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Federal Circuit Refines Patentability of Method Patents

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Changes may act as broad limits on patentability as Court attempts to provide clear guidance regarding business and algorithmic eligibility for coverage

The United States Court of Appeals for the Federal Circuit[1] recently revised its fundamental jurisprudence regarding the patentability of certain method or process patents. Most notably, the opinion in *In re Bilski*, No. 2007-1130 (2008), circumscribes the patentability of a broad category of business and other algorithmic methods. The Court's opinion requires that any patent claiming a process must now include: (i) a physical apparatus for carrying it out or (ii) a transformation of a physical object or electronic representation of an object into another state or a different object. Practically, this will result in a limitation of allowable patent claims directed at processes which are not mechanically implemented.

Basic law: Machines and Processes.

Under United States law, patentability of an invention is determined by three core requirements: utility (or usefulness), novelty and nonobviousness. Part of the utility inquiry is whether an invention fits into one of several preset categories: a process, a machine, an article of manufacture or a composition of matter. Fulfilling the utility requirement is considered a threshold inquiry and inventions not fitting within this fourfold categorization are not "patent-eligible," irrespective of any other meritorious claims or features associated with the invention. At issue is the inclusiveness of the term "process." Processes generally break down into three types: methods of making things, methods of using things and methods of doing things. Not all processes are created equal, however. While the Supreme Court has opined that: (i) anything under the sun that is made by man is appropriate subject matter for patents and (ii) limitations and conditions not expressed by Congress should not be judicially read into the patent law, it has also specifically excluded the following from patentable processes: laws of nature, natural phenomena and abstract ideas. These are identified as *fundamental principles* and are not reserved for any one person or entity, but are free for all to use, usually in conjunction with "using things" and "doing things." The Federal Circuit has also refined the limitations on patentable processes by further excluding: mental processes, processes of human thinking and systems that depend on human intelligence alone. It has permitted, however, in patent-eligible subject matter, processes which include *applications* of laws of nature or mathematical formulas. Whether a process-based invention fits within these specific exclusions has been the subject of much debate, especially in light of changing definitions of permitted subject matter as technology has moved forward with increasing complexity in the electronic arts.

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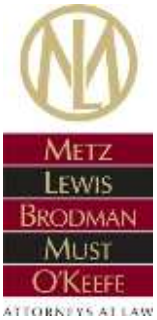
[1] The Court of Appeals for the Federal Circuit is the exclusive court of appeals for all patent -related appeals from the District Courts of the United States, as well as all appeals from decisions of the United States Patent and Trademark Office



What processes are patentable?

The definitive test of patent eligibility for the process category is (and has been) the "machine-transformation" test. This states that a process is patent-eligible if it: (1) is tied to a particular machine ***OR*** (2) transforms an article into a different state or thing.

A little tension.

Tying a process to a machine is relatively easy to understand and recognize -- a process for sorting rocks, for example, which utilizes a series of progressively smaller sieves to filter out each size category. A patentable implementation of such a process might be in the form of a computer program which controls the operation of that particular sorting machine, which would fulfill the first category of the test. A substantial difficulty arises, however, in determining precisely what types of transformations fit the second category of permissible processes.

The only permissible limitations on patent eligibility are stated above: the laws of nature, natural phenomena, abstract ideas, mental processes, processes of human thinking and systems that depend on human intelligence alone. Mathematical algorithms (as opposed to machine operative software) have, however, been found to be one category of abstract ideas - unpatentable unless utilized in conjunction with a machine or capable of the appropriate transformation of data. But what is an appropriate transformation? Since 1998, the defined standard has been whether the process produces a *useful, concrete and tangible result*, irrespective of the subject matter incorporated therein. This definition has opened the door to a variety of algorithmic and "business method" applications completely divorced from any physical implementation, such as methods for resolving disputes or evaluating the risk of certain investments.

Today, however, the frame of reference has changed. The Court in *Bilski* specifically and unambiguously rejected its own precedent and has instructed that all further inquiries into process claim patentability must be based on the machine or transformation test alone.

Bilski's invention claimed a method for hedging risk in the field of commodities trading. Essentially, an investor purchases commodity contracts at one rate, identifies other investors with a "counter-risk position" and engages in commodity transactions with those other investors appropriate to balance the risk taken by his or her first purchase.

The Court's requirements for conducting an inquiry into the patent-eligibility of such a claim incorporates the following questions: Is the claimed process a fundamental principle (such as a law of nature or purely mental process)? If yes, does the claim pre-empt substantially all uses of that principle for the rest of the public (the basic laws of nature must remain free for all to use)? If yes, the subject matter is unpatentable. What *is* permitted is the protection of a method *in conjunction with a particular machine or apparatus*, which would therefore allow others to utilize that fundamental principle with other hardware ***OR*** as part of appropriate transformations of an article, *which change the nature of the article in a particular way*, and would not pre-empt different transformations of other articles by that same process or transformations of the same article by different processes. In either case, meaningful limits on the claimed scope of invention with respect to the transformation are required to pass the patentability inquiry. In order to be patentable, the

transformation of an article must be into a different state or a different article and must be central to the purpose of the process itself. Bilski's claimed invention was independent of any type of mechanized or computerized process and so did not fit into the first category of the machine transformation test. Whether it was an appropriate transformation is the central aspect of both the Court's decision and the changes in the law of patentability.

The key aspect of determining whether a transformation is sufficient to confer patentability, according to the Federal Circuit, is the nature and description of the "thing" that is to be transformed. This is especially true in cases where the subject of the transformation is data. One example of unpatentable subject matter is a process describing the graphic display of data values and the variances of those data values from their average (another might be a graph of one year of high/low/close of the Dow Jones Industrials). A similar process, however, using the same data values and variances from average, but applied to a specific type of data (such as x-ray attenuation) as computed by a particular device (such as an electronic scanner) and is displayed on a screen is patentable subject matter. The differentiation is the nature or subject matter of the data itself and its *limited* application to a subset of all possible data types. Similarly, while the visual depiction of data or objects is an appropriate transformation, such as displaying data on a computer screen, the electronic signal must represent a physical object, composition of matter or other real substance or material and may not merely represent abstract concepts, such as legal obligations, business risks or relationships. Thus, the electronic display of a graph of the throughput of the rock sorting machine discussed earlier might be patentable subject matter, the electronic display of a graph of baseball players' salaries (surely an ephemeral topic) would not. Lastly, mere physical or electronic activity representing a physical act without the appropriate transformation is also insufficient to create a patentable claim. A process directed toward calculating batting averages with paper and pencil would fail as patentable subject matter under this directive. Bilski's invention did not make any patent-eligible transformation because the core information (the commodities contracts) itself was inappropriate for patenting: public or private legal obligations and business risks are merely abstractions and are not representative of any physical object. The physical activity necessary to carry out the trades or purchases was also not sufficient to create the appropriate transformation.

Conclusions and Commentary.

As previously stated, the Court's opinion requires that any method claim either contain: (i) an association with a particular machine or (ii) transform a physical object (or the electronic representation of a physical object) into another state or a different object.

It is impossible to judge the practicality or likely applicability of any newly developed or modified legal test. Legal tests are interpreted by later court decisions and refined over time. Moreover, the ability to apply such legal tests to everyday problems facing businesses and inventors is always limited and subservient to the overall judgment of the lawyer making the evaluation. The decision in *In re Bilski* will, no doubt, be debated for some time. Additionally, the tremendous economic interests at stake in the protection of computer software make it very likely that this issue will be further reviewed either by the Supreme Court or members of Congress for a clarifying opinion or amendment to the patent laws. There is no question that the open door of broad method protection

has spawned a variety of unforeseen and potentially detrimental results, such as the rise of costly and destructive litigation seeking damages for patents of questionable validity or relevance (typically a form of extortion), many of which claim protection for commonly utilized processes which were well known but poorly documented for many years. We are certainly all paying an economic toll for the drag on development and budgets that such claims present, together with the flood of applications to the United States Patent and Trademark Office that unnecessarily delay quality applications. This latest opinion is clearly in response to the economic and societal toll raised by these unintended or unforeseen developments. It is unlikely, however, that the pendulum of patent eligibility will remain stable. Method coverage continues to provide the most comprehensive protection for many inventions and should be creatively pursued with various anticipated states of the law in mind. Moreover, it may be shortsighted to immediately abandon nascent inventions or rush to amend existing patent applications in light of this change. It is likely more change is coming.

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Barry Friedman concentrates his practice in the area of intellectual property law and counsels clients regarding the acquisition and protection of a wide range of technological assets, including patents, trademarks and copyrights. Please contact Barry at (412) 918-1110 or bfriedman@metzlewis.com if you have any questions regarding the Federal Circuit's latest ruling in relation to your specific business situation.