

## REPORT

**SUPREME COURT FINDS CLAIMS TO BE PATENT-INELIGIBLE  
UNDER THE JUDICIALLY-CREATED "ABSTRACT IDEA"  
EXCEPTION TO 35 U.S.C. §101**

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On June 19, the Supreme Court issued a unanimous decision in *Alice Corp. Pty. Ltd. v. CLS Bank Int'l.*<sup>1</sup> ("*CLS Bank*") affirming a May 10, 2013 *en banc* Federal Circuit ruling<sup>2</sup> and holding the claims of Alice's patents invalid under 35 U.S.C. §101 as being drawn to the "abstract idea" of intermediated settlement. In particular, the Court held that merely requiring generic computer implementation—regardless of whether a claim is a method claim, system claim, or *Beauregard*-type<sup>3</sup> software claim—fails to transform an abstract idea into a patent-eligible invention. The decision revisits the Court's treatment of the judicially-created "abstract idea" exception to patent eligibility under §101 in the Court's prior *Bilski*, *Benson*, *Flook*, and *Diehr* decisions, and applies the two-step analysis framework set forth in the more recent *Mayo* decision<sup>4</sup> which is consistent with Judge Lourie's

concurring opinion in the Federal Circuit's *en banc* decision.

The decision expressly declines to define the boundaries of what constitutes an "abstract idea," and thus provides no easily applied test for patent eligibility or clear guidance on claim drafting strategies to avoid the "abstract idea" exception to patent eligibility under §101. Nonetheless, the Court's analysis of the claims at issue demonstrates that many currently-accepted and often-used strategies for overcoming abstract idea-type §101 rejections at the USPTO may no longer be effective.

On June 25, the USPTO issued "Preliminary Examination Instructions for Determining Subject Matter Eligibility in view of *Alice Corp. v. CLS Bank*," a copy of which is attached to this Special Report. The USPTO plans to issue more detailed guidance to examiners in the future and has invited public comment on the preliminary instructions.

**I. The Supreme Court's Decision**

Subject matter *eligible* for patentability is defined in 35 U.S.C. §101 to include "...any new and useful process, machine, manufacture, or composition of matter...." Other sections of the Patent Act govern whether a patent-eligible

<sup>1</sup> Appeal No. 13-298, 573 U.S. \_\_\_\_ (2014).

<sup>2</sup> See our May 24, 2013 Special Report.

<sup>3</sup> A computer-readable medium storing a computer program.

<sup>4</sup> *Bilski v. Kappos*, 561 U.S. 593 (2010); *Gottschalk v. Benson*, 409 U.S. 63 (1972); *Parker v. Flook*, 437 U.S. 584 (1978); *Diamond v. Diehr*, 450 U.S. 175 (1981); and *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. \_\_\_\_ (2012).

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composition is indeed patentable (based on novelty, nonobviousness, adequate written description, enablement, etc.). The Court confirmed that there are judicially-created exceptions to §101 that prohibit patenting (i) laws of nature, (ii) natural phenomena, and (iii) abstract ideas. The Court also confirmed that these exceptions are not without limits, because "at some level, all inventions embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas. Thus, an invention is not rendered ineligible simply because it involves an abstract concept" (internal citations and quotation marks omitted). In this regard, "there may be additional elements in the claims that transform the nature of the claim into a patent-eligible application" of the abstract idea. (internal citations and quotation marks omitted).

The Court applied the two-step analysis set forth in the *Mayo* decision to determine whether the claims at issue were directed to a patent-ineligible "abstract idea" (or one of the other patent-ineligible concepts). The claims included method, system, and *Beauregard*-type claims generally directed to a method of exchanging financial obligations between two parties using a third party intermediary to mitigate settlement risk. A discussion of the claims at issue can be found in our May 24, 2013 Special Report.

#### **A. Two-Step Analysis for Patent Eligibility Under the Abstract Idea Exception**

The first step in the analysis is determining whether the claims at issue are directed to an abstract idea. If the claims are determined to be directed to an "abstract idea," the second step is determining whether the claims recite additional elements constituting an "inventive concept" that is sufficient to transform the abstract idea into a patent-eligible application.

#### **1. Step 1: Abstract Idea**

The "abstract idea" category of patent-ineligible subject matter "embodies the long standing rule that an idea of itself is not patentable" (internal quotation marks omitted). The Court identified an idea of itself and a principle in the abstract, such as a fundamental truth, an original cause, and a motive, as abstract ideas. The Court did not provide any bright-line rule or test for determining whether a claim is directed to an abstract idea. Instead, the Court revisited its holdings in *Benson* and *Flook*, and compared the method underlying Alice's claim to the method in *Bilski*. Each of *Benson*, *Flook*, and *Bilski* involved claims that were previously held by the Court to be directed to abstract ideas.

In *Benson*, the Court rejected as ineligible patent claims involving an algorithm for converting binary coded decimal numerals into pure binary form, holding that the claimed patent was "in practical effect . . . a patent on the algorithm itself." In *Flook*, the Court held that a mathematical formula for computing "alarm limits" in a catalytic conversion process was also a patent-ineligible abstract idea.

As discussed in our July 6, 2010 Special Report, the Court in *Bilski* found that claims directed to the basic concept of hedging or protecting against risk were patent-ineligible. The Court determined that "[h]edging is a fundamental economic practice long prevalent in our system of commerce and taught in any introductory finance class," and thus held that the claims were directed to a patent-ineligible abstract idea.

Although the *CLS Bank* Court declined to "delimit the precise contours of the 'abstract ideas' category," the Court acknowledged that the claims in each of *Benson*, *Flook*, and *Bilski* recited abstract ideas. Then, by analogizing

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primarily to *Bilski*, the Court found that the concept of intermediated settlement is also "a fundamental economic practice long prevalent in our system of commerce," and further found that the use of a third-party intermediary is "a building block of the modern economy." Based on these findings, the Court concluded that intermediated settlement, like hedging, is an abstract idea.

In reaching its decision, the Court rejected Alice's argument that patent-ineligible abstract ideas should be limited to "preexisting, fundamental truths that exist in principle apart from any human action" (internal quotes omitted). The Court reasoned that the hedging at issue in *Bilski* was a method of organizing human activity and not simply a preexisting fundamental truth.

## 2. Step 2: Transformative Inventive Concept

When a claim is determined to be directed to an "abstract idea" in the first step, the elements of the claim must then be analyzed both separately and as an ordered combination, to determine whether they contain an "inventive concept" sufficient to "transform" the claimed abstract idea into a patent-eligible application of that idea (hereinafter referred to as a "transformative inventive concept"). The "transformation" referred to by the Court in the second step of the analysis is not a transformation of matter or data as in the old "machine-or-transformation test," but the transformation of a patent-ineligible abstract idea into a patent-eligible application of the abstract idea. The Court provided no bright-line rule or test for determining when such a transformation occurs, but again compared the claims at issue to the claims at issue in the Court's prior decisions. The

Court cited its prior decisions in *Mayo*,<sup>5</sup> *Benson*, *Flook*, and *Bilski* for examples of claims that did not include a transformative inventive concept and turned to *Diehr* for an example of claims that included a transformative inventive concept.

Regarding *Mayo*, the Court concluded that appending conventional steps, specified at a high level of generality to an otherwise ineligible method was not enough to supply a transformative inventive concept. The Court analogized the conventional steps added to the method in *Mayo* as nothing more than taking an ineligible method and adding "apply it," which was not a transformative inventive concept.

Regarding *Benson*, the Court concluded that implementing a patent-ineligible algorithm on "a general-purpose digital computer" did not supply a transformative inventive concept that would render it patent-eligible, because the process described by the algorithm could be "carried out in existing computers long in use."

As discussed above regarding *Flook*, the Court determined that a mathematical formula for computing "alarm limits" in a catalytic conversion process was a patent-ineligible abstract idea. The Court further concluded that the conventional computer implementation of the mathematical formula did not provide a transformative inventive concept. The Court further characterized *Flook* as standing "for the proposition that the prohibition against patenting abstract ideas cannot be circumvented by attempting to limit the use of the idea to a particular technological environment."

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<sup>5</sup> *Mayo* dealt with the "law of nature" exception, but the second step of that analysis is the same as the "abstract idea" exception analysis.

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Similarly, in *Bilski*, certain dependent claims limited an abstract idea of hedging investments to particular fields of use or added token post solution components. The Court characterized these dependent claims as simply limiting a patent-ineligible abstract idea "to a particular technological environment," and which is not sufficient to provide a transformative inventive concept.

*Diehr* is the only Supreme Court case in which a claim directed to an abstract idea was found to have recited sufficient elements to constitute a transformative inventive concept. In *Diehr*, the claims were directed to a computer-implemented process for curing rubber that used a well-known mathematical equation. The Court explained that the independent claims in *Diehr* were patent-eligible—not because they were computer implemented—but because the independent claims repeatedly implemented the equation using temperature data taken at a particular location within a tire mold, thereby allowing a more accurate determination of the cure time for synthetic rubber than was previously possible.

In the *CLS Bank* decision, the Court viewed this improvement in curing synthetic rubber as an improvement to an existing technological process constituting a transformative inventive concept. Although not acknowledged by the Court in *CLS Bank*, the *Diehr* Court also considered it significant that limiting the application of the mathematical formula to the specific method recited in the claim did not effectively preempt the use of the mathematical equation by others.<sup>6</sup>

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<sup>6</sup> While the concept of "preemption" played a larger part in the Court's decisions in *Mayo*, *Benson*, *Flook*, and *Bilski*, the *CLS Bank* Court only briefly acknowledged that preemption "undergirds" §101 analysis, and then focused on the two-step analysis approach from *Mayo*.

After reviewing these prior decisions, the Court concluded that the addition of generic computer components in Alice's method claims was no more than adding the words "apply it with a computer," which the Court likened to combining the ineffective addition of "apply it" in *Mayo* with the ineffective "limitation to a particular technological environment" of *Bilski*. Considering the claim elements individually, the Court concluded that each step does no more than require a generic computer to perform generic computer functions. The Court reached the same conclusion when considering the claims as an ordered combination. Thus, the Court held that the implementation of a patent-ineligible abstract idea on a generic computer fails to constitute a transformative inventive concept.

The Court rejected Alice's argument that its claims were patent-eligible because a computer "necessarily exists in the physical rather than purely conceptual realm." The Court acknowledged that computers are machines, and many computer-implemented claims are formally addressed to patent-eligible subject matter. But the Court reasoned that if computer-implementation were enough for patent eligibility, a determination of patent-eligibility would depend simply on claim drafting technique, thereby eviscerating the abstract idea exception to patent eligibility.

The Court also determined that Alice's other non-process independent claims directed to either a computer system or a computer-readable medium (*Beauregard*-type claim) were patent-ineligible for the same reasons as the process claims. Alice had conceded that the *Beauregard*-type claims would rise or fall with the method claims. Regarding the system claims, the Court determined that "none of the hardware recited by the system claims offers a meaningful limitation beyond generally linking the use of the method to a particular technological environment, that is,

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implementation via computers" (internal quotations omitted), and thus "the system claims are no different from the method claims in substance."

## B. Concurring Opinion

Justice Sotomayor authored a brief concurring opinion joined by Justices Ginsburg and Breyer agreeing that all of the method claims at issue are drawn to an abstract idea. However, the concurrence goes on to state that the three concurring justices believe that all business methods should be patent ineligible.

## II. Practical Effect of the Decision

As discussed, the Court provides no bright-line test for determining whether a claim is directed to an abstract idea in the first step of the analysis. The Court generally recognized that an idea of itself, a principle in the abstract, a fundamental truth, an original cause, and a motive were abstract ideas, but when comparing the claims to *Bilski's* claims, the Court focused almost exclusively on whether the elements of the underlying method were well-known. For example, the Court reasons that the concept of intermediated settlement is "a fundamental economic practice long prevalent in our system of commerce," and that the use of a third-party intermediary is a "building block of the modern economy." The Court thus found that intermediated settlement is an abstract idea. Similarly in *Bilski*, the Court determined that the claims were directed to a "fundamental economic practice long prevalent in our system of commerce and taught in any introductory finance class."

In view of the Court's first-step analysis, the fact that the underlying concept is well known can—at least in some cases—affect whether a claim is directed to an abstract idea. Thus,

utilizing a well-known concept in a claim may make it difficult to establish that the claim is not directed to an abstract idea, while having a novel or nonobvious underlying concept may help reduce the likelihood that the claim will be considered to be directed to an abstract idea. That being said, this distinction certainly cannot be the only criteria for determining abstractness. For example, a claim directed to a novel and non-obvious equation—by itself—would certainly constitute an abstract idea. But for claims that are not purely abstract, the fact that the underlying concept is well known may affect the analysis under the first step.

At the USPTO, many examiners continue to rely heavily on the Federal Circuit's "machine-or-transformation test" for patent-eligibility that was superseded by the Court's *Bilski* decision. This is primarily due to the fact that the USPTO's now-outdated internal guidance regarding the application of the abstract idea exception to process claims<sup>7</sup> relies heavily on *Bilski's* pronouncement that the "machine-or-transformation" test remains a "useful and important clue" and "investigative tool," and concludes that claims that satisfy that test will usually be directed to a patent-eligible application of an abstract idea. *See* 75 Fed. Reg. 43924. Further, because the Court's decision in *Bilski* only addressed process claims, the USPTO's prior internal guidance regarding the "abstract idea" exception limited its application to process claims. As such, many examiners only assert the "abstract idea" exception against process claims and will withdraw a §101 rejection of a process claim that is allegedly drawn to an abstract idea if the claim is amended so that some or all of the steps within the claim are performed by generic computer components such as a "processor" or "CPU."

<sup>7</sup> [http://www.uspto.gov/patents/law/exam/bilski\\_guidance\\_27jul2010.pdf](http://www.uspto.gov/patents/law/exam/bilski_guidance_27jul2010.pdf)

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However, *CLS Bank* repeatedly emphasizes that the addition of generic computer components does not transform a claimed patent-ineligible abstract idea into a patent-eligible application of that abstract idea. Furthermore, the Court's holding in *CLS Bank* makes clear that the abstract idea exception applies equally to process claims, apparatus claims, system claims, and *Beauregard*-type claims.

In view of the holdings in *CLS Bank*, the USPTO appears to be making some changes to its internal guidance. The "Preliminary Examination Instructions for Determining Subject Matter Eligibility in view of *Alice Corp. v. CLS Bank*" ("PEI") provides preliminary guidance to examiners for applying the analysis set forth in *CLS Bank* to claims during examination. Most notably, the PEI expressly states that the analysis should be performed on all claims. According to the PEI, however, the USPTO is—for the time being—limiting what it considers to be patent-ineligible abstract ideas to the following categories identified in *CLS Bank* as examples of abstract ideas:

- fundamental economic practices;
- certain methods of organizing human activities;
- an idea of itself; and
- mathematical relationships and formulas.

Thus, for now, it seems that the USPTO may only find claims that fall into one of these four enumerated categories satisfy the first step of the "abstract idea" analysis. Of course, the "an idea of itself" category is rather vague, was not explained further in *CLS Bank*, and thus has the potential to be broadly applied by examiners.

Even if a claim falls into one of the four categories, it could still be considered patent-eligible under §101 by the USPTO if the claim includes a transformative inventive concept. The PEI suggest three very broad categories of things that could transform an abstract idea into patent-eligible subject matter:

- improvements to another technology or technical field;
- improvements to the functioning of the computer itself; and
- meaningful limitations beyond generally linking the use of an abstract idea to a particular technological environment.

The PEI also suggest two categories of things that—without more—cannot transform an abstract idea into patent-eligible subject matter:

- adding the words "apply it" (or an equivalent) with an abstract idea, or 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 well-understood, routine and conventional activities previously known to the industry.

At this point, it is unclear (i) how quickly examiners will begin to adopt and reliably apply the PEI, (ii) to what extent examiners will continue to try and apply the outdated "machine-or-transformation" test, or (iii) how soon the USPTO will issue more detailed guidance.

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### III. Recommendations

1. Because there is no easily applied test to determine whether the concept of a claim is an "abstract idea" under the first step of the analysis, be sure to emphasize the novel and unique aspects of the underlying idea in the specification and in any arguments asserting that a claim is not directed to an abstract idea. In virtually every case where the Court determined that a claim was directed to an abstract idea, it characterized the idea as something that is "fundamental," "long prevalent," "has always existed," etc. If the idea underling a claim can be argued to be novel and nonobvious it may be less likely to be considered to be directed to an abstract idea.

In this respect, during prosecution, (i) inform the examiner of the PEI, (ii) be sure that the examiner is aware that the PEI replaces the USPTO's prior guidance based on *Bilski*, and (iii) explain (with reference to the specification and amendments, if necessary) why the claims do not fall into one of the four enumerated categories of abstract ideas in the PEI.

2. Similarly, because there is no easily applied test to determine whether a claim contains an "inventive concept" sufficient to "transform" an abstract idea into a patent-eligible application of that idea, when necessary, the specification, claims, and arguments during prosecution should focus on the contribution that the claimed invention makes to the relevant technical field. As discussed above, the Court in *CLS Bank* acknowledged that making an improvement to an existing technological process is a transformative inventive concept resulting in a patent-eligible application of the abstract idea.

This concept is recognized in the PEI, which identify "improvements in another technology or technical field" as a transformative inventive concept. Further, for systems and

methods that improve the working of a computer itself or even allow a generic computer to perform a process more efficiently with improved software, applicants can argue that the claims effect "improvements to the functioning of the computer itself" under the second category identified in the PEI. If neither of these categories apply, explain that the claim includes other "meaningful limitations" under the broad third category identified in the PEI.

One approach to computer-implemented inventions is to identify the input information and output information, and describe how the output information improves the relevant technological process. The *CLS Bank* decision specifically identified the fact that the invention in *Diehr* utilized a "thermocouple" to record constant temperature readings inside the rubber mold and a known equation to more accurately determine a cure time for synthetic rubber as part of its transformative inventive concept.<sup>8</sup> Thus, new or novel input and/or output information can help establish a transformative inventive concept. In many cases, useful output information can be characterized as "an improvement to another technology or technical field" in accordance with the first category of transformative inventive concepts identified in the PEI. This strategy can be particularly important where the only structural components of the invention are generic computer components, *e.g.*, a processor and a memory.

3. Avoid resorting to one or more of the strategies that were confirmed by the Court to be ineffective to transform a patent-ineligible abstract idea into a patent-eligible application of

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<sup>8</sup> Notably, the independent claims at issue in *Diehr* did not even recite the thermocouple—they only recited determining the temperature at a particular location within the mold.

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the abstract idea. Specifically, avoid claims that can be characterized as:

- a patent-ineligible idea or phenomena and the step of "apply it" (e.g., *Mayo*);
- the mere limiting of a patent-ineligible abstract idea to a particular technological environment (e.g., *Bilski*); or
- the generic computer implementation of a patent-ineligible abstract idea (e.g., *Flook* and *CLS Bank*).

The first and third categories above are the same categories that are stated another way in the PEI. Be aware that simply adding generic computer hardware in response to a §101 rejection based on the currently-examiner-preferred "machine-or-transformation test" could be argued to fall within the third category above. Thus, consider explaining why the claim is either not directed to an abstract idea or contains a transformative inventive concept.

4. Particularly for patentees in the software, financial, and business management industries, consider reviewing your important patents for claims that may be adversely affected by this decision, to determine whether those patents should be reissued to add claims that are consistent with the holdings in *CLS Bank*.<sup>9</sup> This review should be done soon to maximize the

chance of adding claims that might be considered broadening within the two-year-from-issuance window for filing a broadening reissue application. However, if the two-year broadening deadline is not approaching, it may be more productive to defer this analysis until the USPTO issues more detailed guidance to examiners in view of the *CLS Bank* decision.

5. Consider reviewing pending applications to determine whether claims should be added/amended to avoid provoking a §101 patent-ineligibility rejection.

6. Immediately review any claims being asserted in a litigation or otherwise to determine whether they are directed to patent-eligible subject matter under *CLS Bank*. In particular, review system claims, apparatus claims, and *Beauregard* claims, which many believed were not subject to "abstract idea" exception following *Bilski*. Of course, also consider whether the patentee could use reissue to obtain patent-eligible claims and whether reissue may impact the scope of the claims and/or available damages (i.e., check intervening rights).

7. Consider and weigh options for invalidating asserted claims under §101, including covered business method post-grant review, post-grant review (for patents having or having had a claim with a filing date on or after March 16, 2013), and a declaratory judgment action. While patent-ineligibility cannot be made the basis for a reexamination request, a USPTO examiner could raise the issue during a reexamination based on the PEI.

8. For certain internally-utilized, non-public business methods involving "abstract ideas" that cannot be valuably claimed as patent-eligible subject matter and that are not likely to be independently discovered or disclosed by a third-party, consider protecting such discoveries as

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<sup>9</sup> Following the Federal Circuit decision in *In re Tanaka*, 640 F.3d 1246 (Fed. Cir. 2011), narrowed claims could be added without changing existing claims in a reissue application. However, the existing and narrowed claims would both be subjected to a complete examination during reissue. Added claims may also be subject to intervening rights. See our April 29, 2011 Special Report, "Federal Circuit Approves Reissue Applications That Only Add Dependent Claims To An Issued Patent."



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trade secrets until patentable applications of the discoveries are developed that can be argued to transform the abstract idea into a patent-eligible application of the abstract idea.

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