

INVENTION ANALYSIS AND CLAIMING: Claim Diversity PART II¹



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January’s column² introduced the idea of claim diversity. This is an approach to constructing the overall claim suite to address problems that may not surface until after the patent issues, when it may be too late to do to much about them. For example, unnecessary elements or unduly narrow terminology can give rise to infringement loopholes. Limitations whose meaning seemed perfectly clear to the claim drafter and the patent examiner during prep and pros might later be argued to be indefinite by the Opposing Team.³ Claim-invalidating prior art may surface. Changes in the law can render invalid or not infringed a claim that might otherwise have been an effective assertion vehicle.

Many of these uncertainties can be addressed with appropriate fallback feature claims⁴ and definition claims,⁵ but it is impossible to anticipate every eventuality.

Underlying the notion of claim diversity is the proposition that the more one claim differs from another, the more likely it is that any latent defects in the first will not appear in the second. A particular defect in a claim that renders it too broad or too narrow or indefinite may not show up in

another claim if it expresses the invention differently—albeit at the same level of breadth, in the same setting⁶ and using the same statutory claim type. Like the Planned Retreat,⁷ then, claim diversity improves the odds that the issued patent will have at least one claim that is both valid and infringed.

It is sometimes difficult to force one’s brain to think about how the invention might be defined differently from claims already written. Having slaved over a claim to get it just right, it can be hard to put aside a particular ingrained view of the invention—or a particular approach to claiming it—and head off in new directions.

The January column introduced the notion of “enforced format” claiming as a way of jump-starting the claim drafting process into new directions. This month we look at several more.

RECAST THE PROBLEM-SOLUTION STATEMENT

Drafting a new version of the problem-solution statement will readily yield a new claim, particularly when the problem-solution-based claim drafting technique⁸ is used. A different problem-solution statement may also provide us with a new “take” on the inventive departure, again yielding a different claim. Two such claims are those drafted by William Dowss for John Loud’s ball point pen.⁹

- 1. A pen having a spheroidal marking-point, substantially as described.**
- 2. A pen having a marking sphere capable of revolving in all directions, substantially as and for the purposes described.**

Drafting a new version of the problem-solution statement may prove difficult, however. Just as with a claim we have lived with for a while, the original problem-solution statement may dominate our thinking to such a degree that nothing useful comes from an attempt to draft a new one. If that happens, simply move on to the other techniques described below.

In other cases, however, new ways of seeing the problem or the solution may arise as we become more familiar with the invention—particularly after the specification has been written. Such insights can be brought to bear in developing a different formulation of the problem and/or the solution.

USE BOTH FUNCTIONAL AND STRUCTURAL RECITATIONS

A recurring theme in these columns and the author’s book is the importance of functional claim limitations when reaching for claim breadth. Here, for example, is the typewriter backspace key expressed in purely functional terms:

3. A typewriter adapted to move its carriage to a previously typed-at position through an intra-typewriter operation initiated in response to a predetermined user action.¹⁰

Claim 3 calls for no particular structure or, indeed, *any* structure by which the carriage movement is effectuated. Defining an invention functionally, rather than structurally, makes it harder for others to avoid the claim by implementing the functions and relationships inherent in the claim but using different structural elements.

Having drafted a very functional claim, however, we can endeavor to write one that has more structure to it and, in so doing, enhance the application’s claim diversity.

Structural limitations in a claim can be specific physical elements or means-plus-function elements. The former are primarily defined by what they *are*, the latter by what they *do*. For example, claim 4 defines the invention of the backspace key in terms of physical elements and claim 5 defines the same invention using means-plus-function elements.

Physical Elements Claim

- 4. A typewriter comprising a plurality of alphabet keys, a carriage that moves in a first direction when one of the alphabet keys is depressed, a control key, and a mechanical linkage interconnecting the control key and the carriage and that moves the carriage in a second direction when the control key is depressed.**

Means-plus-Function Claim

5. A typewriter comprising printing means for creating printed characters on a carriage-carried platen in response to the operation of alphabet keys, advancement means for moving the carriage forward after each character is printed, and backspace means responsive to user operation of a backspace key for moving the carriage backward when the control means is operated

A wider range of equivalents may be accorded to a structural recitation than to a means-plus-function recitation. In the backspace key example, claim 4's combination of the control key and mechanical linkage may be interpreted more broadly than claim 5's backspace means. Then again, it may not, depending on the invention in question and the state of the law at the time the claim is being interpreted.

Claim diversity is measurably enhanced by using all three types of recitations—purely functional, structural and means-plus-function—either in the consistent-throughout-the-claim form as illustrated by claims 3 through 5, or in mix-and-match combinations.

VARY THE TERMINOLOGY

Varying the claim terminology is another facet of claim diversity. Certain words or phrases may be interpreted more narrowly or more broadly than others, even while seeming to convey the same idea. Advantageously, then, varying the terminology may narrow a claim that would otherwise be so broad as to read on prior art or may broaden a claim that would otherwise be narrower and miss certain competitors' implementations of the inventive concept.

Just thinking about different ways of expressing things may open the door to invention-broadening insights that can be used more extensively throughout the claims. For example, we may have started out using the term “cooking” in all of the claims directed to a microwave oven invention. But upon searching for other ways to express the invention we may realize that the word “heating” might be a better choice for most of the claims, “heating” undoubtedly being a broader term.

Here are some other examples of claim terminology alternatives.

— peptide / protein

— fastener / attachment mechanism

— telecommunications network / telephone system

— refreshing the web page / fetching a new version of the web page

In any given context, the listed alternatives might be deemed to mean exactly the same thing as one another. In another context, however, one might prove to be broader or narrower than the other. Or one term might be deemed indefinite but the other not.

Next month: Reaching for Breadth—Part V

ENDNOTES

1. Copyright © 2007, 2009 American Bar Association. Adapted with Permission. All Rights Reserved.
2. *Intellectual Property Today*, January, 2009
3. *Intellectual Property Today*, October, 2007
4. *Intellectual Property Today*, June, 2007.
5. *Intellectual Property Today*, May, 2008
6. *Intellectual Property Today*, October, 2007
7. *Intellectual Property Today*, June, 2007
8. *Intellectual Property Today*, September, 2007
9. U.S. Patent No. 392,046.
10. No doubt this claim would be rejected by the patent examiner as not defining any “structure” and no doubt the BPAI would back her up. In the author's view, however, there is nothing wrong with this claim. Query whether one skilled in the art could tell with reasonable certainty exactly what structure is or isn't encompassed by this claim. Functional claiming will be discussed in a future column