

# INVENTION ANALYSIS AND CLAIMING: Pack Only What You Need<sup>1</sup>

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The previous two columns described a claim drafting methodology called inventive-departure-based claiming. The basic idea is to start with some number of words that define how the invention departs from the prior art. We then work backward from there, adding to the claim only those limitations needed to either 1) provide antecedent support for the language used to express the inventive departure; or 2) put the inventive departure into a particular context in which the claimed subject matter is novel and non-obvious.

This column introduces the prescription *Pack Only What You Need* as a guiding principle when drafting a claim by working backwards from the inventive departure.

The prescription *Pack Only What You Need* analogizes claim drafting to packing clothes for a winter vacation. Whether you pack your heavy outerwear or your shorts and swim suit depends on where you’re going—the Rockies for skiing, or the Caribbean for golf and the beach. You certainly wouldn’t pack for both destinations; you pack only what you need.

In the claim drafting context, the “destination” is the inventive depar-

ture. You can’t know whether you should “pack” a particular limitation into a claim until you know what inventive departure you are heading for. Thus undue limitations can be avoided by not packing a limitation into the claim until the structure of the evolving claim makes it clear that it is needed. Working backwards from the inventive departure in this way and packing only what you need avoids having to try (perhaps unsuccessfully) to ferret out unnecessary limitations after they have already inveigled their way into the fabric of the claim.

## CLAIM PREAMBLES

The prescription *Pack Only What You Need* applies both to the body of a claim and its preamble. In fact, the preamble is frequently where undue limitations make their way into a claim.

Preamble limitations are supposed to be given limiting effect only if they give “life, meaning and vitality” to a claim.<sup>2</sup> In reality, however, preamble limitations that did *not* give “life, meaning and vitality” to a claim have been given limiting effect by the court.<sup>3</sup> Such limitations, in practical effect, narrow the claim without obtaining any benefit in return because preamble limitations that do not tie in to the rest of the claim (i.e., give it “life, meaning and vitality”) are given no patentable weight during examination.<sup>4</sup>

It is useful, then, to start with the simplest possible preamble, such as “A method comprising....” As the claim begins to take shape, it may turn out that the preamble is, in fact, the best place for certain limitations. That’s fine. In those situations we *intend* the preamble recitation to be limiting.

Unnecessary preamble limitations typically fall into one of four categories:

- Descriptive labels and modifiers
- Unnecessary elements
- Advantages of the invention

- Intended use of the invention

Let us consider these types of preamble limitations in turn, recognizing that such limitations can also be unduly narrowing when appearing in the *body* of the claim. In each of these cases, an unnecessary limitation could have been avoided if the claim drafter had followed the prescription *Pack Only What You Need*.

### Descriptive labels and modifiers

Descriptive labels and modifiers in a claim rarely buy us patentability but yet may be given limiting effect when it comes time to enforce the claim.

For example, note the word “automobile” in the preamble of claim 1.

#### 1. An automobile floor mat comprising

a semi-rigid monolayer having a gradually sloping edge portion extending outward from a central section, said edge portion terminating in a lip disposed at an elevation above the central portion, the lip having a plurality of indentations disposed a regular intervals around its periphery.

The descriptive label “automobile” buys us no patentability in claim 1 because it doesn’t tie into the rest of the claim. There is nothing in the body of the claim that intrinsically limits the defined structure to being an *automobile* floor mat. The limitation “automobile” does not give “life, meaning or vitality” to the claim. Thus if the examiner finds a prior art mat described by the body of the claim, s/he will reject the claim whether or not the prior art mat was designed for use in an automobile (or, for that matter, intended to be placed on a floor).

Although the descriptive label “automobile” will be of no help to us in securing *allowance* of this claim, it may come back to bite us when we go to *enforce* the claim. The patent owner could be out of luck if a competitor uses the claimed semi-rigid monolayer in a way that the inventor and/or claim drafter hadn’t considered, such as in mats that are intended for use in trucks or locomotive cabs and that are not capable of being used in automobiles due to, for example, the mats’ size or shape.

Claim 2 is directed to a telescoping radio/TV antenna, which the claim calls “an extendible and retractable structure.”

#### 2. An extendible and retractable structure comprising

**a plurality of elongate structural sections, mounted to be slideable in the direction of their length relative to each other, each structural section including [details omitted] ...**

The uniqueness of this antenna is the particular geometry of the sliding structural sections, recited in the omitted details. That recited geometry and arrangement of the sections is what renders the structure “extendible and retractable.” The terms “extendible” and “retractable” in the preamble are, therefore, redundant and do not enhance the claim’s patentability. Yet, a competitor’s antenna having sections exactly like the inventor’s may be designed to permanently lock the sections in place when the antenna is initially extended. Such an antenna might be intended for delivery to a remote site, like a mountain-top, extended in place, and left for good. Because the sections would be permanently locked in place once extended, the antenna is arguably non-retractable and, as a result, arguably non-infringing.

**Unnecessary Elements**

Following the prescription to *Pack Only What You Need*—working a claim bottom-up from the inventive departure rather than top-down from the preamble—can help not only to avoid unnecessary labels and modifiers, but entire claim elements.

Claim 3 is directed to a method for operating an engine in which the inventive departure involves using a fuel containing certain additives to keep the engine parts clean.

**3. A method for operating an engine having a fuel pump, the method comprising:**

**operating the engine using a fuel containing [certain recited additives] under conditions sufficient to clean performance-inhibiting deposits from the fuel pump or other fuel system elements.**

The inventor was primarily concerned about fuel pump deposits. But the claim drafter, thinking broadly, structured the claim to recite that the deposits were cleaned from the “fuel pump or other fuel system elements.” This is all to the good. Unfortunately, the preamble explicitly limits the claimed method to an environment that includes a fuel pump. An accused infringer whose engine does not have a fuel pump will argue that this claim does not apply to him.

This claim, like the two before it, bears the tell-tale evidence of a preamble that was drafted before the rest of the claim. The preamble probably includes the phrase “having a fuel pump” because the claim drafter was focused on the embodiment. If the body of the claim had been written *before* the preamble, it would probably have been drafted to call for deposits being cleaned from “fuel system elements” or even from “*a* fuel pump or other fuel system elements.” There would then have been no impetus to pack a “fuel pump” limitation into the preamble; the claim would have been complete without it.

**Advantage or Intended Use of the Invention**

The preambles of the following claims set forth an advantage or intended use for the invention. As such, the preamble potentially limits the applicability of the claim without the claim gaining patentability in return:

**4. A high speed rotor of a type applicable for use with a flywheel, the rotor comprising [no flywheel mentioned in the rest of the claim]...**

**5. An optical system in which at least two out of phase light beams of different frequencies are combined with improved power efficiency**

In the case of claim 4, other parties may discover a non-flywheel-based application for the novel rotor. In the case of claim 5, a putative infringer may select an operating parameter for the optical system that achieves some other advantage, e.g., increased processing speed, without the improved power efficiency that the claim calls for.

*Next Month:* Define, Don’t Explain.

**ENDNOTES**

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2. *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 51 U.S.P.Q.2d (BNA) 1161 (Fed. Cir. 1999).
3. See generally, H. Kliebenstein et al, “Does Phillips v. AWH Mean the Life is Out of the ‘Life and Meaning’ Test for Whether Claim Preambles are Limitations?,” AIPLA Quarterly Journal, vol. 35, no. 3, pp. 301-330 (2007).
4. See generally MPEP §2111.02.