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## United States

# Are computer-implemented patents going extinct?

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While the United States was long considered one of the most accommodating countries for computer-implemented method patents, this is clearly no longer the case. In 2010 the Supreme Court established by a narrow margin the patentability of business methods in general in its seminal *Bilski v Kappos* decision. However, since then, 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 was presented as a method, system or computer-readable medium.

In particular, in the year since the Supreme Court’s ruling in *Alice v CLS Bank*, computer-implemented and computer-related patents have been disappearing at a significant rate – much like Lewis Carroll’s Alice disappeared down the rabbit hole. Courts have used the *Alice* decision to invalidate numerous patents on the basis of the claims being too abstract to be patentable subject matter. Patent applications have fared little better in the US Patent and Trademark Office (USPTO), as patent examiners in large numbers have used *Alice* to reject claims.

### ***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 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 and found 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 patentable subject matter. A request for *en banc* review was granted and the patent community looked forward to receiving firm guidance from the entire court.

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 contained seven separate opinions, supporting various tests for patentability

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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.

However, the Supreme Court 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; they were thus unpatentable subject matter.

The court provided some structured guidance as to how to approach the question of whether a computer-based claim is directed to an unpatentable abstract idea. More particularly, it expressly applied the two-step *Mayo v Prometheus* framework for distinguishing patents that claim laws of nature, natural phenomena and abstract ideas from patents that claim patentable applications of those concepts:

- First, the court determines whether the claims at issue are directed to one of the unpatentable concepts.
- If so, the court searches for an inventive concept by considering the elements of each claim both individually and as an ordered combination in order 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 an unpatentable concept: the abstract idea of intermediated settlement. The court held that this is “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 patentable invention. Regarding 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”.

### Post-Alice decisions

Dozens of cases, at both the trial court and appellate level, have considered patent claims since the *Alice* decision. In nearly every case, the claims being challenged have been invalidated as being too abstract to be patentable.

The courts’ struggle – and failure – to come up with a workable approach to defining whether a claim is too abstract is evident in the variable descriptions of the alleged abstract idea in the cases. Several cases have used very broad, non-specific language. In *Comcast IP v Spring Communications*, for example, the court stated that the claims were directed to the abstract idea of a “conditional decision”. Further, in *Tuxis Tech v Amazon* the court identified the abstract idea as “upselling or cross-selling”, which it recognised as a

marketing technique as old as the field of marketing itself. At the other end of the spectrum, some decisions have added more detail to the asserted abstract idea. In *CMG Financial v Pacific Trust Bank*, for example, the court rejected the claims as being directed to the abstract idea of paying down a mortgage early when funds are available and borrowing funds as needed to reduce the overall interest charged on the mortgage.

Tellingly, the courts have been willing to consider the issue of abstract subject matter very early in a case. While many courts have considered and rejected claims in the context of a motion for summary judgment or after a claims construction hearing, several courts have rejected claims when the patentable subject-matter issue has been raised in a motion to dismiss or for judgment on the pleadings. Thus, courts have felt comfortable identifying an abstract idea and rejecting claims on that basis before any substantive discovery or exchange regarding the meaning of claim terms has taken place.

While cases have provided a wealth of examples of claims that are considered too abstract to be patentable, unfortunately little – if any – practical guidance has been provided to the patent community about what would not be considered too abstract. There has been some interest in what may constitute a ‘safe harbour’, based on the Supreme Court’s language in *Alice* that the claims there did not purport to improve the functioning of the computer itself. This may

indicate that computer-implemented claims that purport to improve the functioning of a computer – or a computer system – may not be considered too abstract. However, if there is any safe harbour, it is not large. Several cases under consideration by the Court of Appeals for the Federal Circuit may help to define where the line should be drawn.

### USPTO guidance

On June 25 2014 the USPTO issued preliminary examination instructions in view of *Alice*. These were replaced by the Interim Guidance on Patent Subject Matter Eligibility 2014, which was issued on December 16 2014. The interim guidance describes an eligibility test for evaluating a claim for patentability and is applicable to natural product or natural phenomenon claims, as well as claims directed to abstract ideas.

The first step under the test is the well-established question of whether the claim is to one of the four statutory categories of patentable subject matter: process, machine, manufacture or composition of matter. Assuming that the claim passes this first hurdle, the examiner then determines whether the claim is directed to one of the judicially recognised exceptions: a law of nature, a natural phenomenon or an abstract idea. If so, the claim must recite additional elements that amount to significantly more than the judicial exception for the claim to be patentable.

Limitations that may qualify include:

- improvements to another technology or technical field;
- improvements to the functioning of the computer itself; and
- 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; and
- requiring no more than a generic computer to perform generic computer functions that are known to the industry as routine and conventional activities.

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The interim guidance identifies the risk of claims that are directed to a judicial exception – that is, that the claim will ‘tie up’ the judicial exception and pre-empt others from using it. The interim guidance recognises that the exclusion must be construed carefully “because at some level all inventions embody, use, reflect, rest upon, or apply a law of nature, natural phenomenon, or abstract idea”. This is the exact concern identified by the Supreme Court in *Mayo v Prometheus Labs* and is the concern that underpins the *Alice* decision.

Interestingly, the interim guidance also creates a streamlined eligibility analysis. This streamlined analysis can be used for a claim that may or may not recite a judicial exception, but “when viewed as a whole, clearly does not seek to tie up any judicial exception such that others cannot practice it”. However, this same element is part of the full analysis under the interim guidance: “To

be patent-eligible, a claim that is directed to a judicial exception must include additional features to ensure that the claim describes a process or product that applies the exception in a meaningful way, such that it is more than a drafting effort designed to monopolise the exception. It is important to consider the claim as a whole. Individual elements viewed on their own may not appear to add significantly more to the claim, but when combined may amount to significantly more than the exception.”

Thus, it appears that the interim guidance recognises that, even if a claim may be directed to an abstract idea, it will pass the subject-matter eligibility test if it does more than monopolise the exception. However, merely not seeking to tie up or monopolise any judicial exception is likely insufficient to meet the test in the interim guidance.

On July 30 2015 the USPTO updated the interim guidance with additional examples of claims directed to abstract ideas, noting that judicial exceptions need not be old or long prevalent, and that newly discovered judicial exceptions, are still exceptions, despite their novelty. In particular, the update curtails a broader application of the streamlined eligibility analysis. These underscore the difficulty in overcoming a rejection based on abstract subject matter.

### **Computer-implemented business methods endangered**

Under *Alice*, a significant number of business method and computer-implemented process patents have been invalidated over the past year as being unpatentable. Similarly, the vast majority of patent applications in this area are being rejected by the USPTO on *Alice* grounds. There is no sign of the tidal wave receding and even greater numbers will be subject to attack in the future on this basis. While patent applicants have previously taken some comfort in there being some distinction based on the form of the claim, such distinction no longer exists.

There will continue to 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



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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 a judgement that 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.

For patent applicants, the USPTO's interim guidance appears to provide a possible lifeline with its streamlined eligibility analysis, or at least its commentary on claims that – when viewed as a whole – clearly do not seek to tie up or pre-empt any judicial exception. Given the level of subjectivity that can be involved in identifying an abstract idea, it is likely that the most successful arguments during patent prosecution will follow this line of thought.

The shifting sands of patent law in the United States also underscore the importance of continuation practice. Continuation and divisional applications provide the applicant with the ability to respond to future developments regarding patentable subject matter, as well as other changes in patent law. In particular, applicants for computer-

implemented inventions should continue to focus on crafting a detailed specification that describes the computer components and devices fully and distinguishes them as much as possible from a general-purpose computer. Care should be taken in describing to what a method or process claim is directed, avoiding language which implies or suggests that the method simply applies an abstract idea to a computer. Similar care should be taken with claim language, as language in claim preambles often appears to be used as the 'abstract idea' to which the claim is directed. *iam*

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