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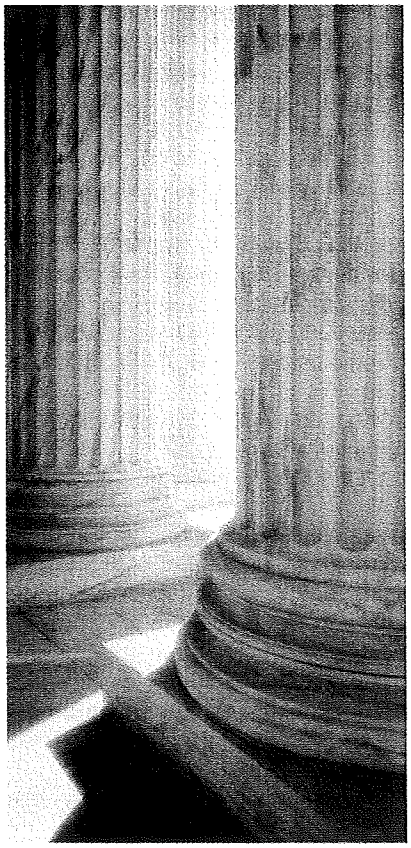
Legally Speaking Are Business Methods Patentable?

How the U.S. Supreme Court's forthcoming decision in the Bilski v. Doll *case is expected to affect existing and future software patents.*

THE PATENTABILITY OF software and business methods has been a contentious topic for more than 50 years. Because the U.S. Supreme Court decided to review the patentability of business methods in *Bilski v. Doll* in the fall of 2009, this controversy will once again—and soon—reach a boiling point. Bilski is asking the Supreme Court to reverse decisions denying him a patent on a three-step method of hedging the risk of price fluctuations in commodities.

Although the *Bilski* case, strictly speaking, does not involve software patents, the Court is likely to say some things in *Bilski* that will have implications for the patentability of software innovations. This is partly due to the fact that Bilski's method could be carried out with the aid of a programmed computer, but also because most of the Court's prior rulings on patent subject matter involve computer program innovations and many software patents are for software-implemented business methods.

The Court's last pronouncement on patent subject matter was its 1981 *Diamond v. Diehr* decision in which the Court ruled by a 5–4 majority that a rubber curing process that included computer program calculations was patentable subject matter. Many software companies, industry associations, and programmers will be weighing in with briefs in *Bilski* arguing for and against software patents.



This column will first briefly review the *State Street Bank & Trust Co. v. Signature Financial Services, Inc.* decision rendered by the U.S. Court of Appeals for the Federal Circuit (CAFC) in 1998 that opened the door to business method patents.

After the Supreme Court in 2006 began to signal its dissatisfaction with the *State Street* test and with business method patents, the CAFC decided to reconsider the broad conception of patentable subject matter articulated in *State Street* and in October 2008, it rejected Bilski's business method claim.

Rather than giving the CAFC leeway to develop its own post-*Bilski* jurisprudence, the Court has selected *Bilski* as its preferred vehicle for making a new pronouncement about patentable subject matter.

I predict the Court will rule that Bilski's method is unpatentable, although for somewhat different reasons than most CAFC judges gave. The Court's pronouncement in *Bilski* will almost inevitably have direct implications for existing and future software patents. This may affect the behavior of both start-up and established software companies, venture capitalists, investors, and many others.

State Street on Patent Subject Matter

Signature is a financial services company that in 1993 obtained a patent on an automated data processing system that used a hub-and-spoke structure to organize financial services. After negotiations over a license to use this patent broke down, State Street sought a court declaration that Signature's patent was invalid because it claimed a business method, which many prior decisions had deemed to be unpatentable subject matter.

In upholding Signature's patent,

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the CAFC characterized the so-called business method exception to patentable subject matter as "ill-conceived." The CAFC said that "anything under the sun made by man" was patentable subject matter, and any process could be patented as long as it yielded a "useful, concrete and tangible result," as Signature's did.

The *State Street* ruling has been controversial for years, in part because it contradicted numerous previous decisions, which critics of *State Street* thought had properly rejected business method patents. Yet, because the Supreme Court decided not to review the *State Street* ruling, some inferred that the Court had acquiesced in the CAFC's expansive interpretation of patent subject matter.

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Signals from the Supreme Court

Starting in 2006, the Supreme Court began signaling its dissatisfaction with the CAFC's conception of patentable subject matter. One opinion criticized business method patents as vague and poor in quality. A second pointed out that the Court had never endorsed the *State Street* test for patent subject matter and questioned the patentability of methods that could be infringed by thinking (i.e., mental processes). During oral argument in a third case that involved a software patent, several Justices asked questions about the patentability of software, even though that issue was not really before the Court.

The U.S. Patent and Trademark Office (PTO) inferred from these signals that the Court did not agree with the *State Street* test. The PTO then began denying applications for business methods and other nontechnological patents, including Bilski's application for a patent for a three-step method of hedging risks of price fluctuations as to commodities.

The *In Re Bilski* Case

The CAFC decided to hear Bilski's appeal en banc (that is, before the full court, not just the usual three-judge panel). It also invited interested parties to submit briefs about whether the court should reconsider the *State Street* test.

In October 2008, nine of the 12 CAFC judges agreed that Bilski's method was unpatentable because it was neither "tied to a machine," nor did it "transform" anything from one state to another, as they thought Supreme Court precedents required.

Yet, two of the nine judges, along with another colleague, wrote separately to say that business methods are ineligible for patents. Two other judges dissented, objecting to the majority's restrictive interpretation of patent subject matter.

Business Method Patents Critics

The CAFC critics of business method patents asserted that the historical record showed that business methods such as Bilski's were not patentable subject matter. Prior to 1793, a well-established English practice restricted patents to manufacturing processes. This "reflects the understanding that only processes related to manufacturing or 'manufactures' were within the statute."

This rule was carried over into U.S. law in the 1793 patent act. During the 19th and all but the last two years of the 20th century, U.S. patents were consistently limited to technological processes. There being no evidence that Congress ever decided to expand patent subject matter to include business methods, there was no basis on which to award Bilski or anyone else a patent on a business method, no matter how innovative it might be.

There was, moreover, an unbroken—until *State Street*—line of precedents going back to the 19th century that considered business methods to be unpatentable.

Judge Mayer's opinion in *Bilski* took the strongest position against business method patents. In his view, "[t]he patent system is intended to protect and promote advances in science and technology, not ideas about how to structure commercial transactions." Patents on business methods such as Bilski's "lack[ ] constitutional and statutory support, serve[ ] to hinder rather than promote innovation, and usurp[ ] that which rightfully belongs in the public domain."

Nor are patents necessary to bring about innovative business methods, for "by their very nature, [such new methods] provide a competitive advantage and thus generate their own incentives." The PTO was being distracted from examining technology patents because *State Street* had led to a flood of applications for nontechnological processes. In the heyday of the Internet bubble, many entrepreneurs sought patents on methods of conducting business on the Internet.

Proponents of Broad Subject Matter

The dissenting CAFC judges thought it was a mistake to freeze the concept of patentable subject matter to that which was appropriate to the "age of iron and steel," as they thought the majority's "machine-or-transformation" test would do. This test might exclude innovative processes involving "subatomic particles and terabytes."

The dissenters also worried that the majority's restrictive view of patentable processes would undermine incentives to invest in innovation in new fields and would put at risk the position that the U.S. has enjoyed as "the world's innovation leader." Many investments had, moreover, been made in reliance on *State Street*'s test, so it was troubling to "disrupt the settled expectations of those who relied on the law as it existed" under *State Street*. Only one of the dissenters, however, stood up for the *State Street* "useful, concrete, and tangible result" test, saying that it had proven workable and should be retained.

What Will the Supreme Court Do?

Chances are high that the Supreme

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Court will rule in *Bilski* that business methods are unpatentable. The Court typically finds historical evidence and decades of precedents persuasive. Both of these factors cut against the patentability of business methods.

The structure and purpose of the patent act also suggest that patents should only protect technological processes. Section 101 allows patents to issue for "new and useful machines, manufactures, compositions of matter, and processes." The constitutional purpose underlying this provision is "to promote the progress of...useful Arts," which in today's parlance is understood to mean the technological arts. The Court will probably also discuss some policy reasons for limiting patents to technologies.

The Court will probably be unanimous in striking down business method patents. Although the opinion written by one of the Justices for the Court will likely focus only on the unpatentability of business methods, there may well be at least one concurring opinion that takes a stronger and broader stance against nontechnological patents.

It is highly unlikely that the Court will endorse the *State Street* standard in part because it requires reading four words into the statute that aren't there (the "useful, concrete, and tangible result" part of the test). This test is, moreover, normatively unappealing and has caused the PTO to waste resources examining nontechnological claims.

Nor is the Court likely to endorse the CAFC's "machine-or-transformation" test because that test seems to conflict with the Court's 1972 decision in *Gottschalk v. Benson*. Benson sought a patent for a novel method of transforming binary coded decimals to pure binary form. One claim contemplated carrying out this method in a programmed computer; another claim omitted references to computer technology. The Court ruled that this algorithm was ineligible for patent protection because it was an abstract mathematical idea. The Court did not distinguish between the claim that mentioned re-entrant shift registers and the one that didn't.

Unless the Court is ready to overturn *Benson*, it may say that Bilski's business method should not become patentable if Bilski simply mentions that the method could be carried out with the aid of a programmed computer or that when embedded in software, the method would transform data.

Implications of *Bilski* for Software Patents

In explaining why Bilski's method is unpatentable, the Court will almost certainly have to construe *Benson* and *Diehr*. Thus, its *Bilski* decision will almost inevitably reopen a host of questions about the patentability of software innovations.

Software innovations have been troublesome for patent law in part because they often, like Benson's algorithm, are mathematical ideas that can be carried out in a human mind or with the aid of a pen and paper, as well as by computer, and in part because they often automate business processes, which the Court is likely to rule are unpatentable.

Because the code that actually implements innovative software processes is protected by copyright law, some confusion exists about the respective roles of copyright and patent in protecting computer program innovations.

Although the Court may find it easy to reject Bilski's patent as nontechnological, it is a difficult task to develop a definitive test for judging which processes are and are not "technological." Are Web services or XML schemas, for example, technological processes?

Bilski will not definitely answer these questions, but it will give new life to this decades-old debate.

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