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Drafting Process Claims After Bilski: How To Apply The Latest 101 'Transformation'

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By now, most attorneys, strategists or academicians who have an interest in the patentability of software or related legal issues are aware of the recent *en banc* decision, *In re Bilski*, handed down by the United States Court of Appeals for the Federal Circuit on Oct. 30, 2008. Even in the short time since the issuance of the opinion, various commentaries and analyses have indicated that the decision is both important and controversial.

However, this article will not address policy or legal questions that resulted in or from the decision. Indeed, for those for whom the prosecution of patent applications is a regular part of their legal practice, a key question arising from the decision is simply this: Now what?

To restate: Are there ways that a patent drafter may now craft documents and claims to take this decision into account so as to reduce risk of harm to a client from changes brought about by the decision? Likewise, are there ways that a patent drafter may now craft documents and claims to continue to generate commercial value for those clients who desire to obtain patent protection in technical areas affected by this decision? Even more specifically, are there changes that patent attorneys should make to their practice where an embodiment or, perhaps, even the primary embodiment of the technology they seek to patent relates directly to software?

In truth, there are numerous suggestions to provide with respect to drafting process claims for technology directly

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related to software. I am in the process of explaining these in my forthcoming book, *Strategic Patent Claim Drafting*. However, in this article, I will share *one specific patent claim drafting tip* -- one that may not be seen as excessively complex to implement and also may ensure that process claims drafted in the manner proposed will comply with the requirements of Section 101 as articulated in the *Bilski* decision. Of course, obtaining an issued-process claim for technology related to software will now in general require drafting a claim having narrower scope than had been believed before the decision was handed down. With that said, however, this drafting tip is constructed in a manner that will hopefully allow the drafter to *give up no more scope than is necessary* to comply with Section 101. Some, as a result, may find the approach I suggest to be an appealing one; nonetheless, I *strongly* recommend that you not rely exclusively on it. Drafting claims in such a manner to fall just within a legal boundary that remains uncertain, as in this case, can be a risky endeavor.

Bilski articulates that for compliance with Section 101 the "machine-or transformation" test must be satisfied. To put a finer point on it, *Bilski* states that this is the *only* test, at least until the Supreme Court articulates a different test. (*Bilski*, majority slip opinion, pps. 18-23.) Therefore, according to *Bilski*, "[a] claimed process is surely patent-eligible under section 101 if: 1) it is tied to a particular machine or apparatus, *or* it transforms a particular article into a different state or thing." (*Bilski*, majority slip opinion, p. 11.) (emphasis in original) However, at the same time, the decision gives us little guidance on application of the "machine" leg of the test. This is because *Bilski* had already conceded that the claims at issue were not tied to a particular machine or apparatus. As a practical matter, though, especially in the area of software, most practitioners will more likely attempt to comply with the "machine" portion of the test than the "transformation" portion of the test. There are various reasons for this, some of which relate to the nature of software itself. Consider, for example, the facts of *Diehr* and *Abele*, two decisions involving patent process claims offered by the Federal Circuit as examples that meet the "transformation" portion of the test. However, as I demonstrate below, crafting a process claim to comply with the "machine" portion of the test is also likely an easier drafting exercise or task to be accomplished than the "transformation" alternative.

Although the United States Patent and Trademark Office (USPTO) takes the position that a process claim intended to cover software executing on a general purpose computer is not statutory subject matter, on this question, the court in *Bilski* provides no definitive guidance. (*Bilski*, majority slip opinion, p. 24.) Again, the court did not need to do so for these particular facts. By contrast, the USPTO in several recent board decisions has provided its guidance to practitioners. Consider, for example, the decisions *Ex Parte Langemyr* (May 28, 2008) and *Ex Parte Wasynczuk* (June 2, 2008). In an article titled "The Death of Google's Patents?," posted on the Patently-O Blog on July 21, 2008, (cited hereinafter as "Duffy"), the well-known academician Professor John F. Duffy of George Washington University, analyzes these two decisions. It is worth noting that Duffy also participated in the amicus briefing and in the oral argument for the *Bilski* case. In his article, Duffy confirms, by way of background information, that under the USPTO's view "[a] general purpose computer is *not* a particular machine, and thus innovative software processes are unpatentable if they are tied only to a general purpose computer." ("Duffy," p. 1). Furthermore, Duffy, after analyzing the two recent Board decisions just mentioned, summarizes his analysis as follows: "... an innovative process is *not* patentable when operating on a single computer processor but *is* when operating on two processors...." ("Duffy," p. 6., emphasis supplied)

Thus, these board decisions provide some, albeit only a small amount of, guidance as to what is *not* a general purpose computer for the purposes of determining whether a claim covers statutory subject matter. Perhaps one way to read these decisions is that any "meaningful" deviation from a general purpose computer qualifies as a specific apparatus or machine for the purposes of the USPTO. Regardless, more helpful than these decisions, the now-famous *en banc* decision *In re Alappat*, 33 F.3d 1526, 31 USPQ2d 1545 (Fed. Cir. 1994), written by Judge Giles Rich speaking for the Federal Circuit, provides guidance for practitioners to consider. The court there stated:

Alappat admits that claim 15 would read on a general purpose computer programmed to carry out the claimed invention, but argues that this alone also does not justify holding claim 15 unpatentable as directed to nonstatutory subject matter. We agree. ***We have held that such programming creates a new machine, because a general purpose computer in effect becomes a special purpose computer once it is programmed to perform particular functions pursuant to instructions from program software.*** *Id.* at 1548. (citations omitted; emphasis supplied)

The USPTO has, however, distinguished this decision by *correctly* pointing out that the claims at issue were *not* directed to a process, but to a machine or an apparatus. See *Ex Parte Langemyr*, Appeal 2008-1495, slip opinion, p. 29 (May 28, 2008). Still, the point here is simple and not one that is undermined or rendered any less forceful by the USPTO's observation.

As has already been stated, the machine or transformation test requires that a process claim be tied to a specific or

special purpose apparatus or machine (assuming, for example, that the transformation portion of the test is not met). Furthermore, as also articulated above, based on an *en banc* decision hailed by many for its impeccable logic, Federal Circuit precedent establishes that "...a general purpose computer in effect becomes **a special purpose computer** once it is programmed to perform particular functions pursuant to instructions from program software..." (*emphasis added*)

Therefore, if one were to draft a process claim where it is *clear* that the process claimed is tied to a specific apparatus, though one taking the form of a general purpose computer programmed to perform particular functions pursuant to instructions from program software, then, according to this Federal Circuit case at least, the machine test is satisfied.

Consider, for example, if one were to include the following definition in the specification of a patent application:

In the context of this particular patent application, the term "specific apparatus" means or refers to a general purpose computer once it is programmed to perform particular functions pursuant to instructions from program software.

Per a line of authority that includes such significant Federal Circuit decisions in the history of US Patent Law as *Vitronics*, 90 F.3d 1576, 1582 (Fed. Cir. 1996), and *Phillips*, 415 F.3d 1303 (Fed. Cir. 2005) (*en banc*), this clear and express statement of the definition of a term, if that term is used in a claim, should, in general, control its interpretation, whether interpreted during prosecution or during litigation

Let's, as a thought experiment, take a process claim *rejected* by the USPTO as being directed to non-statutory subject matter because the process claim was *not* tied to a specific machine or apparatus. However, let's assume the associated specification includes the preceding claim term definition and that the specification, the file history, and the other patent claims do not include any statements or language that one would view or interpret as inconsistent with the previous definition.

For example, assume claim 1, provided below, from *Langemyr*, in these hypothetical circumstances, had been written differently.

A method executed in a computer apparatus for creating a model of a combined physical system having physical quantities by representing physical quantities of the combined physical system in terms of a combined set of partial differential equations, the method comprising:

- representing at least one of a plurality of systems as two or more selected application modes modeling physical quantities of said one of said plurality of systems;
- determining a set of partial differential equations for each of the two or more selected application modes, parameters of the partial differential equations being physical quantities of corresponding ones of said plurality of systems;
- forming said combined set of partial differential equations using the determined sets of partial differential equations associated with said one of said plurality of systems; and
- outputting a model of said combined physical system based on said combined set of partial differential equations for the two or more selected application modes for the said one of said plurality of systems, whereby the model represents a mathematical expression of the physical quantities of the combined physical system.

Suppose that, instead, the "rewritten" claim, recited "specific apparatus," as demonstrated below.

A method executed using a **specific apparatus** for creating a model of a combined physical system having physical quantities by representing physical quantities of the combined physical system in terms of a combined set of partial differential equations, the method comprising:

- representing **via said specific apparatus** at least one of a plurality of systems as two or more selected application modes modeling physical quantities of said one of said plurality of systems;
- determining **via said specific apparatus** a set of partial differential equations for each of the two or more selected application modes, parameters of the partial differential equations being physical quantities of corresponding ones of said plurality of systems;
- forming **via said specific apparatus** said combined set of partial differential equations using

the determined sets of partial differential equations associated with said one of said plurality of systems; and

- outputting **via said specific apparatus** a model of said combined physical system based on said combined set of partial differential equations for the two or more selected application modes for the said one of said plurality of systems, whereby the model represents a mathematical expression of the physical quantities of the combined physical system.

To be clear, this rewritten claim is not suggested as a model for the drafting of process claims to cover software embodiments. As implied previously, there are many ways original claim 1 might be improved. Still, this rewritten claim is suggested here to make the following point: under the legal reasoning provided in *Bilski* and *Alappat*, the process claim, as rewritten and in accordance with the assumed facts, recites statutory subject matter under section 101. Furthermore, the claim recites statutory subject matter even under the reasoning of *Wasynczuk*. The "rewritten" claim in this example is statutory on the same basis as claim 9 in *Wasynczuk*. (See *Ex Parte Wasynczuk*, Appeal 2008-1496, slip opinion, p. 22.) Intellectually, the claims follow the same form in order for the process being claimed to be tied to a specific machine or apparatus.

Furthermore, this result should not be troubling on reflection. According to *Bilski*, the machine or transformation test has the purpose of ensuring that process claims are narrowly tailored enough to encompass only a particular application of a fundamental principle, rather than pre-empt the principle itself. (*Bilski*, majority slip opinion, p. 10) In this example, because the process claim complies with the machine test, this policy goal has been accomplished as desired. Here, the claimed process is limited to being practiced on a special purpose device, that is, a computer programmed to perform particular functions pursuant to instructions from program software. Note that the program software mentioned above does not refer to software that may be written to perform the process sought to be patented. Such software would typically be software that is executing "on top of" the software referenced in the text. However, this simple example is nothing less than a typical situation in which a form or procedure is devised so that a substantive legal goal can be met. Compliance with the appropriate form or procedure, therefore, is confirmation of accomplishment of the goal.

Here, an approach has been provided that is not a complex drafting exercise and that is available to assist practitioners in drafting statutory process claims to cover technology directly related to software. However, as previously indicated, this is not meant to be the only approach one should employ in actual practice.

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