MORRIS, MANNING & MARTIN, LLP
ATTORNEYS AT LAW

Intellectual Property NewsFlash

www.mmmlaw.com October 2008

NEW APPEALS DECISION WILL AFFECT COMPUTER AND PROCESS PATENTS

Case Summary of *In re Bilski* Decision: Patentable Processes Must Involve Physical Transformation or Be Tied to a Particular Machine

State Street Bank Case Can No Longer be Relied On

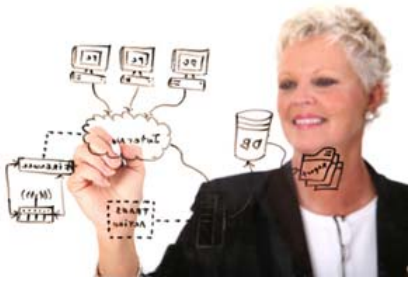
By: John R. Harris
Partner, Morris, Manning & Martin, LLP

On October 30, 2008, the Court of Appeals for the Federal Circuit ("CAFC") handed down its decision in the case of *In re Bernard L. Bilski and Rand A. Warsaw* (case no. 2007-1130). In this decision the CAFC essentially set aside the *State Street Bank* case and other precedents, looked back at certain Supreme Court decisions, and held that a process, in order to be patentable subject matter under 35 U.S.C. § 101, must either be (1) tied to a particular machine or apparatus, or (2) physically transform a particular article into a different state or thing.

The test from the 1998 *State Street Bank* case – that a process may be patentable if it provides a "concrete, useful, and tangible" result – may no longer be relied upon. The *State Street Bank* case kicked off a wave of controversial patent filings on so-called "business methods." That wave is now dissipated. The "machine-or-transformation" test is reaffirmed as the test for patentable subject matter of a process.

The case involved a claim for a patent presented by inventors Messrs. Bilski and Warsaw for a method for managing consumption risk costs of a commodity. The claim recited a number of steps that were fairly broad and abstract, such as "initiating a series of transactions between [a] commodity provider and consumers," and "identifying market participants," and "initiating [another] series of transactions between said commodity provider and … market participants." No computer or software was involved in the claim. The process was of the type that could readily be carried out by a human being – without using any kind of machine. Nothing physical (not even data) appeared to be transformed.

The U.S. Patent and Trademark Office (USTPO) denied a patent for the inventors' claims. The inventors then appealed to the Board of Patent Appeals and Interferences (BPAI), which upheld the rejection of patent. A further appeal was taken to the CAFC. The CAFC not only took the appeal, but on their own initiative ("*sua sponte*") took the case before the entire court ("*en banc*"), not just before the usual three judge panel. The case was so important that thirty-nine friends of the court ("*amicus*") filed briefs in an effort to influence the decision.



The decision was not unanimous – nine judges joined in the 32-page majority opinion (which establishes the ruling). There were 100 pages of other opinions: two judges filed a separate concurring opinion, and three judges filed separate dissenting opinions. One dissenting opinion asserted that the majority did not go far enough in making business methods unpatentable.

The case is likely to have far reaching implications in the intellectual property world. Already-issued patents that do not meet the new criteria may not be enforceable. Pending patent applications that do not have technical disclosures sufficient to support a tie to a particular machine or a physical transformation may never issue. New claim sets may be needed for pending patents that arguably have good supporting technical disclosures of machine ties or transformations. Industries such as Internet business processes, financial services, business methods, insurance, payment systems, and even many forms of computer software, will have to rethink their patent strategies. Prospective investors in such industries will have new due diligence to conduct.

This alert is not intended to be an exhaustive analysis of the decision. The case raises many questions that will only be answered by further court decisions or possible Congressional action. There is a distinct possibility that an appeal to the U.S. Supreme Court will follow. A more detailed analysis is in progress. There will be many comments and articles about the decision, with various viewpoints. However, there are several observations and comments that readily emerge from a reading of the case:

1. The case did not at all involve computer software or any machine-implemented business methods.
2. It remains to be seen what exactly is meant by a process being "tied to a particular machine." This is a recurring theme in the case.
3. If a process involves a physical transformation, such as a chemical or material transformation, the process will be patentable.
4. The USPTO specifically commented that the claims were not limited to operation on a computer, and were not limited by any specific apparatus.
5. A "pure business method" type patent claim is not patentable – which is really nothing new. Such business method type patent claims often set out broad, human-implemented type processes, without requiring the use of a computer, and usually without defining aspects of the process that involve some arguable kind of transformation or some tie to a particular system (machine) with features specific to the process.
6. It remains uncertain whether a process involving a "data" transformation is patentable subject matter. Some cases discussed in the opinion left some hope that certain types of data transformations might still be patentable, especially if the transformations involve data that represents things that are physical such as X-ray images of body parts, sensor signals, etc.
7. A ray of hope for software patents was found in a prior case (*In re Abele*) involving data that clearly represented physical and tangible objects such as the structure of bones, organs, and other body tissues. In that case, the transformation of raw data into a particular visual depiction of that physical object on a display, was sufficient to render a narrowly-claimed but dependent process claim patent-eligible.
8. A recent case involving the unpatentability of electronic signals as a form of "manufacture" (*In re Nuijten*) was specifically not discussed, leaving that decision intact. But electronic signals often represent physicality. The *Bilski* decision can be read as suggesting that what the signals represent may need to be recited in a claim.
9. The CAFC spoke favorably of and relied upon the Supreme Court decisions of *Diamond v. Diehr* (involving a computer-controlled process of making tires, definitely a physical transformation) and *Gottschalk v. Benson* (involving the conversion of binary-coded decimal (BCD) data to a pure binary format, found merely an effort to patent an algorithm). Those cases are, for now, the foremost guides for determining patentable subject matter.
10. Any patent claim that recites a fundamental principle (such as an algorithm, or a principle of business, or an abstract statement of a purpose) and appears to substantially pre-empt all uses of that principle, will not be deemed patentable.
11. A claimed process involving a fundamental principle that uses a particular machine or apparatus will stand a good chance of not pre-empting uses of the principle outside of the particular machine in the manner claimed – and thus should be patentable.
12. It is not clear what exactly is a "particular machine," and how much structure of such a machine must now appear in a patent claim. A general purpose computer, by itself and without connection to specific peripherals or inputs, may well not be particular enough.
13. How much of an Internet-enabled business system is a "particular machine"? Must a claim recite the network connections? Multi-core processors with divided responsibilities that appear in the claims? The network carrier equipment? Specific protocols? The typical three-layer computing model (presentation layer, application layer, database layer)?
14. Another Supreme Court case that denied a patent on subject matter grounds (*Parker v. Flook*) – one that only involved calculating alarm limits of a computer-controlled process – was spoken of favorably and followed. The CAFC suggested that claim limitations specifying how to select alarm margins of safety, weighting factors, variables involved in the process, monitoring of the process variables, setting off an alarm, adjusting an alarm system, etc., might have been enough to make for a patentable claim. All of these involve some physicality.
15. The CAFC said that its earlier decision of *In re Comisky* properly applied the machine-or-transformation test. It reiterated that claims drawn solely to a fundamental and abstract human-implemented principle such as the mental process of arbitrating a dispute is not patent-eligible. Purely human process implementations such as "contract formation" or "managing risks" will be almost impossible to justify for patents – unless somehow tied to a particular machine.
16. Another earlier decision (*In re Schrader*) was found properly decided. In that case, a method of conducting an auction of multiple items in which winning bids were selected in a manner that maximized the total price of all the items, was found unpatentable. One primary reason was that the claim only presented a mathematical optimization algorithm. No specific machine or apparatus was recited.
17. We were reminded that the *State Street Bank* case did not involve a pure process claim – it related to a system for managing and

administering accounts of securities purchases for a mutual fund. Because of the CAFC's comments about the case, it is unclear whether the system (apparatus) patent involved in that case would survive – even though it did not involve a process claim.

18. The CAFC specifically declined in footnote 23 to adopt a broad exclusion over software or any other category of subject matter beyond the fundamental principles set forth by the Supreme Court in its various decisions. It went so far as to say that "the facts here [*In re Bilski*] would be largely unhelpful in illuminating the distinctions between those software claims that are patent-eligible and those that are not." This leaves the door open to software patents as a general proposition, but it seems that the criteria for a software patents have been drawn more tightly.

19. For software and business methods, the question will remain whether a general purpose computer is will qualify as a "particular machine." But probably not. The CAFC specifically said this: "We leave to future cases the elaboration of the precise contours of machine implementation, as well as the answers to particular questions, such as whether or when recitation of a computer suffices to tie a process claim to a particular machine."

20. The CAFC left open a ray of hope for patents on new technologies: "The raw materials of many information-age processes … are electronic signals and electronically-manipulated data. And some so-called business methods, such as that claimed in the present case, involve the manipulation of even more abstract concepts such as legal obligations, organizational relationships, and business risks. Which, if any, of these processes qualify as a transformation or reduction of an article into a different state or thing constituting patent-eligible subject matter?" The court did not answer this question, and indeed specifically saw no reason to expand the boundaries of what constitutes patent-eligible transformations of articles.

There are many other observations and questions that will come out of this decision in the coming days. In these days of economic uncertainty and unease, at least one thing is now certain in the patent world – the nature of patent claims for processes has been significantly narrowed, at least until the Supreme Court or Congress deems it worthwhile to address the issue again.

If you have questions about the *In re Bilski* decision, patent application writing, patent enforceability, or other issues involved in patent application filing, prosecution, validity, or enforceability, please contact any of the following attorneys:

John R. Harris, Author and Editor (jrh@mmmlaw.com) 404.504.7720
Tim Tingkiang Xia, Partner (txai@mmmlaw.com) 404.495.3678
Jack D. Todd, Partner (jtodd@mmmlaw.com) 404.504.7674