling replacement blades to fit the handle of the particular razor. This will protect the patent holder's profits on the replacement blades.

Principle 4: Use method claims to capture performance.

Performance claims can be used to define your invention as, in its broadest sense, anything, when operated as intended, that produces some defined result. Theoretically, to be patentable, it must be the case that the prior art did not achieve that result. Two caveats when pursuing these types of claims: information disclosure statements about what the prior art was able to achieve can be unduly burdensome; and the specification needs to be set up carefully and thoroughly to provide adequate § 112, ¶ 1 support. Appropriate claim definitions and testing methodology, for example, must be clearly defined.

For example, suppose your client developed a remarkable, unique, water filter. The water filter is so good that it removes even the tiniest impurities, while still being contained in a small package and without introducing undue restriction. While you are careful to pursue the appropriate apparatus claims reciting the structure of your client's water filter, the real invention may be in the performance of this device. A claim could be pursued stating something like the following:

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[11] Contributory infringement theories are not available, if the court determines that the ultimate customer is making a permissible "repair" rather than an impermissible "reconstruction." See Aro Mfg. v. Convertible Top Replacement Co., 365 U.S. 336, 346, reh'g denied, 365 U.S. 890 (1961); FMC Corp. v. Up-Right, Inc., 21 F.3d 1073, 1077 (Fed. Cir. 1994).

> A method of cleaning water using a filter; the filter having an overall surface area of no greater than 100 sq. in. and a restriction of no greater than 10 inches of Hg; the method comprising:
>
> passing water through the filter to remove at least 99.999999% of impurities having a size of at least 1 micron from the water.

The objective behind this theoretical claim is: no matter how your client's competitors try to design around the structural limitations of your apparatus claims, your client's performance-based method claim will cover the structural design-arounds, if the design-arounds perform as claimed.

Consider the example of U.S. Patent No. 4,974,319. The '319 patent describes a system for shaving, allowing a user to apply a lubricant to the blade of a razor instead of applying shaving cream to the person's face. In addition to the apparatus claims, the patentee obtained the following performance-based method claim:

> 1. A method of treating the blade of a razor head comprising:
>
> applying an effective amount of a mixture of a non-foaming lubricant and solubilizer via an aerosalization system directly to said razor blade immediately before shaving such that shaving can be performed in the absence of first applying any shaving preparation directly to the area to be shaved.

In other words, the claim requires the performance-based limitation of "applying an effective amount" of a certain mixture to a razor blade "such that shaving can be performed" without first applying shaving cream to the area to be shaved. This claim should be able to hinder the patentee's competition from offering comparable shaving systems that apply lubricant to the razor blade, instead of offering the traditional shaving systems.

Although performance-based claims: (i) can be difficult to support under § 112, ¶ 1; (ii) can cause difficulty in duty of disclosure issues; and (iii) can be difficult to enforce, as part of your client's overall intellectual property portfolio, performance-based method claims can introduce enough problems to your client's competition to help better posture your client relative to its competition.

Principle 5: Write method claims to posture your client against the party it will want to sue for direct infringement.

What type of claim you get issued for your client will affect whom can be sued for direct infringement. It is likely that your client will be reluctant to sue its very own customers. Avoid putting your client in that position. While theories about inducement may be operable, they do not result in the tight, clean cases of infringement that are preferred by litigators.

Consider the Federal Circuit case Embrex, Inc. v. Service Eng'r Corp., 99-1064 (Fed. Cir. June 28, 2000). In this case, the claim at issue was directed to a method for immunizing chickens. The method included a step of injecting a vaccine into the egg embodying the embryo of the chicken. Competitors of the patent holder offered for sale a machine to practice a method that would have been covered by this method claim.

The Federal Circuit reaffirmed the position that a sale of the machine for practicing the claimed method is not a sale of the method within the meaning of 35 U.S.C. § 271(a).[12] As such, in this case, the patent holder's competition was not liable as an infringer under § 271(a).

In this case, in order for your client to avoid having to sue its own customers, it is possible that a claim could have been written to cover the machine itself, or methods of assembling or constructing such a machine.

Conclusion

Method claims can be powerful weapons in your client's arsenal of intellectual property. In conjunction with your client's other issued claims and intellectual property, they can help your client protect its stream of income and shut down the competition.

I have provided five practical principles to keep in mind when drafting method claims. Use method claims to: (1) avoid the baggage of 35 U.S.C. § 112, ¶ 6; (2) avoid structural limitations; (3) protect the replacement part; (4) capture performance; and (5) posture your client against the party it will want to sue for direct infringement. With these principles in mind, you can help your client secure meaningful and effective patent protection.

[12] Id.