



IP: Business methods, diagnostics and abstract ideas

HOW HAVE *BILSKI* AND *MAYO* IMPACTED CLAIM EXAMINATION IN THE PTO?

The Supreme Court has taken an increased interest in patent cases in recent years. Two cases important to entities that file business method patents, software patents and medical diagnostics are *Bilski v. Kappos* and *Mayo Collaborative Services v. Prometheus Laboratories, Inc.* These cases addressed claimed processes that apply algorithms and natural phenomena, and what can be considered patent-eligible subject matter. In the wake of these Supreme Court decisions, recent Board of Patent Appeals and Interferences (BPAI) decisions discussed below provide patent applicants some insight as to how to structure patent claims in light of *Bilski* and *Mayo*.

Patentable subject matter

Patents are granted only to patent-eligible subject matter, such as a new and useful process, machine, manufacture or composition of matter. Notwithstanding the mandate from Congress, the Supreme

Court has said that subject matter that is ineligible for patenting includes abstract ideas, natural phenomena and laws of nature/natural correlations. However, methods and products applying abstract ideas, physical phenomena and laws of nature to perform a real-world function may well be patentable. In earlier cases in the Federal Circuit or Supreme Court, the analysis to determine whether a claim to a process is patent-eligible asked whether the process satisfies the machine-or-transformation (MOT) test, which asks whether the process is tied to a particular machine or apparatus, or transforms a particular article into a different state or thing.

In *Bilski*, the Supreme Court rejected the MOT test as the sole test of process patent eligibility and set forth criteria for determining whether a patent claim was directed to noneligible subject matter. The court found that the *Bilski* method of optimizing a fixed bill system for energy markets was

an unpatentable abstract idea in view of the following guidelines for determining whether the method claim was ultimately directed solely to an abstract idea. The factors are whether the method involves or is executed by a particular machine or apparatus; whether performance of the claimed method results in or otherwise involves a transformation of a particular article into a different state or thing; whether performance of the claimed method involves an application of a law of nature, even in the absence of a particular machine, apparatus or transformation; and whether a general concept (which could also be recognized in such terms as a principle, theory, plan or scheme) is involved in executing the steps of the method.

In *Mayo*, the Supreme Court was challenged with determining if claims to a method of improving efficacy of a drug treatment by the steps of administering a drug and determining the levels of drug in the blood to determine

whether the drug is at a toxic level were patent-eligible subject matter. *Mayo* considered that the correlation of the drug with toxic levels was a natural law of that drug's metabolism and therefore patent ineligible. Factors weighing against patentability in *Mayo* include that the method contained steps that were well-understood and previously engaged in by those in the field and added nothing specific to the natural principle.

Application of *Bilski* and *Mayo* to claims by the BPAI

Those in the business-method area and in medical diagnostics/pharmaceuticals are still left wondering what types of claims will be available to cover their new and useful inventions since the March 2012 *Mayo* decision. Examination of recent BPAI decisions since May 2012 provides some guidance to practitioners on how to draft new claims that satisfy the *Bilski* and *Mayo* criteria.

Claims considered patent eligible

For example, *Ex parte Davis* recited claims to a method for forming a garment comprising a step of providing first, second, third and fourth garment portions, each of which has specified properties. The examiner originally rejected the claims asserting that the associated machine did not carry out the steps of the method and transform the garment, and that the "providing" steps were simply general concepts. However, the

board (citing *Bilski* and *Mayo*) held that making a garment is transformative (although parts of the process were routine in the art) and that providing garment parts having particular properties is an active step.

In *Ex parte Dunlap*, the board upheld claims to a process for plant selection comprising providing a database of plant species comprising images of the plants, eliminating a portion of the plant species using search criteria, and displaying the to the user at least one image of the plants to distinguish from other plants in the genus. The claims were rejected as directed to the concept of selecting a plant species and not reciting a MOT. The board reversed (citing *Bilski* and *Mayo*), holding that the claims do not preempt all methods for selecting plant species, and required a specific database and specific form of results presented to the user.

Claims to a method of delineating the boundary of the myocardium in a medical diagnostic image of the heart were upheld as patentable subject matter in *Ex parte Skyba*. The board reversed the examiner's rejections (citing *Bilski* and *Mayo*), saying that the process claims are transformative because the claim is directed a method that comprises "manually marking" at least three points on the image itself and a person practicing the claimed process ends up with a diagnostic image that is altered or transformed. Moreover, although

the step of "automatically fitting" a border shape may involve a computer, the fitting itself occurs upon "distorting" or "stretching" a shape and an image is marked or moved via physical action by a human. Thus, the claims here could not be performed entirely in a human's mind and do not merely recite an abstract idea.

Claims rejected as patent ineligible

In *Ex parte Gusler*, the rejected claims were directed to a method for automated project accountability comprising "determining at least one decision maker." The claims were not limited to a computer and not constrained by any particular algorithm or metric. The claims were determined to involve only "well-understood, routine, conventional activity previously engaged in by researchers in the field" (*Mayo*). Additionally, the claims recited use of an "electronic forum" for performing a step in the algorithm but the "electronic forum" did not turn the purportedly recited computer into a special-purpose machine as required by *Bilski*. The board in *Gusler* reiterated that "One cannot circumvent the principles articulated by the Court through the use of clever claim drafting tactics involving the nominal addition of generic servers, computers, or networks."

Claims rejected in *Ex parte Hecker* were directed to a device for effecting a computer-aided estimation of a mass of a vehicle, comprising a calculation unit

adapted to calculate the mass of a vehicle. The board (citing *Bilski*) held that the only structure positively recited in the claim is a calculating unit, which is not a particular machine but merely the object on which the calculations are being performed. Thus, although the claim was to a “device” that could be considered a composition of matter, it was considered patent ineligible as claiming an abstract idea because the machine was not purpose specific.

BPAI raises new grounds of rejection based on §101

In some appeals, the board has added new grounds of rejection under §101 that were never raised during examination of the application. In both *Ex parte Cheng* and *Ex parte Fisher*, the board raised new §101 rejections.

In *Ex parte Cheng*, claims directed to a system embodied on computer-readable storage medium that facilitates notifications and comprising various components that constitute encoded instructions were rejected. The board (citing *Bilski* and *Mayo*) asserted that under the broadest reasonable interpretation of “computer-readable media,” the claim covers signals per se, and therefore must be rejected under §101 as covering nonstatutory subject matter.

In *Ex parte Fisher*, the rejected claims were directed to an electronic method for the franchise industry comprising

receiving information about real-estate needs, matching the needs to available real estate, notifying the prospect of any site match and determining if the company approves of the site match. The board (citing *Bilski*) concluded that the method is directed to an abstract idea of matching criteria and is only nominally tied to a generic electronic machine that imposes no meaningful limitations on the claim.

What can the patent practitioner take away from these decisions?

The Supreme Court decisions in *Bilski* and *Mayo* did not prevent patenting of business methods or diagnostics, but they definitely require the practitioner be more careful and thoughtful in claim drafting. For both business methods and diagnostics, the board’s opinions suggest that simply tying the process to any machine will not satisfy the MOT test if the machine is a generic machine that does not provide a specific, special purpose in the claim. Both *Ex parte Dunlap* and *Ex parte Skyba* discussed above provide insight as to the position of the U.S. Patent and Trademark Office (PTO). In each case, the claimed processes were tied to specific outcomes that could not have been carried out just by mental processes. The determination of plant species in *Skyba* required eliminating a subset of plant species from the large database and displaying images of the remaining subset at high resolution on a device

such that a person can determine characteristics of the plant. The requirement for display at high resolution conferred a special purpose to the associated machine. Similarly, in *Dunlap* the medical diagnostic display was not generic, but tied to the imaging and requirement for human input into marking the image.

Possible ways to format claims in light of these cases include drafting the claims such that the machine serves a special purpose for the claimed process, and where application of the algorithm/law of nature does not preempt use of the natural law in other machines. The PTO is concerned with a patent possibly preempting use of a law of nature, and tying that process to a specific purpose-limited machine could help persuade the examiner that the process does not preempt use of the mental steps in other machines.

When drafting process claims, it is important to consider what the “active” steps are actually requiring and if something is being transformed after carrying out these “active” steps. For example, although the term “providing” can be active, it also can be viewed as simply a generic mental process. Complicating the issue of the active step is whether the step could be determined to be routine or known in the art. For example, while “administering” a drug to treat a disease seems active, if administration of the drug is known in the art, the

PTO/BPAI could view the step as insignificant pre- or post-solution activity in view of *Mayo*. Thus, post-*Mayo*, claimed method steps could require a novelty aspect; including an element in the claim step that was not disclosed in the art may be able to position the claim as patent-eligible subject matter.

Although *Bilski* and *Mayo* provide uncertainty around the patenting of a business method or medical diagnostic, with thoughtful claim drafting, these types of patents can still be considered patent eligible subject matter.

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