In re Bilski: 19th Century Thinking for 21st Century Challenges

By Wayne P. Sobon and Erika H. Arner

In a closely watched—and long-awaited—case, a divided Court of Appeals for the Federal Circuit sitting en banc ruled on October 30, 2008, that the only processes that can be patented under 35 U.S.C. § 101 are those that (1) are tied to a particular machine or apparatus or (2) transform a particular article into a different state or thing.1 In declaring this the “definitive test” for patentable processes, the court disregarded the plain language of the statute and rejected substantial Supreme Court precedent cautioning against special, rigid tests for patents. And, although the court’s opinion sought to clarify the standard for process patentability under § 101, recent decisions by the USPTO Board of Patent Appeals and Interferences (BPAI) demonstrate that the “machine-or-transformation” test has provided no more clarity to patent owners and the inventing public, while at the same time, it has called into question the validity of thousands of issued patents.

The Federal Circuit’s Bilski decision needlessly limits the patenting of new, practical innovation; drastically upsets the expectations and decisions of numerous inventors and organizations; and pushes the United States patent system back into a nineteenth-century mechanized, industrial past, just when we should focus on remaining competitive in a twenty-first-century global economy based upon information and services.

Background

In re Bilski began much like any other appeal when the BPAI affirmed an examiner’s rejections of Bilski’s claims for reciting unpatentable subject matter under 35 U.S.C. § 101.2 In particular, Bilski claimed a method for managing risk associated with selling commodities that, by the applicant’s admission, required no computer apparatus. The BPAI apparently ignored the prior detailed rejections by the examiner based on novelty (§ 102) and obviousness (§ 103) and instead focused only on § 101, finding the claims unpatentable under § 101 because they were broad enough to read on a method performed without any machine or apparatus. When Bilski appealed to the Federal Circuit, a three-judge panel heard oral arguments in the case, following usual procedure.

However, before the panel rendered a decision, the Federal Circuit took the unusual step of ordering a hearing en banc on how § 101 should be interpreted and applied.4 At one end of the spectrum, amici argued for a hard and fast “machine-or-transformation” test coupled with the abolition of patent protection for business methods and most computer-implemented processes (see, e.g., Brief for Financial Services Industry as Amici Curiae in Support of Affirmance; Amicus Curiae Brief of End Software Patents in Support of Appellee). Amici at the other end of the spectrum argued for a flexible application of the Supreme Court’s and Federal Circuit’s precedent to accommodate emerging technologies (see, e.g., Brief for Amicus Curiae Accenture in Support of Appellants; Brief of Amicus Curiae Regulatory DataCorp, Inc. in Support of Neither Party). It should be noted here that the authors were involved in the brief for Amicus Accenture.

Apparently acknowledging the gravity of the case and the wildly conflicting positions of the parties and amici, the court invited representatives from the Financial Services Industry and Regulatory DataCorp, Inc., to participate in the oral arguments before the full 12-judge court.

When the court’s decision was rendered, a majority of nine held that the machine-or-transformation test is the only test for patentable processes under § 101. Three separate dissenting opinions revealed a court nearly as divided as the amici. Judge Pauline Newman filed a vigorous dissent arguing that the majority’s exclusion of process inventions is contrary to the statute and precedent and ignores the constitutional mandate to promote useful arts and science. Judge Randall Rader also dissented, arguing that the majority opinion “links patent eligibility to the age of iron and steel at a time of subatomic particles and terabytes” and that the ruling will have a chilling effect on innovation. At the other end of the spectrum, Judge Haldane Robert Mayer’s dissent argued that the majority should have completely overruled State Street Bank and AT&T v. Excel. Judge Mayer argued that affording patent protection to business methods lacks statutory support and retards innovation. Judge Timothy Dyk also filed a concurring opinion, joined by Judge Richard Linn, to document statutory and early legal support for the majority’s opinion, arguing that it has long been assumed that the only processes eligible for patenting are those that produce or use manufactures, machines, or compositions of matter.

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In re Bilski Rejects the 1999 Act of Congress Adopted in the Wake of State Street Bank.

Remarkably, despite spanning 132 pages and decades (indeed, centuries) of patent jurisprudence and statutory history, the Federal Circuit’s decision failed to acknowledge the most recent and relevant congressional action, which indicated that patents properly protect “methods of doing or conducting business”—clear language, full stop.

In the aftermath of the State Street Bank decision, the same arguments raised in the Bilski case were raised to Congress and the public. These arguments included: that financial, insurance, and other companies had not been apprised they could protect business processes; that the Patent Office was not equipped to properly examine these cases; and that the Federal Circuit had gone too far in enlarging patenting for these sorts of methods. In response, far from overturning the State Street Bank decision (which it was entirely empowered—even asked—to do),7 Congress included in the 1999 American Inventors Protection Act (AIPA) a specific prior user defense to infringement of business method patent claims. According to Congress,8 § 273 was enacted to strike “an equitable balance between the interests of U.S. inventors who have invented and commercialized business methods and processes, many of which until recently were thought not to be patentable, and U.S. or foreign inventors who later patented the methods and processes.”9

In its quest for a single, definitive test for patentable processes, the Bilski court (stunningly) overlooked the fact that Congress had in fact embraced the State Street Bank analysis as the proper interpretation of the U.S. Code. “As the Court [in State Street Bank] noted, the reference to the business method exception had been improperly applied to a wide variety of processes, blurring the essential question of whether the invention produced a ‘useful, concrete, and tangible result.’ In the wake of State Street Bank, thousands of methods and processes used internally are now being patented.”10 Congress further elaborated that in light of the State Street Bank decision, the 1999 Act “focuses on methods for doing and conducting business, including methods used in connection with internal commercial operations, as well as those used in connection with the sale or transfer of useful end results—whether in the form of physical products, or in the form of services, or in the form of some other useful results; for example, results produced through the manipulation of data or other inputs to produce a useful result.”11 Acknowledging the broad range of stakeholders, Congress explained that “[t]he earlier-inventor defense is important to many small and large businesses, including financial services, software companies, and manufacturing firms—any business that relies on innovative business processes and methods.”12

The Supreme Court has repeatedly cautioned that “courts should not read into the patent laws limitations and conditions which the legislature has not expressed.”13 Less than a decade ago, in direct response to the Federal Circuit’s State Street Bank decision, Congress added the words “business method” to the Patent Code, provided a limited prior user right to protect companies caught up short, and, far from overturning the Federal Circuit’s decision, adopted it in its joint legislative history to explain the actions it had taken.

The Federal Circuit’s Bilski majority decision wholly ignores all of this. The majority decision ignores the fact that Congress clearly underscored that business methods are patentable (it’s hard to have a prior user defense for something that doesn’t exist),14 ignores the fact that Congress defined business methods extraordinarily broadly to include transactions between entities and manipulations of data to achieve a useful result, and instead cobbled together a few sentences from 30-year-old Supreme Court cases to severely limit § 101 processes to a cramped “machine-or-transformation” test, simply ignoring Congress and disregarding Supreme Court guidance.

In re Bilski Ignores the Supreme Court’s Admonitions Against Rigid Patent Law Tests.

Despite many recent admonitions from the Supreme Court to avoid applying the patent laws according to narrow, rigid tests, the Federal Circuit seems to have done it again with its machine-or-transformation test for patentable processes. Where the Supreme Court has set forth a broad, flexible framework for interpreting the patent laws, it is improper for lower courts to apply an unyielding test, even when the alleged interests of uniformity and consistency may be served.15

In re Bilski presents a situation remarkably similar to the 2002 case of Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd., in which a unanimous Supreme Court overruled the Federal Circuit’s adoption of a rigid, bright-line rule to determine when claim amendments bar application of the doctrine of equivalents.16 In that case, as here, the Federal Circuit’s own prior case law had not gone so far as to impose an absolute bar, applying, instead, a flexible, case-by-case analysis.17 There, as here, the Federal Circuit had found that its flexible, case-by-case approach had proved “unworkable,” necessitating a more limited bright-line test. Like the three separate dissents in In re Bilski, four separate dissents were entered in the underlying Festo decision by Federal Circuit judges objecting to the majority’s adoption of a narrow, inflexible test.18 Over the fervent objections of several of its brethren, the Federal Circuit majority in Festo adopted the narrow “absolute bar” test, which was then roundly struck down by a unanimous Supreme Court. It seems that the Bilski decision may face a similar fate.

The concerns of the Federal Circuit dissenters and the Supreme Court in Festo apply equally to the Bilski majority’s rigidly applied rule, which calls into question the validity of thousands of issued U.S. patents. “[C]ourts must be cautious before adopting changes that disrupt the settled expectations of the inventing community.”19 Changes require congressional action; “[t]he responsibility for changing [the law] rests with Congress.”20 Requiring congressional action to change well-settled rules is necessary because “[f]undamental alterations in these rules risk destroying the legitimate expectations of inventors in their property.”21

Like the doctrine of equivalents issue in Festo, the patentability of business processes was settled long before Bilski. Business methods were patentable before State Street Bank, and they remain patentable in accordance with Congress’s intent, as evidenced by 35 U.S.C. § 273, amended in the wake of State Street...
Bank, in which the Federal Circuit stated that a “business method” exception has never been invoked by this court, or the CCPA, to deem an invention unpatentable.22 To date, more than 15,000 patents have issued in Class 705, which the USPTO characterizes as the business methods class. As the Court in Festo put it: “To change so substantially the rules of the game now could very well subvert the various balances the PTO sought to strike when issuing the numerous patents which have not yet expired and which would be affected by our decision.”23 It would also subvert the policy balance implicit in the patent statute enacted just nine years ago by Congress.

By requiring that process patents produce some physical transformation or be tied to a machine, the Federal Circuit has ventured into territory formerly reserved for the legislature. Perhaps more surprisingly, the court has failed to heed several recent lessons imparted by the Supreme Court in other patent cases.

The Statute’s Plain Language and Supreme Court Precedent Set Forth a Flexible Approach.

Section 101 of the Patent Act provides that “any” process is patent-eligible “subject to the conditions and requirements of this title.”24 The Supreme Court set forth the broad framework for analyzing the eligibility of process claims for patent protection under 35 U.S.C. § 101 in Diamond v. Diehr.

It is for the discovery or invention of some practical method or means of producing a beneficial result or effect, that a patent is granted, and not for the result or effect itself. It is when the term process is used to represent the means or method of producing a result that it is patentable, and it will include all methods or means which are not effected by mechanism or mechanical combinations.25

Thus, patent protection for processes under § 101 encompasses practical applications of methods that produce useful results, including those not “effected by mechanism or mechanical combinations.”26 This broad formulation could not be clearer.

The Supreme Court has emphasized that § 101 must be interpreted expansively. In Diamond v. Chakrabarty, for example, the Court stated: “The subject-matter provisions of the patent law have been cast in broad terms to fulfill the constitutional and statutory goal of promoting ‘the Progress of Science and the useful Arts’ with all that means for the social and economic benefits envisioned by Jefferson.”27 The statute itself broadly defines “process” as “process, art, or method, and includes a new use of a known process, manufacture, composition of matter, or material.”28 Both the Supreme Court and the Federal Circuit have acknowledged that “[t]he use of the expansive term ‘any’ in § 101 represents Congress’s intent not to place any restrictions on the subject matter for which a patent may be obtained beyond those specifically recited in § 101 and the other parts of Title 35.”29 The Supreme Court has noted that although the original patent statutes used “art” in the sense of the broad, Constitutional phrase “useful arts,” that term was replaced by “process” in later statutes and the two terms had roughly the same meaning.30 While the concurrence of Judges Dyk and Linn purports to describe what people meant by these words at the time of the framing of the Constitution and the enactment of the first patent statutes, they completely ignore the rather broad common interpretations those words actually embraced. Examples of those interpretations can be found in the General Dictionary of the English Language, compiled by Thomas Sheridan in 1780 (“art: the power of doing something not taught by nature and instinct; a science, as the liberal arts; a trade; artfulness; skill, dexterity; cunning”; “process: tendency, progressive course; regular and gradual progress; methodical management of any thing; course of law”; “useful: convenient, profitable to any end, conducive or helpful to any purpose”)31 and in Webster’s 1833 edition of the Dictionary of the English Language (“art: cunning, device, skill or trade”; “useful: serviceable, profitable”).32

Further, it is interesting and instructive to note that the Oxford English Dictionary indicates that the original sense of “technology” derives from the Greek “technhi,” the primary meaning of which is simply “art, craft,” as opposed to “episteme,” which referred to “scientific knowledge, a system of understanding.”33 And according to Webster’s 1833 edition, “technology” is “a treatise on the arts, an explanation of terms of art”; according to Sheridan’s dictionary in 1780 “technical” referred to something “belonging to arts, not in common or popular use.”34 The current association of “technology” only with more complicated machines, chemical processes, or electrical systems, which seems to drive so much of the majority’s thinking in Bilski (and Judge Mayer’s breathtaking attack on all forms of new financial, industrial engineering, and business processes as “non-technical”), represents a post-Industrial Revolution overlay on what originally embraced all forms of practical human ingenuity, or “art.”

The Federal Circuit’s insistence that claimed processes must be embodied in machines or involved in transforming matter simply confuses what “technology” and the “useful arts” embrace. Given the broad statutory language defining patent-eligible subject matter, the Diehr test for processes has proven flexible enough to adapt to most, if not all, man-made, practical innovations, just as Congress intended. It would be imprudent, then, to depart from this adaptable approach in favor of a more limited, rigid standard such as the machine-or-transformation test of the Bilski majority.

Indeed, the Supreme Court has refused to so limit § 101. In Gottschalk v. Benson, the Court stated: “It is argued that a process patent must either be tied to a particular machine or apparatus or must operate to change articles or materials to a ‘different state or thing.’ We do not hold that no process patent could ever qualify if it did not meet the requirements of our prior precedents.”35 The Bilski majority considered these statements but found more persuasive one solitary passage from Diehr in which the Supreme Court repeated a quote from Benson: “Transformation and reduction of an article ‘to a different state or thing’ is the clue to the patentability of a process claim that does not include particular machines.”36 Never has so much in a case depended on the meaning of the word “the.” Given the Supreme Court’s own words in the very same case, that it did “not hold” that physical transformation or tethering to a machine was necessary,37 the reliance by the Bilski majority, vaulting “a clue” to a rigid, absolute
test makes little jurisprudential sense. And it flies in the face of the Supreme Court’s repeated admonitions against such inflexible rules.

**Bilski’s Claims Are Patent-Eligible Under § 101; They Deserve a Fair Examination Even if They Are Not Patentable.**

It is well settled that “[a] principle, in the abstract, is a fundamental truth; an original cause; a motive; these cannot be patented, as no one can claim in either of them an exclusive right.” Since Bilski’s claims do not seem to recite one of these fundamental principles, they should be entitled to an examination by the Patent Office (which is what the inventors paid the Patent Office for), “subject to the conditions and requirements” of the Patent Act.

A § 101 analysis is simply the first threshold inquiry that precedes a patentability analysis under §§ 102, 103, and 112 of the patent statute. As the Court stated in *Flook*: “The obligation to determine what type of discovery is sought to be patented must precede the determination of whether that discovery is, in fact, new or obvious.” Attempts to import into § 101 the other requirements of patentability are simply improper. “The ‘novelty’ of any element or steps in a process, or even of the process itself, is of no relevance in determining whether the subject matter of a claim falls within the categories of possibly patentable subject matter.”

Bilski’s claims recite a process implemented in the physical world, for example, “initiating a series of transactions” between a “commodity provider and consumers”; “identifying market participants”; and “initiating a series of transactions between the ‘commodity provider’ and ‘said market participants.’” Because the process claims specific interactions between human actors, such as market participants and commodity providers, it represents a practical application with a useful result. Further, Bilski does not attempt to patent what is simply an abstract idea, physical phenomenon, or law of nature, these being the only judicially recognized exceptions to the broad expanse of § 101. The claim does not preempt all forms of hedging, but instead covers the particular set of practical steps claimed. Thus, the formal structure of the Bilski claims, as such, seem to present patent-eligible subject matter under § 101, although the claims may not be patentable under other sections of Title 35.

**The “Machine-or-Transformation” Test Does Not Solve the Problem.**

Although the Bilski majority sought to clarify the standard for process patentability under § 101, recent decisions by the BPAI applying the machine-or-transformation test reveal difficulty in applying the test. For example, in *Ex Parte Wasynczuk*, the BPAI found that claims to a “computer-implemented system” including “a first executing process” and “a second executing process” failed the machine-or-transformation test for lacking a *specific machine*. However, the BPAI found substantially identical claims to a “computer-implemented method” including “a first physical computing device” and “a second physical computer device” (essentially a dual-processing computer) did have a “specific machine” and therefore satisfied the machine-or-transformation test.

In *Ex parte Langemyr*, the BPAI applied the machine-or-apparatus test to reject claims to a “method executed in a computer apparatus” for modeling “a combined physical system having physical quantities” as well as substantially identical claims that recited a “computer readable medium comprising machine executable code . . . executed by at least one processor.” These decisions seem to hinge largely on claim format rather than substance and herald the dawn of the new, radically uncertain age of the machine-or-transformation test.

**Conclusion**

The Federal Circuit’s long-awaited Bilski decision, while surely a well-intentioned response to what the judges regard as Supreme Court guidance, clearly also responds to the criticisms the Federal Circuit endured after its *State Street Bank* decision (including some tart comments from a few justices on the Supreme Court). However, in running from its past decisions, the Federal Circuit seems simply to have done it again: that is, to have fashioned a rigid, absolute rule for the patentability of processes, a rule better suited for the days of buggy manufacturers and leather dyers than the modern world of information and services. And it has stunningly and simply ignored the clear will of Congress, a Congress that adapted the patent code in response to *State Street Bank* to carefully balance competing policy interests, a balance that the Federal Circuit has now blithely upset. In short, Bilski is wrongly reasoned, flies in the face of Supreme Court guidance, ignores Congress, throws aside the settled expectations of thousands of patentees, and risks new, serious, and unknown economic harms.

**Endnotes**

7. Indeed, bills have been introduced in a number of successive Congresses to overturn or severely curtail the scope of patenting after *State Street*, none of which has passed.
9. Id.
10. Id.
11. Id. (emphasis added).
12. Id.
14. Although one can argue that the Federal Circuit in Bilski does say that the “business method exception” never existed and therefore the amended section 273 simply refers to business methods implemented with machines or that transform articles, most observers interpret business methods to be precisely those sorts of processes that are not necessarily carried out by machines. And that argument is firmly belied by the *Congressional Record*, which describes the far broader assortment of processes meant by “business methods.” H.R. REP. NO. 106-464, at 121–22 (1999) (Joint Conference Report). See, in particular: “The method that is the subject matter of the defense may be an internal method of doing business, such as an internal human resources management process, or a method of conducting business such as a preliminary or intermediate manufacturing process, which contribu-
utes to the effectiveness of the business by producing a useful end result for the internal operation of the business or for external sale.” See also: “The issue of whether an invention is a method is to be determined based on its underlying nature, and not on the technicality of the form of the claims in the patent. For example, a method of doing or conducting business that has been claimed in a patent as a programmed machine, as in the State Street case, is a method for purposes of Section 273 if the invention could just as easily have been claimed as a method. Form should not rule substance.” 145 CONG. REC. H11769-01, at 11802 (Nov. 9, 1999) (Joint Conference Report) (emphasis added).

17. Id. at 730.
18. Id.
19. Id. at 739 (citing Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17, 28 (1997)).
20. Id.
21. Id.
22. 149 F.3d at 1375.
23. Festo at 739 (quoting Warner-Jenkinson, 520 U.S. at 32, n.6).
26. Id.
29. In re Alappat, 33 F.3d 1526, 1542 (Fed. Cir. 1994); see also State Street Bank, 149 F.3d 1368, at 1372, and Chakrabarty, 447 U.S. at 308 (stating that “Congress plainly contemplated that the patent laws would be given wide scope” considering its use of the comprehensive word “any.”).
30. Diehr, 450 U.S. at 182.
31. See Thomas Sheridan, GENERAL DICTIONARY OF THE ENGLISH LANGUAGE (1780).
32. NOAH WEBSTER, DICTIONARY OF THE ENGLISH LANGUAGE 35 (11th ed. 1833).
34. Webster, supra note 32, at 35; Sheridan, supra, note 31.
36. Diehr, 450 U.S. at 184.
38. Diehr, 450 U.S. at 185 (quoting Le Roy v. Tatham, 55 U.S. (14 How.) 156, 175 (1852)).
39. Flook, 437 U.S. at 593; see also Diehr, 450 U.S. at 188 (concluding that the claimed “process is at the very least not barred at the threshold by § 101”).
41. Diehr at 188-89.
42. While the Federal Circuit (and the Supreme Court) have noted that the § 101 inquiry is distinct from those of §§ 102, 103, and 112, undoubtedly the tests are also to some extent entwined. Particularly when looking at whether a claim like Bilski’s is just an abstract theory or is too preemptive, the Patent Office and the courts require the right context for making that assessment. To take an example from the electrical arts, you have to know whether you are examining the first patent for transistors to know whether the patentee is entitled to very broad claims that might cover all future transistors and whether such breadth is legitimate. The same holds for process patents like Bilski: one needs to understand the other sorts of hedging and how this particular claimed set of process steps fits into that background before the Patent Office or the court can make a sweeping generalization that it is merely an “abstract idea,” rather than a practical application of the idea. This is why it is important (and official practice) for the Patent Office to examine patents for all conditions of patentability together at one time, rather than piecemeal. The courts should do the same.
44. Id.