



Seeking Patent Protection for Business-Related and Computer-Related Inventions After *Bilski*

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CELESQ®-WEST IP Master Series (November 17, 2008). On October 30, 2008, the U.S. Court of Appeals for the Federal Circuit issued its much awaited decision in *In re Bilski*, No. 2007-1130 (Fed. Cir. Oct. 30, 2008) (en banc). The full court in *Bilski* faced the issue of what types of processes should be eligible for patent protection under 35 U.S.C. § 101. Just over a decade after the landmark *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368, (Fed. Cir. 1998), which is credited with opening the flood gates to so-called “business method” patents, the Federal Circuit took a hard look at centuries of jurisprudence on what types of processes have been and should be the subject of patent protection, and determined that the “governing” test should be the “machine-or-transformation test”.

The Governing Test

In the majority opinion,² the Court found the so-called “machine-or-transformation test” is the only test is “governing”. (Majority Op. at 13-15). The majority rejected all other attempts to create other “short-cut” tests, including the previously rejected “Freeman-Walter-Abele”³ and “technological arts” tests,⁴ and the previously relied upon “useful, concrete, and tangible result” test.⁵ (Majority Op. at 18-21).

The purpose of the “machine-or-transformation test” is to preclude processes which preempt so-called “fundamental principles” (i.e., laws of nature, physical phenomena, and abstract ideas) from being patent eligible.⁶ (Majority Op. at 7 n.5, 15-16).

In particular, as the majority opinion explained, the “machine-or-transformation test” as taken from the historical Supreme Court decisions, provides that:

“[A]n applicant may show that a process claim satisfies § 101” by either

- (1) “showing that his claim is tied to a particular machine” or
- (2) “showing that his claim transforms an article.”

(Majority Op. at 24).

The majority further explained that under either branch, the analysis should consider that:



- (1) the use of a specific machine or transformation of an article must impose meaningful limits on the claim's scope to impart patent-eligibility; and
- (2) the involvement of the machine or transformation in the claimed process must not merely be insignificant extra-solution activity.

(*Id.*).

Significantly, the majority dispelled some misconceptions and confirmed that “whether a claimed process is novel or non-obvious is irrelevant to the § 101 analysis.” (Majority Op. at 17). Thus, the majority recognized that the analyses under §§ 102, 103, etc., should not be commingled as part of the § 101 analyses. Of course, issues regarding utility do remain under Section 101. (Majority Op. at 17, n.15).

Similarly, the majority “made clear that it is inappropriate to determine the patent-eligibility of a claim as a whole based on whether selected limitations constitute patent-eligible subject matter... After all, even though a fundamental principle itself is not patent-eligible, processes incorporating a fundamental principle may be patent-eligible. *Thus, it is irrelevant that any individual step or limitation of such processes by itself would be unpatentable under § 101.*” (Majority Op. at 17-18 (emphasis added)).

The Bilski Claim Was Not Patent-Eligible

When it came time to apply these principles to the *Bilski* claim,⁷ the majority found it failed both parts of the test.

With respect to the “machine implementation” branch of the inquiry, the Applicant admitted the claim was not so limited, so the majority left 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.” (Majority Op. at 24).

With respect to the “transformation” branch of the inquiry, the majority provided more analysis, stating that “[a] claimed process is patent-eligible if it transforms an article into a different state or thing. This transformation must be central to the purpose of the claimed process.” (Majority Op. at 24-25).

It was considered “self evident” that such a transformation would include, for example, “a process for a chemical or physical transformation of *physical object or substances*”. (Majority Op. at 25 (emphasis added)).

The majority opinion noted that today’s “raw materials” are “electronic signals” and “electronically-manipulated data.” It found difficult the question of whether “abstract concepts such as legal obligations, organizational relationships and business risks” should also fall within this exception. (*Id.*). Nonetheless, it decided that “case law has taken a measured approach to this question, and we see no reason here to expand the boundaries



of what constitutes patent-eligible transformations of articles.” (*Id.*).

Thus, the majority held “that the Applicants’ process as claimed does not transform any article to a different state or thing. *Purported transformations or manipulations simply of public or private legal obligations or relationships, business risks, or other such abstractions cannot meet the test because they are not physical objects or substances, and they are not representative of physical objects or substances. Applicants’ process at most incorporates only such ineligible transformations.*” (Majority Op. at 28 (emphasis added)).

The majority’s analysis was based on the reasoning that “Applicants here seek to claim a non-transformative process that encompasses a purely mental process of performing requisite mathematical calculations without the aid of a computer or any other device, mentally identifying those transactions that the calculations have revealed would hedge each other’s risks, and performing the post-solution step of consummating those transactions. *Therefore, claim 1 would effectively pre-empt any application of the fundamental concept of hedging and mathematical calculations inherent in hedging (not even limited to any particular mathematical formula).* And while Applicants argue that the scope of this pre-emption is limited to hedging as applied in the area of consumable commodities, the Supreme Court’s reasoning has made clear that effective pre-emption of all applications of hedging even just within the area of consumable commodities is impermissible. ... Moreover, while the claimed process contains physical steps (initiating, identifying), it does not involve transforming an article into a different state or thing. Therefore, Applicants’ claim is not drawn to patent-eligible subject matter under § 101.” (Majority Op. at 31-32 (emphasis added)).

Conclusion

In July 1998, the Federal Circuit issued its decision in *State Street* that put to rest the ill-conceived notion of a business method exception to patent-eligible subject matter. In the decade since, our new information and electronic age economy has fostered a wide variety of innovations that have come before the U.S. Patent and Trademark Office. At times some have argued the patent-eligibility hurdle became too easy to cross, although other hurdles like novelty, obviousness, and definiteness lay in the way of undeserving inventions and patent protection. Today’s majority opinion has raised the patent-eligibility hurdle under the guise of following the binding Supreme Court precedent. For now, at least the safe harbors of patent eligibility of the machine-or-transformation test remain protected. Time will tell whether reliance on the 19th century notions of patent eligibility are appropriate in the new economic order the U.S. and the World face today in the 21st Century. We look forward to future installments by the Federal Circuit (and perhaps others) on how the present analysis may be refined or augmented. (See Majority Op. at 15).

For a more detailed analysis of the “machine-or-transformation test” as adopted by the majority opinion and a brief summary of the analyses presented in the dissenting and concurring opinions, please see our Guest Column in IP Law 360, which is available at our firm website. See [Charles R. Macedo](#) and David Boag,



The 'Machine-Or-Transformation Test' For Processes, IP Law 360, Portfolio Media, New York (October 30, 2008) (available at <http://www.arelaw.com/publications>) and other analyses available at <http://www.arelaw.com/publications> .

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² The majority opinion was authored by Chief Judge Michel, and joined in by Circuit Judges Lourie, Schall, Bryson, Gajarsa, Linn, Dyk, Prost and Moore. Circuit Judge Mayer wrote a dissenting opinion but agreeing in the results, and offering a differing rationale. Circuit Judges Newman and Rader each dissented with their own dissenting opinions. Circuit Judge Dyk, who was joined by Circuit Judge Linn, joined in a concurring opinion to respond to the dissenting opinions of Circuit Judges Newman and Rader. The majority opinion is available on Westlaw as 2008 WL 4757110

³ According to the majority opinion, "This test, in its final form, had two steps: (1) determining whether the claim recites an 'algorithm' within the meaning of Benson, then (2) determining whether that algorithm is "'applied in any manner to physical elements or process steps.'" (Majority Op. at 19).

⁴ The majority opinion noted that a test requiring process claims to be "technological arts" was too "unclear" and "vague" because there were so many differing views of what constitutes "technology" or "technological arts". (Majority Op. at 21).

⁵ The majority opinion explained that the "useful, concrete, and tangible result test" was set forth in its precedent as follows:

- *State St. Bank & Trust Co. v. Signature Fin. Group*, 149 F.3d 1368, 1373 (Fed. Cir. 1998) ("Today, we hold that the transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price, constitutes a [patenteligible invention] because it produces 'a useful, concrete and tangible result'");
- *In re Alappat*, 33 F.3d 1526, 1543-44 (Fed. Cir. 1994) (en banc) ("This is not a disembodied mathematical concept which may be characterized as an 'abstract idea,' but rather a specific machine to produce a useful, concrete, and tangible result."); and
- *AT&T Corp. v. Excel Commc'ns, Inc.*, 172 F.3d 1352, 1357 (Fed. Cir. 1998) ("Because the claimed process applies the Boolean principle to produce a useful, concrete, tangible result without pre-empting other uses of the mathematical principle, on its face the claimed process comfortably falls within the scope of § 101.").

The majority further explained that "the basis for this language in *State Street* and *Alappat* was that the Supreme Court has explained that 'certain types of mathematical subject matter, standing alone, represent nothing more than abstract ideas until reduced to some type of practical application.' *Alappat*, 33 F.3d at 1543; see also *State St.*, 149 F.3d at 1373." (Majority Op. at 20).

⁶ Historically, the Supreme Court was faced by this kind of issue when Samuel Morse sought to patent not merely his Morse Code, and the device he developed that used his Morse Code, but also to own any "use of... electro-magnetism ... developed



for marking or printing intelligible characters, signs or letters, at any distances, being a new application of that power....” Patent Reissue of 1848, quoted in *O’Reilly v. Morse*, 56 U.S. (15 How.) 62, 112 (1853). In that case, the Supreme Court recognized that it would be improper to allow Morse a claim which would in effect preempt all uses of a fundamental law of nature (i.e., electro magnetism) even when tied to a particular field of use (i.e., transmitting information at great distances) including those he (or anyone else) had yet to discover. 56 U.S. at 116. Mr. Morse’s claim would potentially cover sending an e-mail over the internet.

⁷ The specific representative claim in Biliski’s patent application read as follows:

1. “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.”