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## United States

# Business method patents under fire in the United States

By **W Edward Ramage**, Baker Donelson Bearman Caldwell & Berkowitz, PC

While the United States has long been considered one of the most accommodating countries for computer-implemented business method patents, these types of patent have hit a rough patch over the past few years. While such processes are still generally considered to be patentable subject matter, the Supreme Court has issued a series of decisions that substantially limit the scope of patent eligibility for business methods.

In 2010 the Supreme Court established, albeit by a narrow margin, the patentability of business methods in general in its seminal *Bilski v Kappos* decision. Since then, however, it has broadened the ‘abstract idea’ exception to patentability to find a number of computer-implemented business method claims to be invalid. More importantly, it has done so regardless of whether the invention is presented as a method, a system or a computer-readable medium.

### **Bilski v Kappos**

On June 28 2010 the Supreme Court issued its long-awaited *Bilski v Kappos* opinion on the patentability of business methods in general. In *Bilski* the court seemed able to agree only that the claims at issue for hedging by commodities buyers and sellers against the risk of price changes constituted unpatentable subject matter. It did so narrowly by finding that the claims were attempts to patent abstract ideas, and not by using the ‘machine or transformation’ test that the Federal Circuit Court of Appeals had espoused earlier in the same case. Notably, the court seemed in unanimous agreement that the machine

or transformation test is not the sole test for patent-eligible subject matter, and in fact expressly stated that a process need not be tied to a machine or transformation. The court also narrowly held that business method claims *per se* are patentable subject matter.

However, the focal point of the decision was that abstract ideas, without more, are unpatentable. The court reaffirmed prior case law that one cannot patent a mathematical formula, an abstract idea or an algorithm. An application of a law of nature or mathematical formula to a known structure or process may be patentable, but one cannot circumvent the prohibition by attempting to limit the use of the formula or idea to a particular technological environment or adding insignificant post-solution activity.

However, the court provided no firm guidance or bright-line test for abstractness. In fact, in his concurrence Justice Stevens noted that the court “never provides a satisfying account of what constitutes an unpatentable abstract idea”.

### **Prometheus Labs v Mayo**

Immediately after *Bilski*, the Supreme Court immediately remanded a pending appeal in *Prometheus Laboratories v Mayo Collaborative Services* to the Federal Circuit for further consideration in light of *Bilski*. The patent involved an iterative dosing method comprising three steps:

- Administer a drug to a subject;
- Determine the level of the drug in the subject; and
- Decide whether the next dose should

## “*Mayo* also put to rest the debate in the patent community about the screening role of subject-matter patentability”

be the same, higher or lower, based on comparing the level of the drug in the subject against pre-determined thresholds.

The Federal Circuit had initially held the method patentable under the previous machine-or-transformation test, stating that the administration of the drug transformed an article into a different state or thing. On remand, the court again upheld the patentability of the medical treatment methods, even in light of *Bilski*.

The Supreme Court disagreed. In March 2012 it issued a surprisingly unanimous decision, holding that method claims that involved administering a drug to a patient and determining the therapeutic effect were not patentable subject matter. The court specifically held that the correlations between the drug being administered and the concentrations of certain metabolites in the blood of the patient were a “law of nature” and thus not directly patentable. The claimed processes, while not natural laws themselves, did not sufficiently transform the nature of the what was being claimed and thus were also not patentable. The claimed processes were applications of a law of nature and would not be patentable unless they had additional features providing practical assurance that the processes were genuine applications of those laws, rather than an attempt to monopolise the correlations.

The court did consider the steps as an ordered combination, but found that the combination added nothing new to the laws of nature. In short, the claims informed the relevant audience about certain laws of nature and the remaining steps comprised only “well-understood, routine, conventional activity”.

The court also expressed its continued concern that “patent law not inhibit further

discovery by improperly tying up the future use of laws of nature”. The court recognised that rewarding those who discover new laws of nature with patents might well encourage those discoveries, but the danger of inhibiting future innovation by tying up the use of these “basic tools of scientific and technological work” was greater. In other words, granting a patent for such a discovery “forecloses more future invention than the underlying discovery could reasonably justify”.

*Mayo* also put to rest the debate in the patent community about the screening role of subject-matter patentability. The court firmly held that the Section 101 patent-eligibility inquiry is a significant threshold question and not to be taken lightly. Subsequently, the US Patent and Trademark Office (USPTO) issued the Interim Procedure for Subject Matter Eligibility Analysis of Process Claims Involving Laws of Nature, setting down the examination procedure for method or process claims where a natural principle is a limiting element.

While *Mayo* involved medical diagnostic testing methods and focused on the ‘natural laws and phenomena’ exception to patentability, its reasoning is more broadly applicable to whether computer-implemented method claims are unpatentable, particularly regarding the pre-emption of fundamental tools of discovery and the presence or addition of meaningful limitations that prevent the claim as a whole from covering a concept’s every practical application. In fact, the Supreme Court expressly adopted the *Mayo* analytical framework when it next addressed business method patents.

### ***Alice Corporation Pty Ltd v CLS Bank International***

*Alice* came to the Supreme Court with an aura of uncertainty. CLS Bank had filed a declaratory judgment action seeking to

invalidate four patents owned by Alice Corporation directed to a computerised trading platform for mitigating or eliminating settlement risk in financial transactions. ‘Settlement risk’ is the risk that only one party to an agreed financial exchange will satisfy its obligations. The patented invention used a computer system as a third-party intermediary to facilitate the exchange of financial obligations between the parties. The claims were presented in the typical computer-based forms and included a method for exchanging financial obligations, a computer system for carrying out the method of exchanging financial obligations and a computer-readable medium containing program code for performing this method.

The district court applied the Supreme Court’s *Bilski* decision to find that all of the method claims were ineligible for patent protection because they were directed to an abstract idea, and that the system and medium claims would pre-empt all practical applications of this idea. A Federal Circuit panel reversed, holding that all of the claims were patent-eligible subject matter. A request for *en banc* review was granted and the patent community looked forward to receiving firm guidance from the entire court.

However, those expectations were not met. In a fractured decision in 2013, seven of the 10 judges overruled the panel and affirmed the district court’s ruling on the method and medium claims, but without agreeing on the basis for the decision. Five of the 10 judges also found that the system claims were unpatentable, with the other five agreeing with the Federal Circuit

panel. The published decision had seven separate opinions, supporting various tests for patentability and expressing varying opinions as to the importance of the form of the claims. The ruling left the patent community in a state of confusion.

The Supreme Court, however, was not confused with regard to either the result or the analytical approach. In a unanimous decision, the court held that the claims – regardless of form – did no more than instruct the practitioner to implement the abstract idea of intermediated settlement on a generic computer and added nothing of substance to the underlying abstract idea, and were thus patent ineligible subject matter.

The court provided some structured guidance as to how to approach the question of when computer-based claims are directed to a patent-ineligible abstract idea. More particularly, it expressly applied the two-step *Mayo* framework for distinguishing patents that claim laws of nature, natural phenomena and abstract ideas from patents that claim patent-eligible applications of those concepts:

- The court determines whether the claims at issue are directed to one of the patent-ineligible concepts.
- If so, the court searches for an inventive concept by considering the elements of each claim both individually and as an ordered combination to determine whether the additional elements transform the nature of the claim into a patentable application.

The analysis of the Alice Corporation patent claims was straightforward. The court first determined that the claims at issue were directed to a patent-ineligible concept: the abstract idea of intermediated settlement. The court held that this was “a fundamental economic practice long prevalent in our system of commerce”, similar to the abstract idea of risk hedging that the court found ineligible in *Bilski*.

The court then determined that the claim elements, considered both individually and as an ordered combination, did not transform the abstract idea of the claim into a

“ Applicants for computer-implemented inventions should continue to focus on flexibility ”

patent-eligible invention. With regard to the method claims, the court held that stating an abstract idea while adding the words ‘apply it with a computer’ does not suffice. Viewed as a whole, the claims simply recited the abstract concept as performed by a generic computer and did not purport to improve the functioning of the computer itself or effect an improvement in any other technology or technical field. Using “some unspecified, generic computer” is not enough to transform the abstract idea into a patentable invention.

The court reached the same conclusion with regard to the system and medium claims for substantially the same reasons. The supposed specific hardware listed in those claims was no more than “purely functional and generic”. Thus, none of the hardware recited offered “a meaning limitation beyond generally linking the method to implementation by computers”.

### ***Ultramercial, Inc v Hulu, LLC***

An immediate impact of *Alice* is a prolonging of the rather tortured history of *Ultramercial*, which involved a method for distributing products over the Internet via a facilitator. In 2010 the district court had held that the claims were not patent eligible. The Federal Circuit initially reversed, but that decision was vacated by the Supreme Court and remanded for reconsideration in light of *Mayo*. On remand, a Federal Circuit panel in 2013 unanimously reversed the district court, reaffirming the prior finding that the method was patent eligible.

Shortly after issuing its *Alice*, decision, the Supreme Court sent *Ultramercial* back to the Federal Circuit a third time for reconsideration. If the Federal Circuit finds the patent invalid, it is a strong indication that many existing computer-implemented method patents will be in serious jeopardy. If the patent is upheld, it is likely that the Supreme Court may take the opportunity yet again to address the patentability of computer-implemented systems.

The Federal Circuit appears likely to follow the first course. A few weeks after *Alice*, a Federal Circuit panel unanimously held that claims directed to using an improved device profile in a digital image

## Contributing profiles



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processing system were invalid in *Digitech Image Technologies v Electronics for Imaging*. Specifically, the method for generating the device profile claimed an abstract idea because it described a process of organising information through mathematical correlations and was not tied to a specific structure or machine.

### **USPTO guidance**

On June 25 2014 the USPTO issued preliminary examination instructions in view of *Alice*. The USPTO noted that there were two differences from its prior guidance. First, *Alice* established that the same analysis should be used for all types of judicial exception (the USPTO had previously applied different analyses for abstract ideas in comparison to laws of nature issues). Second, the decision

established that the same analysis should be used for all categories of claim (the USPTO had previously treated product claims differently from method claims).

The USPTO reaffirmed the basic approach of first determining whether a claim is directed to one of the four statutory categories of invention (ie, process, machine, manufacture or composition of matter). If not, the claim is rejected as being directed to non-statutory subject matter. If so, it must be determined whether the claim is directed to a judicial exception using the two-part analysis of *Mayo* and *Alice*.

The guidance recognises that the exclusion must be construed carefully “because, at some level, all inventions embody, use, reflect, rest upon or apply abstract ideas and the other exceptions”. Examples of abstract ideas were presented: fundamental economic practices, certain methods of organising human activity, an idea of itself and mathematical relationships and formulae.

If an abstract idea is present in a claim, the guidance instructs examiners to determine whether any element or combination of elements in the claim is sufficient to ensure that the claim amounts to significantly more than the abstract idea itself. Limitations that may qualify include improvements to another technology or technical field, improvements to the functioning of the computer itself or meaningful limitations beyond generally linking the use of the abstract idea to a particular technological environment. Limitations that do not qualify include essentially adding the words ‘apply it’ to an abstract idea, mere instructions to implement an abstract idea on a computer or requiring no more than a generic computer to perform generic computer functions that are routine and conventional activities known to the industry.

### Computer-implemented business methods endangered

Under *Alice*, a significant number of business method and computer-implemented process patents are at risk of being found invalid as patent ineligible and an even greater number

will be subject to attack on those grounds. While previously patent applicants have taken some comfort in there being some distinction based on the form of the claim, any such distinction no longer exists. There will be a long period of uncertainty as to where to draw the line – if, in fact, a line can be drawn with any confidence. As the USPTO recognises, all inventions might be considered to have some form of abstract idea or natural principle at their core. Thus, whether any element or combination of elements in a claim is sufficient to ensure that the claim amounts to significantly more than the abstract idea itself is likely to vary based on who is answering the question. For now, until more consistent guidance is provided by the USPTO and the courts, abstraction may well be in the eye of the beholder.

Similarly, applicants for computer-implemented inventions should continue to focus on flexibility. The specification should be detailed with regard to computer implementation, describing the computer components and devices fully and distinguishing them from a general purpose computer as far as possible. Care should be taken in describing what a method claim is directed to, avoiding language that implies or suggests that the method simply applies an abstract idea on a computer. Applicants should also consider engaging in continuation practice, thereby reserving the ability to respond to future developments regarding patentable subject matter. **iam**

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