

BILSKI and the Patentability of Software and Business Methods:
A Guide For The Perplexed

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(a) The Take Home Message:

Business methods are patentable. Abstract ideas are not patentable.

The author looks at the court decisions, Patent Office reactions and his own experiences dealing with patent examiners to offer practical drafting tips to make sure that patent application claims don't fall into the non-patentable category of "abstract ideas".

(b) Introduction:

On June 28, 2010, the US Supreme Court issued its much anticipated decision in the *Bilski*¹ case. This decision was supposed to determine whether or not business methods (and software and other high-tech methods) were patentable.

The decision was a 5/4 split holding that *some business methods were patentable*, but not Mr. Bilski's. Within a few short hours, many law firms analyzed the decision, and rushed to send out their opinions. The theme running through all these email blasts was that there is still no way to determine whether and when particular subject matter was patentable, and that nothing was really resolved by the decision.

I would disagree. In my opinion, there are important insights we can discern from the decision itself, from the official reaction from the Patent Office and from our own experiences with patent examiners over the past few months.

(c) The Bilski Patent Office And Lower Court Decisions:

Mr. Bilski sought to get patent protection for a business method of hedging against risk in a commodities trading market. The initial patent examiner rejected *Bilski's* claims. The Board of Patent Appeals agreed with the Examiner.

Bilski then appealed to the Federal Circuit which overturned precedent to hold that: a process may be patentable if: (1) "it is *typed to a particular machine or apparatus*", or (2) "it *transforms a particular article into a different state or thing*". The Federal Court then went on to state that this "machine or transformation" test is the sole test to determine if a process may be patented.

¹ Bilski v. Kappos 561 U.S. ____ (2010).

(d) The Supreme Court Majority Decision:

Bilski next appealed to the US Supreme Court. All nine Supreme Court judges agreed that *Bilski's* particular method claims were not patentable. However, the case was a 5/4 split as to how patent-eligibility was to be determined, as follows.

Justice Kennedy writing for the majority *endorsed the machine-or-transformation test* holding that it was a “useful and important clue or investigative tool”. Importantly however, he also held that the machine-or-transformation test was “*not the sole test*” for determining whether a process is patent eligible.

Justice Kennedy referred specifically to computer programs and warned that reliance solely on the machine or transformation test could “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”.

But what other test(s) should we use if the machine or transformation test is not the sole test of patent eligibility? Justice Kennedy only remarks: “Patent law faces a great challenge in striking the balance between protecting inventors and not granting monopolies ...[However]... Nothing in this opinion should be read to take a position on where that balance ought to be struck.”

In ruling on *Bilski's* claims, Justice Kennedy emphasized that the only things that are statutorily barred from patentability are “laws of nature”, “physical phenomena” and “abstract ideas”. He also confirmed that “at least some” business methods were indeed patentable. Lastly, he reminded us that the patent-eligibility test is only a threshold test. To be patentable, a process must also be new and not obvious. In addition, it must be “fully and particularly” described in the patent application itself.

The court held that *Bilski's claims were not patentable because they were directed to an “abstract idea”*. Interestingly, all nine members of the Supreme Court agreed that Bilski's claims were directed to an “abstract idea”.

Because Bilski's claims were rejected as being an unpatentable abstract idea, the majority of the court then held that it need not further define what constitutes a patentable process. This is where most commentators feel that the decision comes up short since the court is basically saying that there are other tests of patent eligibility, but we're leaving the development of those tests up to the Federal Circuit. Does this mean that nothing meaningful was solved or clarified by the Supreme Court? I don't think so.

Bilski's claims were rejected as being directed to an "abstract idea". So what does the Supreme Court say about what constitutes an abstract idea? The court refers in detail to several "guideposts" being the *Benson*², *Flook*³ and *Diehr*⁴ cases. What do these three cases tell us? *Benson* and *Flook* both held that you couldn't patent a mathematical formula. *Diehr* allowed the patenting of a method in which only some of the method steps were done by a mathematical formulae in a computer. *Diehr's* method was held to be patentable because it was "related to an industrial process".

The Supreme Court rejected Bilski's claims, stating that they simply reduced his invention to a mathematical formula. In this regard, the court stated that: "Allowing petitioners to patent risk hedging would pre-empt use of this approach in all fields, and would effectively grant a monopoly over an abstract idea".

Importantly, however, the court stated that: "Hedging is a fundamental economic practice that is taught in any introductory finance class" and that Bilski's claims merely used "well-known random analysis techniques to help establish some of the inputs to the equation". Although these comments (in my opinion) seem to speak more to the novelty and obviousness of the invention, they are very telling in that they show how the court viewed the subject matter of this type of invention. Specifically, *the court seems to favor* technologies like: "**software**, advanced *diagnostic medicine* techniques, and inventions based on linear programming, data compression, and the *manipulation of digital signals*" as fields of technology that may require the Federal Circuit to go beyond the machine or transformation test in determining patent eligibility.

(e) The Dissenting Opinion:

The four dissenting judges all concluded that business methods were not patentable at all; and they made their disdain for business method patents be known. They made a number of very strong anti-patent statements, including: "Many have expressed serious doubts about whether patents are necessary to encourage business innovation", and "If business methods could be patented, than many business decisions would live in a constant state of fear of litigation".

Would the above statements ever be made about traditional method patents? Most likely not. Therefore, in my opinion, *these dissenting judges clearly saw a very abrupt line between traditional method patents and business method patents*. But is there really such a clear distinction? For example, are software and medical diagnoses method claims "business" methods, or are they just "regular" method claims? Is there even such a distinction? The dissenting judges may well have viewed software methods as being different from pure "business" methods. However, software is really just methods of moving 1s and 0s on a data storage media. Where is the line between software and pure business methods to be set? There is no discussion of "software" per se in the dissent.

² *Gottschalk v. Benson*, 409 U.S. 63 (1972).

³ *Parker v. Flook*, 437 U.S. 584 (1978).

⁴ *Diamond v. Diehr* 450 U.S. 175 (1981).

(f) Patent Office Reaction To Bilski:

The Patent Office was well prepared for this Supreme Court decision. Within hours of the decision, the Patent Office sent a memo to its examiners telling them:

First - there are four categories of patentable subject matter (being “processes, machines, manufactures, and compositions of matter”) and three categories of non-patentable subject matter (being “laws of nature, physical phenomena, and abstract ideas”).

Second - having patent-eligible subject matter is only a threshold test. The invention must still be “novel, nonobvious and fully and particularly described” for the inventor to get a patent.

Third – (and most importantly) the memo instructed the examiners to examine cases as follows:

- “If the claimed method meets the machine or transformation test, the method is likely patent-eligible unless there is a clear indication that the method is directed to an abstract idea.

- If the claimed method does not meet the machine or transformation test, the claim should be rejected unless there is a clear indication that the method is not directed to an abstract idea.”

- “If the claim is rejected 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.”

Basically, this memo told the Examiners to *continue to use the machine or transformation test*. However, now it adds, “*if an invention does not meet the test, it should be rejected unless it clearly does not claim an abstract idea.*”

Thus, it appears the Patent Office is trying to “rescue” claims that do not meet the machine-or-transformation test, but are not mere abstract ideas either. *This approach will likely save a lot of existing software patent applications from being found to be non-patentable.*

On July 27, 2010, the Patent Office then released a much more detailed guidance policy⁵ for its examiners. Basically, this guidance policy lists factors to consider to determine whether a claim is directed to an abstract idea. [See: http://www.uspto.gov/patents/announce/bilski_qrs.pdf] Importantly, the Patent Office seems to be looking for whether the abstract idea “*has been practically applied*”. The guidance policy also specifically warns against trying to claim things like economic practices, legal relationships, mental activity (such as observing or evaluating), interpersonal relations, teaching, and exercising.

⁵ http://www.uspto.gov/patents/announce/bilski_guidance.jsp

(g) My Own Experiences With Patent Examiners:

Over the past few months, I have noticed a change in how Examiners are examining software method patent claims. For the most part, these examiners have been loosening their requirements. Most importantly, it is generally not necessary to find the word “computer” or “processor” in the specification to prove to the examiner that the software invention is computer based. Examiners now know a computer when they see one. We generally do not have to “prove” that a software or Internet-based invention is done on a computer. This is good.

In addition, we are generally not required to explicitly claim the method being carried out within specific computer structures or systems. However, the reaction of the examiners has not been uniform, and some examiners still do require this language in the claims.

Moreover, some examiners do specifically want to see claims written such that the invention is “tangible” or “non-transitory”. Basically, this means setting forth that the invention is not a series of computer instructions residing in an electronic signal, but instead is a series of computer instructions residing in a physical storage medium (e.g.: software residing on a computer disk or in computer memory).

(h) Where Do We Go From Here?

First, let’s summarize what has the Supreme Court told us:

1. **Business methods are patentable.**
2. The **machine or transformation test is still valid** (and the only sure test for now).
3. The **machine or transformation test is not the only test out there.** The previous “useful, concrete and tangible result” test isn’t dead yet, and may receive approval in future by the Federal Circuit as well.
4. There are certain **technologies the court seems to favor**, being “**software, advanced diagnostic medicine techniques**, and inventions based on linear programming, data compression, and the **manipulation of digital signals**”. These fields of technology may require the Federal Circuit to go beyond the machine or transformation test in determining patent eligibility.
5. There are certain **technologies the court seems to dislike.** All of the nine judges thought Bilski’s claims were dealing with an abstract idea. No one liked these claims to “hedging bets” or “economic theories”. Additionally, Bilski had **no physical structure** in his claims. His claims **didn’t recite any machines or (more importantly) any way in which a machine could be programmed to perform the method steps.** That was a death sentence.

6. **You can't patent an abstract idea.** You never could patent an abstract idea. There is nothing revolutionary about this part of the decision. However, the court (and the Patent Office) spends a lot of effort talking about what now constitutes an abstract idea.

7. **You can't patent "math".** However, you may be able to patent a process in which only **some of the steps are "math"** and the invention is **"related to an industrial process"**.

Second, what has the Patent Office told us?:

1. The Patent Office Guidance Memo Saves The Day For Most Software And High-Tech Patents: In my opinion, the most important part of the Patent Office Memo to Examiners is the statement that: *"If the claimed method does not meet the machine or transformation test, the claim should be rejected **unless there is a clear indication that the method is not directed to an abstract idea.**"* It appears that this statement provides an examiner with the ability to look at a complex software or medical diagnostic claims and realize that the method involves much more than a simple abstract idea. In my experience, ideas tend to be viewed as being "abstract" when they are either: (a) too simple, or (b) too vague. A properly written software or medical diagnostic method claim should be neither of these.

Finally, here are some claim drafting tips of mine on how to meet the machine or transformation test and make it clear that the claim is not directed to an abstract idea:

1. Make sure you are drafting method claims that are tied to **real physical objects**.
2. Draft claims that clearly show **how physical objects are transformed from one state to another**. (If your claims involve steps of manipulating data, be sure to clearly claim how that data manipulation transforms one physical object or thing into another.)
3. Don't just recite "computer" or "processor" in the claim. Instead, show how the computer actually accomplishes the invention. ***Explain what the computer or processor actually does.***
4. **Never write claims to abstract ideas like** "managing risks", "structuring legal relationships", "setting up organizational relationships", etc. These claims are typically weak as being vague or indefinite anyway.
5. If your claimed process can be **performed in a human mind** (because it's not tied to a machine or transformation of an article into a different state or thing), then it's **just not patentable**.
6. **Claim an apparatus as well.** Remember, *Bilski* only deals with method claims.
7. Business methods should be claimed in a way that focuses on the improvements made in the business field (e.g.: in terms of computer systems, organizational structures).