I. Summary

On June 28, 2010, the U.S. Supreme Court issued its long-awaited decision in *Bilski v. Kappos* on the patent-eligibility of business methods and the test for patentable subject matter of process claims. The Supreme Court Justices were much divided on the issues, and the decision is very narrowly framed:

- The Court unanimously agreed that Bilski's claims are unpatentable because they define an abstract idea, but the Court refused to restrict the analysis of patent-eligible process claims to the so-called "machine-or-transformation test."
- A majority of the Justices disavowed any approval of any of the Federal Circuit's earlier tests, including the *State Street Bank"useful, concrete, and tangible result" test."
- A majority of the Justices also held that business methods are not categorically excluded from patent protection.

Missing from the decision is any useful guidance clarifying either what business methods might be patentable, or more generally, what distinguishes a patentable "process" from unpatentable "laws of nature, natural phenomena, and abstract ideas."

Justice Kennedy wrote the majority opinion, joined by Justices Roberts, Thomas, and Alito. Justice Scalia joined Justice Kennedy's opinion except for Parts II-B-2 and II-C-2, rendering those portions of Justice Kennedy's opinion a four-member plurality, rather than the majority needed to establish controlling law.¹

Justice Stevens wrote a concurring opinion and was joined by Justices Ginsburg, Breyer and Sotomayor. Justice Stevens argued against the patentability of business method patents by tracing the historical roots of patent law and by interpreting the intention of Congress when enacting the Patent Act of 1952 and First Inventor Defense Act of 1999.

Justice Breyer also wrote a concurring opinion, which also argued against the patentability of business methods and highlighted several points of agreement between the majority and concurring opinions. Justice Scalia joined in the portion of Justice Breyer's opinion highlighting the points of agreement among the opinions.

II. Background

A. The Underlying Facts and Issue

Bilski's claims are directed to a method of hedging risk in the field of commodity trading by executing various transactions based on the fluctuating price of a particular commodity.

¹ 561 U.S. ___ (2010).


³ The portions of the opinion not holding the force of law will be identified in the "Majority Opinion" section below.
Claim 1 recites:

A method for managing the consumption risk costs of a commodity sold by a commodity provider at a fixed price comprising the steps of:

(a) initiating a series of transactions between said commodity provider and consumers of said commodity wherein said consumers purchase said commodity at a fixed rate based upon historical averages, said fixed rate corresponding to a risk position of said consumer;

(b) identifying market participants for said commodity having a counter-risk position to said consumers; and

(c) initiating a series of transactions between said commodity provider and said market participants at a second fixed rate such that said series of market participant transactions balances the risk position of said series of consumer transactions.

Dependent claim 4 recites a mathematical equation, and other dependent claims limit the method to commodities and energy markets, and include limitations relating to use of well-known random analysis techniques to help establish some of the inputs to the equation.

The claims are not limited to transactions involving the commodity itself, but also extend to intangible legal rights such as options to buy the commodity. The claims are not tied to any "computer-readable medium," nor do they require any physical structure in order to implement the process.4

The issue is whether Bilski's claims comply with the requirements of 35 U.S.C. §101 by reciting a patent-eligible "process" within the meaning of §100(b). A secondary issue is whether business method claims, such as Bilski's, are "process" claims entitled to patent protection.

B. The Board of Appeals Decision

In the Patent Office, the Board of Patent Appeals and Interferences (Board) affirmed the Examiner's rejection of all claims as nonstatutory. The Board held that process claims need not recite a specific apparatus in order to comply with the requirements of §101 if the claims recite "a transformation of physical subject matter from one state to another." The Board held that the claims at issue are directed to the transformation of "non-physical financial risks and legal liabilities of the commodity provider, the consumer, and the market participants," and thus, the claims "preempt[] any and every possible way of performing the steps of the [claimed process], by human or by any kind of machine or by any combination thereof," and therefore are nonstatutory.

The Board also held that the claimed invention did not produce any "useful, concrete and tangible result," citing State Street.

C. Federal Circuit Decision

On appeal, the Federal Circuit affirmed the Board's holding in a split en banc decision.5 The majority Federal Circuit opinion, written by then Chief Judge Michel, held that the machine-or-transformation test is the sole governing test for determining patent eligibility of process claims.6 That is, the Federal Circuit majority held that process claims must: (1) be tied to a particular machine or apparatus; or (2) transform a particular article into a different state or thing.7

The Federal Circuit majority adopted the machine-or-transformation test primarily based on the majority's reading of three Supreme Court cases, Benson, Flook and Diehr.8 Starting from the long-established principle that there are three exceptions to what constitutes a patent-eligible "process"--"laws of nature, natural phenomena, [or]  

4 Applicants admitted during prosecution that the claimed method was not limited to use within a computer or tied to any other tangible apparatus.

5 In re Bilski, 545 F.3d 943 (Fed. Cir. 2008) (en banc).
6 Id. at 956.
7 Id.
abstract ideas," these Supreme Court cases applied three doctrines to determine whether a claimed process falls within one of the three patent-eligible exceptions. Under the core preemption doctrine, the question is the scope of a claim. If the practical effect of a claim would be to pre-empt substantially all uses of a fundamental principle, the claim is not drawn to patent-eligible subject matter. However, if a claim is drawn to an "application" of a fundamental principle to a known structure or process, that claim may be patent-eligible.

The majority held that the Supreme Court had established the machine-or-transformation test as the definitive test for determining whether a process claim is tailored narrowly enough to encompass only a particular application of a fundamental principle. Under this test, a claimed process is patent-eligible under §101 if it is tied to a particular machine or apparatus, or it transforms a particular article into a different state or thing.\(^9\)

Under one corollary doctrine of the machine-or-transformation test, mere field-of-use limitations are generally insufficient to render an otherwise ineligible process claim patent-eligible. Under another corollary doctrine, "insignificant postsolution activity will not transform an unpatentable principle into a patentable process." (As the majority noted, the Federal Circuit has extended the concept of postsolution activity to include any insignificant extra-solution activity, such as an interim simple recording step or presolution data gathering, regardless of where and when it appears in the claimed process).\(^10\)

With regard to the claims at issue, the majority held that the claimed process does not constitute patentable subject matter for two reasons. First, the claims admittedly are not tied to any machine.\(^12\) Second, the claims do not involve any physical transformation of a tangible article, nor do the claims recite data representative of any physical object or substance.\(^13\) The claimed process merely involves mental and mathematical processes of identifying transactions that would adequately hedge risk.

Therefore, the majority opinion affirmed the Board’s holding.

III. The Supreme Court's Decision

A. Majority Opinion

1. Machine-or-Transformation Test

In the sections of Justice Kennedy's opinion joined by a majority of the Justices, the Court dismissed Bilski's claims without adopting "any categorical rules that might have wide-ranging and unforeseen impacts." Instead, the court held the claims unpatentable on the narrow basis of being attempts to claim unpatentable abstract ideas according to the Court's decisions in Benson, Flook, and Diehr.\(^14\)

2. Benson, Flook and Diehr

Aside from the question of whether Benson, Flook and Diehr established the machine-or-transformation test as a definitive test, the Court's summary of these cases is similar to the summary in the Federal Circuit's majority opinion. The discussion of Benson in the two decisions is essentially the same. The Court described Flook as considering the "next logical step after Benson," and, similarly to the Federal Circuit, as standing for the proposition that the prohibition against patenting abstract ideas "cannot be circumvented by attempting to limit the use of the formula to a particular technological environment" or adding "insignificant postsolution activity," citing Diehr's explanation of Flook.

\(^9\) Bilski, 545 F.3d at 952, citing Diehr, 450 U.S. at 175. The Federal Circuit referred to these three exceptions collectively as "fundamental principles." As noted by the Federal Circuit, Benson refers to "laws of nature, natural phenomena, and abstract ideas." Bilski, 545 F.3d at 952.

\(^10\) Under Benson, tying a claimed process to a broadly defined machine that performs the process will not suffice if the claimed process would have no uses other than those covered by the claim. (In Benson, claims directed to a process for converting numerals in binary-coded decimal (BCD) format to pure binary format were held unpatentable even though the claims were limited to practice of the process via an algorithm programmed on a digital computer. Benson, 409 U.S. at 65)

\(^11\) Bilski, 545 F.3d at 957.

\(^12\) Id. at 962.

\(^13\) Id. at 963-964.

\(^14\) All members of the Court agreed that the claims at issue fall outside of §101 because they claim an abstract idea.
The Court described Diehr as establishing a limitation on the principles articulated in Benson and Flook, pointing to the same language in Diehr as the Federal Circuit—“an application of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection.” The Court, like the Federal Circuit, also noted that Diehr (i) emphasized the need to consider the invention as a whole, rather than dissecting the claims into old and new elements and then ignoring the presence of the old elements in the analysis; and (ii) concluded that because the claim at issue was not an attempt to patent a mathematical formula, but rather was "an industrial process for the molding of rubber products," the claim fell within §101’s patentable subject matter.

3. Application to Bilski's Claims

According to the Court, in light of the foregoing precedents, it is "clear" that Bilski's claims are not directed to a patentable "process." In the Court's view:

The concept of hedging, described in claim 1 and reduced to a mathematical formula in claim 4, is an unpatentable abstract idea, just like the algorithms at issue in Benson and Flook. Allowing petitioners to patent risk hedging would preempt use of this approach in all fields, and would effectively grant a monopoly over an abstract idea.

The Court dismissed Bilski's remaining claims as limiting an abstract idea to one field of use, or adding token postsolution components, which do not make the concept patentable according to the principles established in Flook.15

4. Refusal to Mandate a Bright-Line Test

The Court rejected the Federal Circuit's reading of Benson, Flook, and Diehr as establishing the machine-or-transformation test as the definitive test for determining patent eligibility of process claims. Citing Diehr, the Court cautioned that "courts should not read into the patent laws limitations and conditions which the legislature has not expressed."16 Applying rules of textual statutory construction, the Court concluded that neither the language of the statute nor the "ordinary, contemporary, common meaning" of "process" places any requirements for a machine tie or a transformative step to be claimed in order for a process claim to be patent-eligible.17

The Court relegated the machine-or-transformation test to the status of a "useful and important clue, and investigative tool, for determining whether some claimed inventions are processes under §101." As noted above, the Court expressly limited its holding to the narrow ground that the claims are not patent-eligible because they claim an abstract idea, rather than adopting any categorical rules "that might have wide-ranging and unforeseen impacts."18

In rejecting the machine-or-transformation test as the sole test for determining whether a claimed process is patent-eligible, the Court also made clear that the Court was not endorsing interpretations of §101 that the Federal Circuit has used in the past, specifically citing the State St.

15 The Court observed that the additional limitations in these claims "add even less to the underlying abstract principle than the invention in Flook did, for the Flook invention was at least directed to the narrower domain of signaling dangers in operating a catalytic converter."

16 Diehr, 450 U.S. at 182 (internal quotations omitted).

17 Id.

18 In Section B.2 of Justice Kennedy's opinion, which was not joined by a majority of the Court, Justice Kennedy further opined that the machine-or-transformation test "may well provide a sufficient basis for evaluating processes similar to those in the Industrial Age—for example inventions grounded in a physical or other tangible form"; but that the test "would create uncertainty as to the patentability of software, advanced diagnostic medicine techniques, and inventions based on linear programming, data compression, and the manipulation of digital signals." Justice Kennedy further cautioned that the Court "is not commenting on the patentability of any particular invention, let alone holding that any of the above-mentioned technologies from the Information Age should or should not receive patent protection," because "[w]ith ever more people trying to innovate and thus seeking patent protections for their inventions, the patent law faces a great challenge in striking the balance between protecting inventors and not granting monopolies over procedures or steps that others would discover by independent, creative application of general principles."
"useful, concrete and tangible result" test as an example. However, the Court also emphasized that it was not foreclosing the Federal Circuit's development of other limiting criteria that "further the purposes of the Patent Act and are not inconsistent with its text."

5. Business Methods May Still Be Patentable

Relying on a dictionary definition of "method" and §§273(b)(1) and 273(a)(3) of the patent statute, the five-member majority of the Court also refused to categorically deny business methods from patent protection.20

However, the Court majority offered no guidance whatever as to what methods of doing business might be patent-eligible. Indeed, the Court majority offered no meaningful guidance to clarify what distinguishes a patentable "process" from unpatentable "laws of nature, natural phenomena, and abstract ideas."

B. Justice Stevens' Concurrence

Justice Stevens, joined by Justices Ginsburg, Breyer, and Sotomayor, argued that business methods are not patentable. Justice Stevens argued against the patentability of business method patents by tracing the historical roots of patent law and by interpreting the intention of Congress when enacting the Patent Act of 1952 and First Inventor Defense Act of 1999. Under this historical perspective, Stevens argued that a business method is not a "process" within the meaning of §101.

Justice Stevens further criticized the majority opinion for arguing in favor of business method patents based on §273. Stevensreasoned that Congress would have explicitly amended §101 to include business methods rather than enacting §273 to implicitly acknowledge the existence of such patents: "we should be loathe to conclude that Congress effectively amended §101 without saying so clearly." Although a statute is to be read as a whole, Justice Stevens opined that it is improper to interpret one statute (the Patent Act of 1952) as giving effect to a different statute (the First Inventor Defense Act of 1999).

Justice Stevens' concurrence also criticized the majority opinion for its lack of analysis with regard to how Bilski's claims are considered "abstract ideas." According to Justice Stevens, the majority applied conclusory reasoning and did not sufficiently analyze the claims to provide any reasonable basis for its conclusion. As a result, Justice Stevens discounted the benefit of the majority opinion: "[t]he Court, in sum, never provides a satisfying account of what constitutes an unpatentable abstract idea … This mode of analysis (or lack thereof) may have led to the correct outcome in this case, but it also means that the Court's musings on this issue stand for very little."

Justice Stevens argued that interpreting the term "process" according to the "ordinary, contemporary, common meaning" of the word rendered the test for patent-eligibility of process claims vague and without boundaries. Justice Stevens quipped that the majority opinion's method of interpreting "process" is itself a patent-eligible process under the majority's reasoning.

C. Justice Breyer's Concurrence

Although joining Justice Stevens' opinion in full, Justice Breyer wrote a separate concurrence. Joined in part by Justice Scalia, Justice Breyer wrote separately "in order to highlight the substantial agreement among many Members of the Court on many of the fundamental issues of patent law raised by this case." Justice Breyer cited four points on which the Kennedy majority and Stevens concurrence agreed:

(1) "although the text of §101 is broad, it is not without limit";

(2) "the so-called 'machine-or-transformation test' has thus repeatedly helped the Court to determine what is a patentable process";

As noted below in connection with Justice Breyer's concurrence, a majority of the Justices rejected the "useful, concrete and tangible result" test as an appropriate patent-eligibility test.

Under §273(b)(1), an alleged infringer can assert the defense of "prior use" against a patented method. For purposes of this defense, §273(a)(3) defines method as "a method of doing or conducting business." The majority opinion held that "the statute itself acknowledges that there may be business method patents" by providing for a defense to infringement of business methods, albeit without directly clarifying §100(b) itself to specifically list business methods among the list of patentable "methods." As discussed below, the four-member Stevens concurrence argued that business methods are not patentable.
(3) "while the machine-or-transformation test has always been a 'useful and important clue,' it has never been the 'sole test' for determining patentability"; and

(4) "although the machine-or-transformation test is not the only test for patentability, this by no means indicates that anything which produces a 'useful, concrete, and tangible result' is patentable."

In his fourth point above, Justice Breyer highlighted the fact that five justices (the four-member Stevens' concurrence and, for purposes of this section only, Justice Scalia) ruled out the "useful, concrete, and tangible result" test from State Street. 21

IV. Discussion

For the moment, at least, the Supreme Court has left open the door for patent protection being available for some business methods. However, it is unclear both whether the door will stay open, and if so, how wide will be the opening. In this regard, the Court did close the door to business method claims like those at issue in the case. The Court's conclusory analysis of why Bilski's claims constitute attempts to claim abstract ideas, preempt fields of use, or merely add token postsolution components, provide little insight regarding how to make these determinations in different contexts, much less how to draft process claims to avoid these issues. 22

The Bilski decision can also be viewed as endorsing the prohibitions against preempting either all practical uses of a process, or a field of use, as well as the need for more than insignificant postsolution activity to escape preemption, as set forth in the Benson, Flook, and Diehr trilogy. These doctrines present potentially difficult issues with regard to claiming business and non-business method "Information Age" processes, such as the exemplary processes referenced in Justice Kennedy's opinion--software, advanced diagnostic medicine techniques, and inventions based on linear programming, data compression, and the manipulation of digital signals.

In this regard, tying the claimed process to performance by a "processor" moots the issue of whether the claim encompasses mental steps, but such a broadly recited machine tie does not necessarily resolve potential preemption issues.

The possible impact of Bilski on so-called "Beauregard" claims is also uncertain. (Beauregard claims recite a computer program in physical form, for example "a computer-readable medium embedded with a computer program, the program comprising the steps of … .") 23 Bilski arguably is not applicable to Beauregard claims, because Bilski concerns only process claims, and Beauregard claims recite a manufacture or machine, not a process. However, the prohibition against patenting abstract ideas and the corollary preemption doctrines are not limited to processes, and Bilski does not resolve the question of whether the practical effect of claiming an otherwise non-patent eligible software process in its recorded form preempts the process. 24

The Bilski decision and analysis of Bilski's claims also provide no meaningful guidance regarding drug administration, medical diagnosis and treatment and other medical processes.

Looking to the future, the USPTO has already released an internal memorandum instructing Examiners how to examine process claims post-Bilski. 25 The memorandum instructs Examiners to continue using the machine-or-transformation test: "if a claimed method meets the machine-or-transformation test, the method is likely patent-

21 149 F.3d at 1373.

22 There is also an arguable anomaly in the Court's analysis. On the one hand, the Court emphasized the general principal that the invention as a whole must be considered, rather than dissecting the claims into old and new elements and then ignoring the presence of the old elements in the analysis. On the other hand, in evaluating Bilski's claims, the Court's analysis of why the claims merely recite an abstract idea emphasizes that both hedging and the random-analysis techniques recited in some of the claims were well-known.

23 In re Nuijten, 500 F.3d 1346 (Fed. Cir. 2007); but see Nuijten, 500 F.3d 1346, Linn, J. (concurring in part and dissenting in part) "To allow a patent on a storage medium containing the signal but to deny one to the real underlying invention 'make[s] the determination of patentable subject matter depend simply on the draftman's art' in the sense criticized by the Supreme Court."

24 A copy of the USPTO memorandum is attached to this Special Report.
eligible under section 101 unless there is a clear indication that the method is directed to an abstract idea." If a process claim does not comply with the machine-or-transformation test and is rejected as merely an "abstract idea," Applicants can still overcome a §101 rejection if Applicants can successfully argue that the claim is not drawn to an abstract idea.

It is not clear at this time whether the "unless there is a clear indication that a method is directed to an abstract idea" caveat signals a departure from the USPTO's prior practice in applying the machine-or-transformation test. It is also not clear at this time what, if any, arguments that an applicant could successfully make if a broadly-worded claim does not comply with the machine-or-transformation test.

In addition, the Federal Circuit will soon have the opportunity to revisit §101 in the context of medical processes. The day after Bilski was decided, the Supreme Court remanded two such cases back to the Federal Circuit for reconsideration in light of Bilski. 26 In addition, a third medical process case was recently appealed to the Federal Circuit. 27

In Prometheus, the Federal Circuit held that the diagnostic claim complied with the transformation prong of the machine or transformation test because "[t]he transformation is of the human body following administration of a drug and the various chemical and physical changes of the drug's metabolites that enable their concentrations to be determined." 28

In Classen, the Federal Circuit affirmed the invalidity of claims directed to a method of determining whether an immunization schedule is effective in treating a chronic immune-related disorder. The Court held the claims invalid on the basis that the claims at issue did not claim a specific technical process, but rather a "general inquiry" into the relationship between an immunization schedule and the incidence of chronic disorders.


27Association for Molecular Pathology v. Myriad Genetics, No. 09-Civ-4515 (S.D.N.Y.).

28Prometheus, 581 F.3d at 1336.
MEMORANDUM

DATE:       June 28, 2010

TO:         Patent Examining Corps

FROM:       Robert W. Bahr
            Acting Associate Commissioner
            For Patent Examination Policy

SUBJECT:    Supreme Court Decision in Bilski v. Kappos

Today, the Supreme Court affirmed the USPTO’s decision that the claims in the patent application at issue in *Bilski v. Kappos* are not patent-eligible under 35 U.S.C. § 101. The purpose of this memorandum is to provide interim guidance to the Patent Examining Corps.

The Supreme Court confirmed that section 101 “specifies four independent categories of inventions or discoveries that are eligible for protection: processes, machines, manufactures, and compositions of matter.” The Supreme Court also confirmed that, although the text of section 101 is broad, it is not without limit in that its “precedents provide three specific exceptions to § 101’s broad patent-eligibility principles, ‘laws of nature, physical phenomena, and abstract ideas.’”

The Supreme Court decided that under its precedents (*Benson, Flook, Diehr*) the claims in *Bilski* are not patent-eligible processes under section 101 because they are an attempt to patent abstract ideas.

The Supreme Court indicated that the machine-or-transformation test is not the sole test for patent-eligibility of processes under 35 U.S.C. § 101. However, the Supreme Court indicated that its “precedents establish that the machine-or-transformation test is a useful and important clue, an investigative tool, for determining whether some claimed inventions are processes under § 101.”

Significantly, the Supreme Court also indicated that a business method is, at least in some circumstances, eligible for patenting under section 101.

The Supreme Court indicated that the patent-eligibility inquiry under section 101 is only a threshold inquiry, and that a claimed invention must also satisfy the Patent Act’s requirements that it be novel, nonobvious, and fully and particularly described.
Examiners should continue to examine patent applications for compliance with section 101 using the existing guidance concerning the machine-or-transformation test as a tool for determining whether the claimed invention is a process under section 101. If a claimed method meets the machine-or-transformation test, the method is likely patent-eligible under section 101 unless there is a clear indication that the method is directed to an abstract idea. If a claimed method does not meet the machine-or-transformation test, the examiner should reject the claim under section 101 unless there is a clear indication that the method is not directed to an abstract idea. If a claim is rejected under section 101 on the basis that it is drawn to an abstract idea, the applicant then has the opportunity to explain why the claimed method is not drawn to an abstract idea.

The USPTO is reviewing the decision in *Bilski* and will be developing further guidance on patent subject matter eligibility under 35 U.S.C. § 101.