



PATENT, TRADEMARK & COPYRIGHT



JOURNAL

Reproduced with permission from BNA's Patent, Trademark & Copyright Journal, 78 PTCJ 807, 10/30/09, 10/30/2009. Copyright © 2009 by The Bureau of National Affairs, Inc. (800-372-1033) <http://www.bna.com>

PATENTS

The Supreme Court has an opportunity to declare that software is eligible for patenting, but the authors fear that it may well do just the opposite.

Beyond Affirmed: Will the Supreme Court Use *In re Bilski* to Restrict Patentable Subject Matter Even Further Than the Federal Circuit?

By JAMES T. CARMICHAEL
AND STEPHEN W. AYCOCK II

"I take it that we are operating under the assumption that software is patentable? We have never held that in this Court."

James T. Carmichael and Stephen W. Aycock II are patent lawyers with Miles & Stockbridge, Tysons Corner, Va. The opinions expressed and any legal positions asserted in the article are those of the author and do not necessarily reflect the opinions or positions of Miles & Stockbridge, its other lawyers, or BNA. This article is for general information and is not intended to be and should not be taken as legal advice for any particular matter or other purpose.

Justice Stephen G. Breyer, during oral arguments in *Microsoft Corp. v. AT&T Corp.*, 550 U.S. 437, 82 USPQ2d 1400 (2007)(74 PTCJ 7, 5/4/07) (Transcript of Record at 22).

Some say the Supreme Court doesn't grant certiorari to affirm the Federal Circuit. But it is hard to imagine the Supreme Court reversing *In re Bilski*, 545 F.3d 943, 88 USPQ2d 1385 (Fed. Cir. 2008) (77 PTCJ 4, 11/7/08). The examiner, the Patent and Trademark Office's Board of Patent Appeals and Interferences, and the en banc U.S. Court of Appeals for the

Federal Circuit all found *Bilski's* claimed invention to be ineligible subject matter. Judging from its precedent, so will the Supreme Court.

Then why take the case? The Supreme Court must have agreed to hear *Bilski* in order to do something more—perhaps much more. The Supreme Court may use *Bilski* to tighten the limits on patent-eligible subject matter even further than the Federal Circuit.

Clues can be found in previous Supreme Court opinions. For example, while certiorari was dismissed as improvidently granted in *LabCorp*, the case involved whether certain claims were patent eligible under 35 U.S.C. § 101. *Laboratory Corporation of America d/b/a LabCorp. v. Metabolite Laboratories Inc.*, 548 U.S. 124, 79 USPQ2d 1065 (2006)(72 PTCJ 208, 6/23/06). Justice Stephen Breyer, joined by Justices John Paul Stevens and David H. Souter, dissented from the dismissal and was clearly frustrated with the court for not deciding the case and addressing the Section 101 issue. In his dissent in *LabCorp*, Breyer wrote that “a decision from this generalist Court could contribute to the important ongoing debate, among both specialists and generalists, as to whether the patent system, as currently administered and enforced, adequately reflects the ‘careful balance’ that ‘the federal patent laws. . . embod[y].’ ” *LabCorp*, 548 U.S. at 139 (internal citations omitted). It was also apparent that he was in favor of a more narrow interpretation of Section 101. Justice Anthony Kennedy, in his concurrence in *eBay v. MercExchange*, 547 U.S. 388, 78 USPQ2d 1577 (2006)(72 PTCJ 50, 5/19/06), expressed his concern over the “potential vagueness and suspect validity” of business method patents.

The views of Breyer and Kennedy are not lost on *Bilski* or the government. Both sides clearly recognize that the court has some vocal opponents to business method and software patents. In its brief, the government tries to appeal to the Section 101 limiting sentiment of the court by tracing the historical roots of the constitutional clause, the statute and the case law. In his brief, *Bilski* preemptively tries to deal with the anti-business method contingent by arguing that the machine-or-transformation test does not address the concerns of those that would limit patentable subject matter.

Earlier Interest in Patentable Subject Matter.

Talk of changing the bounds of patentable subject matter is not new. The chorus asking for guidance on Section 101 has been rising since the 70s, which, not surprisingly, is around the time that computer technology really began to flourish. The Supreme Court mentioned in *Benson* (1972) and *Flook* (1978) that Congress would need to act to change Section 101 in order to accommodate new technological advances if it so desired. *Gottschalk v. Benson*, 409 U.S. 63, 73, 175 USPQ 673 (1972); *Parker v. Flook*, 437 U.S. 584, 595, 198 USPQ 193 (1978). Yet, Congress has not changed Section 101 since 1952 and the Supreme Court hasn't visited the patentable subject matter issue directly since 1981.

The 1970s saw the Supreme Court broaden patent-eligible subject matter when the computer and software industries were young. Our software and hardware industries are now mature, and the United States leads the world in these important areas of technology. Indeed, the absence of interference by Congress and a liberal interpretation of Section 101 from the 70s through the 80s may have encouraged the nascent software and computer industries to flourish and thrive in the United

States. This rise to dominance gave America a much needed manufacturing and production edge at a time when traditional areas of manufacturing were beginning to slip into what now can be seen as a protracted decline.

Of the three ways that patentable subject matter can be limited—by the executive branch via the Patent and Trademark Office by Congress, or by the courts—the Supreme Court probably stands the best chance of making it happen. Patent reform bills have been kicked around in Congress for years without any significant legislation passing. The PTO's most recent attempt at a major substantive rule change package sparked a lawsuit and ended up being stayed by a court, with the PTO ultimately abandoning parts of the rule changes (78 PTCJ 733, 10/16/09). So, if the tide within the government as a whole or within the courts is shifting toward limiting patentable subject matter, the Supreme Court is where the action will be and *Bilski* may be the case that sees it happen.

Petitioner: Test Has No Basis, Disrupts ‘Balance.’

The battle lines have been drawn and the two sides in *Bilski* have carefully chosen word labels for their respective positions. These word labels get repeated over and over in the briefs like sound bites in a political campaign. *Bilski* simply asks for a “practical application” test. Brief for Petitioners at 43, *Bilski v. Kappos* (U.S. July 30, 2009) (No. 08-964) (78 PTCJ 455, 8/14/09). The government's brief refers to *Bilski's* method as “a technique for organizing human activity.” Brief for Respondent at 10, *Bilski v. Kappos* (U.S. Sept. 25, 2009) (No. 08-964) (78 PTCJ 675, 10/2/09). And so a battle looms between “practical application” and “organization of human activity” over some claims that arguably are not the best vehicle to decide these issues. There must be something larger at stake here.

In his brief, *Bilski's* argument centers around three main themes: (1) the machine-or-transformation test allegedly finds no basis in statutes and conflicts with Supreme Court precedent; (2) 35 U.S.C. § 101 must be read broadly enough to protect the reference to methods of doing or conducting business found in 35 U.S.C. § 273; and (3) the “practical application” test should be used in place of the machine-or-transformation test.

In addressing his first point of argument, *Bilski* notes that the Federal Circuit acknowledged that “language such as the use of ‘e.g.’ [in a quote from *Diamond v. Diehr*, 450 U.S. 175, 205 USPQ 488 (1981)(519 PTCJ AA-1, D-1, 3/5/81)] may indicate the Supreme Court's recognition that the machine-or-transformation test might require modification in the future.” Brief for Petitioners at 13. *Bilski* also notes that the Federal Circuit majority stated that the Supreme Court “may ultimately decide to alter or perhaps even set aside this test to accommodate emerging technologies.” *Id.* The quotes that *Bilski* chose from the Federal Circuit may foreshadow events to come. There almost certainly will be alterations or modifications to the safe harbor provisions of the machine-or-transformation test, but which direction will the court take?

Bilski proceeds to invoke recent Supreme Court patent cases—*Festo*, *eBay*, and *KSR*—in order to appeal to the court's penchant for reigning in an overreaching Federal Circuit. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 62 USPQ2d 1705 (2002) (64 PTCJ 98, 5/31/02); *eBay Inc. v. MercExchange LLC*,

547 U.S. 388, 78 USPQ2d 1577 (2006) (72 PTCJ 50, 5/19/06); and *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398, 82 USPQ2d 1385 (2007) (74 PTCJ 5, 5/4/07). In this case though, the Federal Circuit may be going in the direction the Supreme Court wants, and may have simply not gone far enough.

In his brief, Bilski tries to draw on congressional intent by arguing that the machine-or-transformation test disrupts the “balance” struck by Congress when it enacted Section 273. Bilski notes that when enacting Section 273, “Congress did not amend the Patent Act to limit patent eligibility for business methods.” Brief for Petitioners at 31. However, Congress did not amend the Patent Act at that time to expressly include business methods. So, that argument appears to cut both ways.

Bilski refers to numerous statements in the *Congressional Record*, and appears at times to be stretching what Congress actually did when enacting Section 273—that is, enact an affirmative defense in the wake of *State Street Bank* to provide certainty to businesses regarding infringement lawsuits for practices in which they were currently engaged. *State Street Bank & Trust Co. v. Signature Financial Group Inc.*, 149 F.3d 1368, 47 USPQ2d 1596 (Fed. Cir. 1998) (56 PTCJ 346, 7/30/98). This defense was needed partly because in patent law, unlike copyright law, independent invention or creation is not a defense to infringement.

Finally, Bilski asks the court to apply a flexible “practical application standard” that is derived from cases in which the court reasoned that an application of a law of nature may be patentable. Brief for Petitioners at 43. Bilski notes that “a claim containing a mathematical formula satisfies § 101 when it ‘implements or applies that formula in a structure or process which, when considered as a whole, is performing a function which the patent laws were designed to protect.’” Brief for Petitioners at 45-46 (quoting from *Diehr*, 450 U.S. at 192). Bilski’s argument begs the real question of whether hedging against energy price increases due to weather is a “function which the patent laws were designed to protect.” This question will almost certainly be asked during oral argument.

Bilski argues that non-manufacturing method patents have historically been issued. His argument falls flat mostly due to a poor choice of examples. Bilski cites a patent of John Churchill relating to magnetic variation as applied to cartography and navigation. However, as Bilski notes in his brief, Churchill used the invention to make maps and globes and longitude charts for ships at sea. Unlike Bilski’s invention, Churchill’s invention was actually used to make something.

Bilski contends that under “the Federal Circuit’s jurisprudence interpreting this Court’s ‘practical application’ test, the Bilski patent application claims would likely have been found patent eligible,” reasoning that the invention as a whole applies mathematical calculations as part of a process for buying and selling energy commodities and that this is “just the type [of practical application of mathematical concepts in a useful process] embraced by the Federal Circuit until it adopted the mandatory machine-or-transformation test.” Brief for Petitioners at 54-55. Here, Bilski seems to lose sight of the fact that the dissenting judges of the Federal Circuit also disliked the machine-or-transformation test, but would have nonetheless rejected Bilski’s claims under a different rationale.

So, apparently, even without the machine-or-transformation test, Bilski’s claims would have faced the prospect of being found not patentable. It is not the machine-or-transformation tests that stands in the way of Bilski getting a patent; it is Bilski’s claims.

Government Brief: Section 101 Is Limited.

The government’s brief focuses on two main points: (1) the history of the term “process” and the balance that Section 101 achieves between being broadly encompassing but imposing meaningful limits, and (2) that Section 273 does not implicitly expand Section 101. The government casts Bilski’s claims as techniques for organizing human activity removed or untethered from technology. Noting that software code claimed by itself is not patent-eligible, the government goes on to argue that Bilski’s claimed invention is even further removed from technology because it does not even claim to be software. Brief for Respondent at 39-40.

The government makes this point to illustrate why affirming the Federal Circuit will not adversely affect appropriate software patents from issuing. Brief for the Respondent at 40. So, the solicitor at least appears not to be opposed to appropriately drawn software patents.

The government’s brief addresses Bilski’s “practical application” requirement as merely a precondition for patent eligibility, noting that a claimed process that lacks any “practical application” or “useful” result is a paradigmatic unpatentable abstract idea. Brief for Respondent at 45. The government also notes, addressing the Section 273 argument, that if Congress wanted to extend patent protection to non-technological processes, such as the organization of human activity, it would have “spoken with greater clarity.” Brief for Respondent at 48.

Microsoft: Affirm, But Change Test.

Microsoft Corp., joined by Koninklijke Philips Electronics N.V., and Symantec Corp., argues that the judgment of the Federal Circuit should be affirmed, but that the exclusive reliance on the “machine-or-transformation” test ought to be disapproved. See Brief for Amici Curiae Microsoft et al. in Support of Respondent at 3, *Bilski v. Kappos* (U.S. Oct. 2, 2009) (No. 08-964). Interestingly, in its brief, Microsoft embarks on an explanation of how computers work internally (via transistors turning on and off like tiny switches under software control) and shows why computers do fit within the eligibility framework developed by the court during the Industrial Revolution. See Brief for Amici Curiae Microsoft et al. at 4.

Microsoft argues that software cannot be realistically viewed separate from hardware and, as such, computer-implemented processes by definition include physical things (i.e., the tiny transistor switches within the computer itself). See Brief for Amici Curiae Microsoft et al. at 5. Microsoft explains that a standard established in the 19th century that “a patent-eligible process must involve one or more disclosed physical things—that is, it must describe a series of steps that use physical means to produce a result or effect in the physical world” is fatal to Bilski’s claims, but would leave intact “properly drawn claims describing computer-implemented processes.” Brief for Amici Curiae Microsoft et al. at 4.

Microsoft’s formulation of the test for a patent-eligible process claim sounds a lot like the machine-or-

transformation test. The “physical means” seems analogous to a machine or apparatus and “a result or effect in the physical world” sounds a lot like a transformation of something tangible. Microsoft’s formulation of the test may actually be stricter than the machine-or-transformation test in the sense that Microsoft’s test requires that the steps use physical means to produce the result. At least in the machine-or-transformation test applicants get an “or” in the middle.

Microsoft dislikes the term “software patent.” Brief for Amici Curiae Microsoft et al. at 13. Microsoft appears to be distancing itself from “software patents” as if it senses the potential for those kind of patents to be limited by the court and wants to preserve an argument that its own patents are something else. Even more interesting, Microsoft argues that “software patents” as a category distinct from hardware patents have “no technological or legal basis.” *Id.*

Microsoft explains the historical roots of modern software using examples like Charles Babbage’s Analytical Engine and the Jacquard Loom. Brief for Amici Curiae Microsoft et al. at 15. Microsoft likens the holes in the punch cards for a Jacquard loom to pits on the surface of a CD, but doesn’t say whether the punch cards for a Jacquard loom would be patentable. *Id.*

Microsoft sticks to its message that “a patent-eligible process must involve one or more disclosed physical things—that is, it must describe a series of steps that use physical means to produce a result or effect in the physical world.” Brief for Amici Curiae Microsoft et al. at 28. Echoing *KSR*, Microsoft calls the machine-or-transformation test “inflexible.” *Id.*

Microsoft walks an interesting line in its brief. On one hand, Microsoft agrees with the Federal Circuit that *Bilski*’s claims are not patent eligible. On the other hand, Microsoft does not like the machine-or-transformation test and would replace it with a test including physical means and a result or effect in the physical world. Microsoft appears to take the position that a claim drawn to a computer-implemented process is really nothing more than a hybrid claim having software steps and hardware for performing those steps. And, if the court accepts a definition like Microsoft’s, *Bilski*’s claims could be rejected while leaving patents drawn to computer implemented processes intact.

Constitutional Considerations.

One thing that has been left unanswered by the briefs of the parties is how changing the contours of patent-eligible subject matter with regard to business methods (or, more importantly, software) will affect the constitutional purpose of “promoting the progress of science and the useful arts.” In other words, is there a compelling scientific or economic reason for choosing to expand or contract subject matter eligibility when it comes to business methods and software?

It is a difficult question to answer because business methods and software are ubiquitous in the U.S. economy and reach into nearly every organization of every size. As Ben Klemens noted in his paper, “The Rise of the Information Processing Patent,” “there is no self-contained information processing industry: every business in every field uses software and business methods.” *Boston University Journal of Science and Technology Law*, 14:1, Abstract, June 21, 2007.

In his paper, Klemens discusses the question “where should one draw the line between what is patentable and what is not?” from two perspectives: the legal and the economic. In the economic section he contends that “the time period when software was widely understood to be not patentable saw the invention of the Internet at large, the World Wide Web, e-mail, instant messaging, word processors, relational databases, spreadsheets, graphical user interfaces, audio compression/decompression software, image manipulation software, some nifty games, and countless other options.” Klemens at 21. Klemens also argues that “the world’s web economy progresses by mostly ignoring U.S. patent law.” Klemens at 27. Klemens’s list of technologies that were developed when software per se was regarded as unpatentable makes it easy to understand how the Supreme Court may see little risk in limiting patent-eligible subject matter.

Klemens characterizes software and information processing as “massively decentralized pseudo-industries” in which “there are so many players that independent invention is basically inevitable.” Klemens at 37. He argues for a regime in which a process is patentable only if it includes steps that are “non-trivially physical.” Klemens at 35.

This is essentially the result in *Bilski* from the Federal Circuit. In the machine-or-transformation test, the steps need nontrivial physicality in the form of a specific machine or apparatus or in the form of transformed material. One difference is that the Federal Circuit left open the prospect of data as a transformable material.

If, as Klemens contends, the “judicial line distinguishing the patentable from the unpatentable exactly matches the ideal economic line that divides traditional industries that prospered with patents from the massively decentralized information-based industries that have prospered without patents,” then the Supreme Court may seek to move the line between patentable and unpatentable to exclude processing data.

Patents and Economic Growth.

Business methods and software could arguably be lumped together in the general category of data processing. Excluding that from patent-eligible subject matter would be consistent with *stare decisis*. It would not necessarily contradict or overrule existing precedent such as *Abele*, for example. *In re Abele*, 684 F.2d 902, 214 USPQ 682 (C.C.P.A. 1982) (24 PTCJ 390 8/19/82).

In *Abele*, the claims at issue involved image data obtained by a computed tomography machine. The data represented a physical entity (e.g., part of a person’s body), and that has been described as the reason the claims were patentable. But there is another way to explain how *Abele* satisfied Section 101; its computed tomography machine was a *machine*. So, it is foreseeable that the Supreme Court could further limit patentable subject matter while leaving intact many of its earlier decisions.

Before it does so, the Supreme Court ought to consider whether its expansion of patentable subject matter in the 1970s and early 80s was responsible for promoting the explosive growth of the U.S. information technology economy. Even if it were true today that “the world’s web economy progresses by mostly ignoring U.S. patent law,” the opportunity for this progress certainly exists because U.S. patent laws provided an

incentive for the web to emerge from R&D labs and become a driving force in the U.S. economy. Is it merely a coincidence that the country offering the greatest scope of patent eligibility in the world is also the country that produced the greatest computer-related inventions?

The Supreme Court should take this opportunity to declare that the United States is open for business and that software is eligible for patenting. But it will not. It may well do the opposite.