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LAST MONTH AT THE FEDERAL CIRCUIT

Special Edition

To Be Patentable Under § 101, a Process Must Be Tied to a Machine or Transform an Article into a Different State or Thing

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Judges: Michel (author), Newman (dissenting), Mayer (dissenting), Lourie, Rader (dissenting), Schall, Bryson, Gajarsa, Linn, Dyk (concurring), Prost, Moore

[Appealed from Board]

In *In re Bilski*, No. 07-1130 (Fed. Cir. Oct. 30, 2008) (en banc), the Federal Circuit affirmed the decision of the Board, finding that the method claims in Bernard L. Bilski and Rand A. Warsaw's (collectively "Bilski") patent application were not directed to statutory subject matter under 35 U.S.C. § 101. In doing so, the Court noted that the machine-or-transformation test is the test that should be used to determine whether a process claim is drawn to statutory subject matter. The Court explained that under this test, a claimed process is patentable under § 101 if (1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing.

Bilski filed a patent application with claims directed to a method for hedging risk in the field of commodities trading. Claim 1 recites "[a] method for managing the consumption risk costs of a commodity sold by a commodity provider at a fixed price comprising the steps

of . . . initiating a series of transactions between said commodity provider and consumers of said commodity"; "identifying market participants for said commodity having a counter-risk position to said consumers"; and "initiating a series of transactions between said commodity provider and said market participants." Slip op. at 2.

The examiner rejected Bilski's claims under § 101, reasoning that they were not directed to the "technological arts" and that they were not limited by any specific apparatus. *Id.* at 3. On appeal, the Board held that the examiner erred to the extent he relied on a "technological arts" test because the case law did not support such a test. It noted that the examiner's requirement of a specific apparatus was also erroneous. Nonetheless, the Board sustained the examiner's rejection, finding that the claims were directed to an abstract idea ineligible for patent protection. Bilski appealed.

On appeal, a panel heard oral argument on October 1, 2007. Prior to disposition by the panel, however, the Federal Circuit sua sponte ordered an en banc review. In its order, the Federal Circuit posed five questions for supplemental briefing by the parties and amici:

- (1) Whether claim 1 of Bilski's application claims patent-eligible subject matter under 35 U.S.C. § 101?
- (2) What standard should govern in determining whether a process is patent-eligible subject matter under § 101?

(3) Whether the claimed subject matter is not patent-eligible because it constitutes an abstract idea or mental process; when does a claim that contains both mental and physical steps create patent-eligible subject matter?

(4) Whether a method or process must result in a physical transformation of an article or be tied to a machine to be patent-eligible subject matter under § 101?

(5) Whether it is appropriate to reconsider *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368 (Fed. Cir. 1998), and *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352 (Fed. Cir. 1999), in this case and, if so, whether those cases should be overruled in any respect?

The Federal Circuit began its analysis with the language of the statute, noting that § 101 recites four categories of patent-eligible subject matter: processes, machines, manufactures, and compositions of matter. The Court observed that the issue here involved what the term “process” in § 101 meant, and how to determine whether a given method claim recites a process that complies with § 101. The Court rejected the dictionary definition of the term “process,” noting that the Supreme Court has held that the meaning of “process” as used in § 101 is narrower than its ordinary meaning. Specifically, the Court noted that a claim is not a patent-eligible “process” if it claims laws of nature, natural phenomena, or abstract ideas, which the Court characterized as “fundamental principles.” Slip op. at 6-7. The Court explained that a process claim that incorporates a “fundamental principle” may be patented only if it recites a particular application of the fundamental principle. It added that the “machine-or-transformation test” is the “definitive test” for determining when a process claim encompasses only a particular application of a fundamental principle. *Id.* at 10. According to this test, “[a] claimed process is surely patent-eligible under § 101 if: (1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing.” *Id.*

The Court acknowledged arguments by Bilski and several amici that the Supreme Court did not intend the machine-or-transformation test to be the sole test for patentable processes. The Court, however, noted that its reliance on this test as the applicable test for § 101 analysis was “sound.” *Id.* at 14. It added that the Supreme Court or the Federal Circuit may need to change the test because “future developments in technology and the sciences may present difficult challenges to the machine-or-transformation test, just as the widespread use of computers and the advent of the Internet has begun to challenge it in the past decade.” *Id.* at 14-15. But for now, it declined to depart from this test.

The Federal Circuit also reiterated two other important aspects of the Supreme Court’s § 101 jurisprudence. First, the Court noted whether a claimed process is novel or nonobvious is irrelevant to the § 101 analysis. And, second, it is inappropriate to determine the patent-eligibility of a claim as a whole based on whether selected limitations constitute patent-eligible subject matter.

“A claimed process is surely patent-eligible under § 101 if: (1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing.” Slip op. at 10.

The Federal Circuit next addressed the issue of whether several other purported articulations of § 101 tests were valid and useful, and rejected all of them. It started with the *Freeman-Walter-Abele* test, which requires determining whether the claim recites an “algorithm” and then determining whether the algorithm is “applied” in any manner to physical elements or process steps. The Court found that this test was inadequate in light of its opinion here and that it had previously recognized that a claim failing that test may nonetheless be patent-eligible. Similarly, the Court concluded that the “useful, concrete and tangible result” test associated with *State Street* was inadequate. It explained that “while looking for ‘a useful,

concrete and tangible result' may in many instances provide useful indications of whether a claim is drawn to a fundamental principle or a practical application of such a principle, that inquiry is insufficient to determine whether a claim is patent-eligible under § 101." *Id.* at 20.

"Patents granted in the wake of *State Street* have ranged from the somewhat ridiculous to the truly absurd." Mayer Dissent at 12.

The Court also declined to adopt the "technological arts test" urged by some amici. It reasoned that the contours of such a test would be unclear because the meanings of the terms "technological arts" and "technology" were both ambiguous and ever-changing. The Court likewise rejected calls for categorical exclusions. In so doing, the Court reaffirmed its conclusion in *State Street* that the so-called "business method exception" is unlawful and that "business method claims . . . are 'subject to the same legal requirements for patentability as applied to any other process or method.'" *Id.* at 21 (quoting *State Street*, 149 F.3d at 1375-76). The Court also declined to adopt a test that would allow claims that recite "physical steps" without any connection to a particular machine or apparatus. *Id.* at 23.

"[T]he full reach of today's change of law is not clear Uncertainty is the enemy of innovation. These new uncertainties not only diminish the incentives available to new enterprise, but disrupt the settled expectations of those who relied on the law as it existed." Newman Dissent at 2.

Having rejected these other tests, the Federal Circuit provided additional guidance on how to perform the § 101 analysis using the machine-

or-transformation test. In so doing, the Court drew heavily from *Parker v. Flook*, 437 U.S. 584 (1978), and *Gottschalk v. Benson*, 409 U.S. 63 (1972). The Court explained that the machine-or-transformation test is a two-branched inquiry; an applicant may show that a process claim satisfies § 101 either by showing that his claim is tied to a particular machine, or by showing that his claim transforms an article. The Court noted that "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 that "the involvement of the machine or transformation in the claimed process must not merely be insignificant extra-solution activity." Slip op. at 24.

As to machine implementation, the Court explained that because *Bilski* admitted that the language of claim 1 did not limit any process step to any specific machine or apparatus, issues specific to the machine-implementation part of the test were not before it. Thus, the Court left for another day whether and when the recitation of a computer alone would suffice to tie a process claim to a particular machine. With respect to the transformation part of the test, the Court noted that a claimed process is patent-eligible if it transforms an article into a different state or thing. It explained that the transformation must be central to the purpose of the claimed process and that the main aspect of the transformation test that required clarification was what sorts of things constitute "articles" such that their transformation is sufficient to impart eligibility under § 101.

The Court observed that it was virtually self-evident that a process for chemical or physical transformation of physical objects or substances is statutory. It noted, however, that "the raw materials of many information-age processes . . . are electronic signals and electronically-manipulated data" and "so-called business methods" that involve the "manipulation of even more abstract constructs such as legal obligations, organizational relationships, and business risks." *Id.* at 25. It questioned which, if any, of these processes qualified as a transformation or reduction of any article into a different state or thing constituting patent-eligible subject matter. It noted that its case law has taken a measured approach to this question and that it saw no reason to expand the boundaries of what constitutes patent-eligible transformations of

articles. It explained that “[s]o long as the claimed process is limited to a practical application of a fundamental principle to transform specific data, and the claim is limited to a visual depiction that represents specific physical objects or substances, there is no danger that the scope of the claim would wholly pre-empt all uses of the principle.” *Id.* at 26.

Finally, the Court applied the principles mentioned above to *Bilski*’s claims to determine whether those claims satisfied the machine-or-transformation test. The Court held that the claimed process did not transform any article to a different state or thing. It explained that mere manipulations of legal obligations or relationships, business risks, or “other such abstractions” could not meet the transformation prong of the test because they were not and did not represent physical objects or substances. *Id.* at 28. In addition, the Court noted that because *Bilski* admitted that the claims did not involve a machine or an apparatus, that prong was also not satisfied. Accordingly, the Court concluded that *Bilski*’s claims were not drawn to patent-eligible subject matter under § 101 and affirmed the decision of the Board.

Judge Dyk, joined by Judge Linn, filed a concurring opinion to document statutory support for the majority’s opinion, analyzing the history of the patent statute beginning with the Patent Act of 1793 and its English underpinnings. He disagreed with the dissenters that the majority “usurp[ed] the legislative role.” Dyk Concurrence at 1. Following a review of patents issued under the English Statute of Monopolies and the legislative histories of the 1793 and 1952 Patent Acts, Judge Dyk noted that “the uniform assumption was that the only processes that were patentable were processes for using or creating manufactures, machines, and compositions of matter.” *Id.* at 2. He concluded that the history of § 101 fully supported the majority’s holding that *Bilski*’s claims do not recite patentable subject matter.

Judge Newman dissented. She observed that the exclusion of certain process inventions was contrary to the statute and precedent, and ignored the constitutional mandate. She explained that by limiting patent eligibility to those processes that satisfy the machine-or-

transformation test, the majority contravened the Supreme Court’s refusal to so hold in *Benson* and *Flook*. Newman Dissent at 6-7. She also examined the English origins and legislative history of the 1793 Patent Act, concluding that nothing in the statute supported demoting processes to “second-class status” behind the other categories of patentable subject matter. *Id.* at 26. To avoid a sure disincentive to innovation-based commerce, Judge Newman concluded that the law permitted patenting any process invention “that is not clearly a ‘fundamental truth, law of nature, or abstract idea.’” *Id.* at 40.

Judge Mayer also dissented, arguing that the majority did not go far enough. He explained that the Court should have overruled *State Street* and *AT&T*. According to him, affording patent protection to business methods lacks constitutional and statutory support, and retards innovation. Judge Mayer also listed patents granted since *State Street* ranging “from the somewhat ridiculous to the truly absurd” and noted the “thundering chorus of criticism” that ensued. Mayer Dissent at 12-13. He urged adopting a “technological arts” test that would exclude from patent eligibility any process that draws its inventive concept from disciplines such as business, law, sociology, or psychology. *Id.* at 23.

Finally, Judge Rader also dissented, arguing that the majority created a new circuitous judge-made test in contravention of Supreme Court precedent. He explained that § 101 broadly grants patent eligibility to “any” process, subject to the other conditions for patentability. Rader Dissent at 2. According to him, the majority should have merely noted that *Bilski* is attempting to patent an abstract idea and that nothing more was needed.

“Because [the majority] links patent eligibility to the age of iron and steel at a time of subatomic particles and terabytes, I must respectfully dissent.” Rader Dissent at 1.

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Abbreviations

ALJ Administrative Law Judge
ANDA Abbreviated New Drug Application
APA Administrative Procedures Act
APJ Administrative Patent Judge
Board Board of Patent Appeals and Interferences
Commissioner Commissioner of Patents and Trademarks
CIP Continuation-in-Part
DJ Declaratory Judgment
DOE Doctrine of Equivalents
FDA Food and Drug Administration
IDS Information Disclosure Statement
ITC International Trade Commission
JMOL Judgment as a Matter of Law
MPEP Manual of Patent Examining Procedure
PCT Patent Cooperation Treaty
PTO United States Patent and Trademark Office
SJ Summary Judgment
TTAB Trademark Trial and Appeal Board

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