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# Is Software Patentable?

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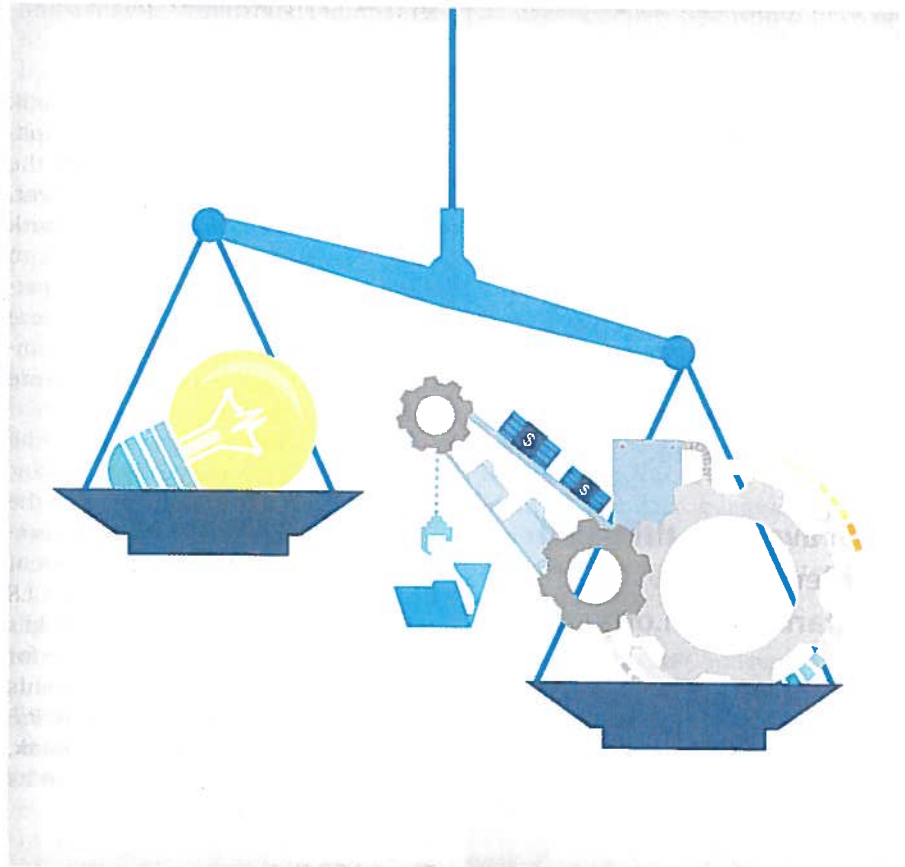
## Legally Speaking Is Software Patentable?

*Assessing the shifting perspectives on patentability standards for software.*

**T**HE PATENTABILITY OF computer program innovations has been controversial for nearly 50 years. In the 1960s and 1970s there was considerable doubt these innovations were or should be eligible for patent protection. By the mid-1980s the tide shifted and software innovations were increasingly deemed eligible for patents. Doubts about the patentability of software seemed to dissipate in the mid- to late 1990s. After all, programs are technological in nature and any design that can be implemented in software can equally well be implemented in hardware, which would unquestionably be patentable.

Interestingly, the tide seems to be shifting again. The German legislature recently passed a resolution calling for the cessation of patenting for most software-related innovations. New Zealand has been considering an outright ban on software patents. In the last several years, the U.S. Supreme Court has called into question many—and perhaps even most—software patents. Even the Court of Appeals for the Federal Circuit (CAFC), which has long taken a liberal view of innovations that qualify for patenting, recently struck down some software patents in the *CLS Bank International v. Alice Corp.* case.

This column will discuss the *CLS Bank* case and the deep divide within the CAFC about patentability standards. The CAFC has yet to establish



a workable framework for assessing when software innovations are patentable and when they are not.

### Alice's Patents

Alice obtained four patents covering a computerized trading platform for conducting financial transactions to manage the risk that one of the two trading partners will fail to meet its

obligations. The trading platform relies on a trusted third party to handle settlement risks by ensuring both parties meet their obligations or the transaction fails. The specifications for these patents were substantially the same, although the claim language is different.

Some of Alice's claims are in method form. Typical is the claim for a



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method of exchanging obligations between parties holding a credit record and a debit record with an exchange institution, the method comprising a set of steps.

Some claims are in system form. A typical claim is for a data processing system to enable the exchange of obligations, the system comprising a data storage unit and a computer to carry out a series of stated steps.

Some claims are in computer media form. A typical claim was for a computer program product comprising a computer-readable storage medium having computer-readable program code embodied in the medium for use in a trading platform to handle settlement risks. (This is known as a *Beauregard* claim after the CAFC decision that allowed code-embodied-in-a-medium claims.)

### The Lawsuit

Alice became aware that CLS Bank was conducting business that implicated its patents. Alice informed the bank about the claimed infringement. Rather than taking a license, CLS Bank filed a lawsuit asking a U.S. court to declare it had not infringed these patents and also that Alice's patents were invalid and unenforceable. Alice counterclaimed, asserting its patents were valid and infringed.

While this lawsuit was pending, the U.S. Supreme Court ruled in *Bilski v. Kappos* that a method of hedging the risk of fluctuation in prices of commodities was ineligible for a patent because it was for an abstract idea. CLS Bank likened Alice's patents to *Bilski's* and argued they too were ineligible for patenting. Alice asserted its patents were distinguishable from those in *Bilski*. A trial judge agreed with CLS Bank. Alice appealed from the ruling that its patents were invalid.

### The CAFC Outcome

The CAFC decided to hear Alice's appeal en banc, that is, with all 10 judges participating. (Usually, appeals are heard by three-judge panels. En banc cases are rare, and typically only convened for what the court perceives as important cases.)

Seven of the 10 judges who deliberated in *CLS Bank* agreed that under Supreme Court precedents, Alice's

method and computer-media claims were invalid. Two of the seven judges disagreed with the other five, however, over the reasoning that supported these conclusions.

Alice's system claims split the court even more. Five judges would have upheld these claims because they mention specific machine components and because they are too detailed to be abstract ideas. The other five regarded the system claims as functional equivalents of the method claims. Although these five acknowledged the system claims mentioned computers and data storage, they did so in such generic and functional terms that the use of any general-purpose computer would suffice. The claim details were, in their view, insignificant or conventional, which under *Bilski* do not count.

When appellate courts are evenly split, as in *CLS Bank* on the system claims, the lower court decision is affirmed, but no precedent is established without an appellate majority. The result was that Alice's system patents were invalidated as well.

Eight of the 10 judges in *CLS Bank* agreed the method, system, and media claims should rise or fall together. However, five thought all three types of claims should fall, while the other three judges thought all of Alice's claims were patentable.

### Abstract Idea or Patentable Process?

Patent law provides that any new, non-obvious and useful "machine, manufacture, composition of matter, or process" is eligible for a grant of patent rights as long as the inventor applies for a patent and complies with the rules for obtaining one. Courts have interpreted this language broadly. Yet they have also said that abstract ideas, laws of nature, and natural phenomena are ineligible for patenting.

A key case interpreting these exceptions is the U.S. Supreme Court's unanimous 1972 ruling in *Gottschalk v. Benson*. It held the Patent and Trademark Office (PTO) had correctly denied Benson's application for a patent on an algorithm for converting binary coded decimals to pure binary form.

Benson made two types of claims: one for the method carried out with

computer components and the other for the method more generally. The latter would have covered carrying out the method in one's mind. The Court did not distinguish between these claims; both were unpatentable.

The main explanation the Court gave was that courts had long considered processes to be patentable when they transformed matter from one physical state to another. Benson's process did not do this. This interpretation was consistent with some older cases (not cited in *Benson*) holding that mental processes were unpatentable.

The Court in *Benson* also expressed concern about the abstractness of the algorithm and how wide was the array of possible applications. A patent on Benson's algorithm would preempt all uses of the method, regardless of whether the inventor had foreseen them.

Seven years later the Court in *Parker v. Flook* ruled that a software-implemented process for updating alarm limits in catalytic converter plants was unpatentable. The only distinction between the claimed method and the prior art was Flook's algorithm.

The Court in *Flook* rejected the claims, even though they contained field of use restrictions (which would preclude wholly preempting use of the algorithm) and mentioned some post-solution acts (adjusting controls so the plant would not blow up). The Court viewed these restrictions as insignificant and worried that patent applicants would try to evade the rule announced in *Benson* if these claims were allowed.

Two years later in *Diamond v. Diehr*, the Court decided by a 5-4 vote that a process for curing rubber that utilized a computer program was a patentable process. The CAFC interpreted this decision broadly, as though *Diehr* had, in effect, overruled *Benson* and *Flook*. The CAFC began upholding software patents, which overcame the PTO's resistance to issuing software patents. While no one knows how many software patents have been issued since the mid-1980s, they probably number in the hundreds of thousands.

### ***Bilski* Resurrected *Benson***

Under the usual CAFC standard, Bilski's process for hedging the risk of price fluctuations of commodities would have easily passed muster as a

**In the last several years, the U.S. Supreme Court has called into question many—and perhaps even most—software patents.**

process that yielded a useful, concrete, and tangible result. Yet the PTO denied a patent to *Bilski*, seemingly emboldened by signals from the Supreme Court about its dissatisfaction with the CAFC.

Having detected these same signals, the CAFC decided to hear *Bilski*'s appeal en banc. This court was deeply split over the patentability of *Bilski*'s method. Yet, a majority supported the machine-or-transformation (MoT) test. That is, a method would be deemed patentable if it was to be carried out by a machine or if it transformed something from one state to another. Because *Bilski* did not mention any machine in his claims, nor did he claim to transform anything, the CAFC held his method unpatentable.

The Supreme Court ultimately agreed with the CAFC that *Bilski* had not claimed a patentable process, but it did not find the MoT test compelling. Instead, the Court ruled the claims were too abstract to be patentable. As in *Benson*, the Court expressed concern about the preemptive effect of issuing a patent to this abstract idea. The Court in *Bilski* gave *Benson* and *Flook* as examples of unpatentable ideas, but did not define what it meant by abstract.

### **Implications for *CLS Bank***

Judge Lourie and four fellow judges picked up on the preemptive effect analysis in *Bilski* and used that lens to examine Alice's patent claims. These judges concluded that Alice's claims

would have the kind of preemptive effect the Court worried about in *Bilski*. It did not matter which type of claim language was used (that is, method, media, or system) if the substance of the claims was the same.

Four other CAFC judges relied heavily on the presence or absence of references to computers and memory—in effect, applying the MoT test—to judge Alice's patents. All four regarded the systems claims as unquestionably patentable because these claims mentioned machine components. The specificity in claim language also persuaded these judges to think Alice's claims were too concrete to be abstract ideas. The tenth CAFC judge disparaged the effort to distinguish between patentable methods or systems and unpatentable abstract ideas as unproductive. She would have upheld all of Alice's patents.

### **Conclusion**

Alice has not yet sought Supreme Court review of the CAFC ruling, but it is expected to do so. Whether the Court will decide to take the case remains to be seen. There are other software patent cases in the appellate pipeline. *CLS Bank* may not be the best vehicle to test the patentability of software as its claims are atypical.

But *CLS Bank* was the case that the CAFC selected for en banc review. As in *Bilski*, the Court may decide it has to take this case because the fractures within the CAFC do not augur well for consistency in three-judge panels on patentability questions in future cases.

One of the CAFC judges who would have upheld Alice's system patents warned that if the analysis by Judge Lourie in the *CLS Bank* prevails, this would mean "the death of hundreds of thousands of patents, including all business method, financial system, and software patents as well as many computer-implemented and telecommunications patents." This may be hyperbole—but then perhaps not. I will leave to my readers' judgment whether this would be a good or bad development. □

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