

INTELLECTUAL PROPERTY ALERT

IN RE BILSKI – FEDERAL CIRCUIT GUIDANCE FOR PATENT-ELIGIBLE PROCESSES

The United States Court of Appeals for the Federal Circuit recently issued an opinion relating to the patentability of business and algorithmic inventions following its en banc review of *In re Bernard L. Bilski and Rand A. Warsaw* (hereinafter, “*Bilski*”). The Federal Circuit affirmed the decision of the United States Patent and Trademark Office Board of Patent Appeals and Interferences which concluded that the invention of *Bilski* was not directed to patent-eligible subject matter. In so doing, the Federal Circuit clarified the standards applicable in determining whether a claimed method constitutes a statutory “process” under the United States patent laws.

Under the patent laws of the United States, an invention must meet the following three statutory requirements to be patentable: utility (or usefulness), novelty and nonobviousness. With regard to utility, patents are not granted for all new and useful inventions and discoveries. Patents may be granted only for “any new and useful process, machine, manufacture or composition of matter, or any new and useful improvement thereof.” In general, the invention as a whole must be useful and accomplish a practical application. Abstract ideas, laws of nature and natural phenomena have been found generally to lack utility. Inventions that do not meet this threshold requirement of utility are not patent-eligible.

In reviewing the four statutory categories of patent-eligible subject matter to satisfy the requirement of utility, in *Bilski*, it was undisputed that the Applicant’s claimed invention was not directed to a machine, manufacture of composition or matter, or any new and useful improvement thereof. Thus, the issue before the Court was directed to the meaning of the term “process” and whether the claimed invention constitutes a new and useful process.

The term “process” has an ordinary meaning in the English language which is generally broad in scope. For example, “process” is defined as “[a] procedure, ... [a] series of actions, motions, or operations definitely conducing to an end, whether voluntary or involuntary.” WEBSTER’S NEW INTERNATIONAL DICTIONARY OF THE ENGLISH LANGUAGE 1972 (2d ed. 1952). However, the Supreme Court has held that the meaning of “process” as used in the patent law statutes is narrower than its ordinary meaning. Specifically, the Supreme Court has held that a claim is not a patent-eligible “process” if it claims laws of nature, national phenomena or abstract ideas. These are identified as fundamental principles which are free to all and reserved exclusively for none. Thus, in determining whether a claimed process is patentable, it is necessary to determine whether the process is directed to unpatentable subject matter because it claims only a fundamental principle, such as an abstract idea or a mental process. Further, what test or criteria governs whether a process is patentable or unpatentable because it claims a fundamental principle only?

Patents, by definition, grant the power to exclude others from practicing an invention which is patented. A process that seeks to exclude others from all uses of a fundamental principle is patent-ineligible. However, the Supreme Court has drawn a distinction between such a process and a process that seeks only to exclude others from using a particular application of a fundamental principle. A process that excludes only a particular application is patent eligible. Thus, in assessing the patent-eligibility of a process, it must be determined whether the claimed process recites a fundamental principle and, if so,

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would the process preempt substantially all uses, or only particular applications, of that fundamental principle if patented. A determination as to whether a process preempts all uses of a fundamental process is not exactly straightforward. The Supreme Court has enunciated a definitive test to determine if a process is narrow enough to encompass only a particular application of a fundamental principle, or if it pre-empts the principle itself. The test is the machine-or-transformation test and consists of a two pronged inquiry. Under this test, 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.

The machine-or-transformation test appears to complement the goal of the Supreme Court to prevent one from pre-empting or excluding others from practicing fundamental principles. In this regard, a process involving a fundamental principle that uses a particular machine or apparatus would not pre-empt uses of the principle that do not also use the specified machine or apparatus. Thus, a process that satisfies the first prong would not pre-empt substantially all uses of the fundamental process and therefore is patent-eligible. Further, a process that transforms a particular article to a specified different state or thing by applying a fundamental principle would not pre-empt the use of the principle to transform any other article, or to transform the same article but in a manner not covered by the process, or to do anything other than transform the specified article. Thus, a process that satisfies the second prong would not pre-empt substantially all uses of the fundamental process and therefore is patent-eligible.

In *Bilski*, the Federal Circuit identifies that certain considerations are applicable under either prong of the machine-or-transformation test. For instance, the use of a specific machine or transformation of an article must impose meaningful limits on the scope of the process in order for the process to be patent-eligible. With respect to the first prong of the test, a process is not necessarily patent-eligible even though the process is tied to a particular machine. For example, the Supreme Court has found that the limitation of tying a process to a digital computer was not actually limiting because the fundamental principle at issue, a particular algorithm, had no utility other than operating on a digital computer. The tying of the process to a digital computer did not reduce its preemptive scope since all uses of the algorithm were covered by the process. Thus, the process was not patent-eligible. However, in another instance, the Supreme Court found that a process incorporating a mathematical algorithm was patent-eligible because the process employed the mathematical algorithm but did not seek to pre-empt use of the algorithm, only to exclude others from using the algorithm in conjunction with all of the other limiting steps recited in the process.

The main issue in *Bilski* is the second prong of the machine-or-transformation test. The *Bilski* invention clearly did not involve a machine and therefore, did not satisfy the first prong of the test. Thus, it was to be determined if the process satisfied the second prong. Does the process transform an article into a different state or thing? What sorts of things constitute “articles”? To what extent do they need to be “transformed”? It is clear that when two chemical ingredients are reacted together to form a different chemical product that the two reactants are transformed. However, for business and algorithmic inventions, such is not as clearly evident when the starting materials involve electronic signals or data and the transformation involves the manipulation of such signals or data.

For example, an invention that relates to a process for the electronic transformation of raw data (i.e., x-ray attenuation data) produced in a two-dimensional field by a computer scanner into a visual depiction of a

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physical object on a display was found to be patent-eligible. However, a process of performing a clinical test and based on the data from the test determining if an abnormality existed and possible causes of any abnormality, was not considered to be patent-eligible. This process was found to be merely an algorithm combined with a data-gathering step. In most cases, gathering data does not constitute a transformation of any article. A requirement simply that data inputs be gathered, without specifying how, has been found to be a meaningless limit to an algorithm because every algorithm inherently requires the gathering of data inputs. Thus, merely adding a data-gathering step to an algorithm is insufficient to convert that algorithm from an unpatentable fundamental principle into a patent-eligible process.

Business methods, such as the *Bilski* process, can involve the manipulation of more abstract constructs such as legal obligations, organizational relationships, and business risks. The process in *Bilski* involves a method for hedging risk in the field of commodities trading. The invention is not limited, however, to transactions involving actual commodities. The recited transactions may simply involve options, i.e., rights to purchase or sell the commodity at a particular price within a particular time frame. In *Bilski*, the Federal Circuit reaffirms the machine-or-transformation test as the governing test for determining patent eligibility of a process. The “useful, concrete and tangible” standard, which was applied since 1998, is found to be inadequate.

In applying the machine-or-transformation test, the Federal Circuit found that the process in *Bilski* does not transform any article to a different state or thing. The purported transformations or manipulations simply of legal obligations or relationships, business risks, or other such abstractions cannot meet the test because they are not physical objects, and therefore the process is not drawn to patent-eligible subject matter. Further, the Federal Circuit held that the process in *Bilski* encompasses a purely mental process of performing requisite mathematical calculations without the aid of a computer or other machine. Therefore, the process would pre-empt any application of the fundamental process of hedging and mathematical calculations inherent in hedging. The pre-emption of all applications of hedging, even just within the area of consumable commodities, is impermissible.

It is recognized that future developments in technology and the sciences may present difficult challenges to the machine-or-transformation test. Even the Federal Circuit in *Bilski* recognized that it may be foreseeable that the Supreme Court may ultimately decide to alter or set aside this test to accommodate emerging technologies. At present, however, other purported tests such as the “useful, concrete, and tangible result” test, have been found inadequate and insufficient in determining patent eligibility of a process under the utility requirement of the patent statutes, and the machine-or-transformation test has been reaffirmed as the governing test for such a determination. It is reasoned and expected that in the future, and most likely the near future, further guidance will be provided relating to the patent eligibility of business methods and algorithmic processes as the machine-or-transformation test is applied to a variety of merging technologies that may challenge the criteria of the test.

The Intellectual Property Alert is intended to keep readers current on matters affecting intellectual property and is not intended to be legal advice. If you have any questions, please call Carol Marmo at 412.566.1933 or any other attorney with whom you have been working. Ms. Marmo is a member of the Intellectual Property Law Department of the Pittsburgh Office of Eckert Seamans Cherin & Mellott, LLC.