

Abstract Idea or Real World Software Solution?

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On Dec. 6, the U.S. Supreme Court granted certiorari in *CLS Bank Intl. v. Alice Corp. Pty. Ltd.*, 717 F.3d 1269 (Fed. Cir. 2013), to address the patent eligibility of computer implemented inventions. For some, the issue is emblematic of what they see as the problems resulting from U.S. Patent and Trademark Office granting “too many patents” for too trivial of inventions. Others see patent eligibility as the touchstone question for the future of research and development.

A patent may be obtained for any “process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.” 35 U.S.C. 101. These statutory categories are quite broad, covering “anything under the sun made by man.” *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980).

Even so, there are three exceptions: a patent may not cover a law of nature, a natural phenomenon, or an abstract idea. In *Gottschalk v. Benson*, 409 U.S. 67 (1972), the court articulated these exceptions to ensure no one could “preempt” the use of ideas and discoveries that are fundamental to scientific research and development. But the Supreme Court and the Federal Circuit have struggled with how to identify an “abstract idea.” In *Parker v. Flook*, 437 U.S. 584 (1978), the court adopted a “mathematical algorithm” test, holding invalid a claim that added nothing inventive beyond the algorithm itself. In *Diamond v. Diehr*, 450 U.S. 175, 182 (1981), the court narrowed *Flook*, holding valid a claim that contained a well-known equation, and stating that it was improper to separate out the equation from the rest of the patent claim. The court did not address the issue of abstract ideas again until *Bilski v. Kappos*, 130 S. Ct. 3218 (2010).

At issue in *Bilski* was a method for hedging energy commodities. The Supreme Court rebuked the Federal Circuit - which had interpreted the Supreme Court to mean a process is patent eligible only if “(1) it is tied to a particular machine or apparatus, or (2) it transforms

a particular article to a different state or thing,” the so-called “machine or transformation test.” The court held that while that test is useful, it is not the sole test. Second, the court held that statute did not exclude business methods from being a “process.” Finally, the court held that *Bilski*’s method was an abstract idea. However, the court declined to set forth any particular test to identify an abstract idea, only referring to the “guideposts” in *Benson*, *Flook* and *Diehr*.

The Federal Circuit developed various abstract idea tests leading up to *CLS Bank*. Unfortunately, different judges proposed different and somewhat conflicting tests. Thus, in *Cybersource v. Retail Decisions*, 654 F.3d 1366 (2011), Judge William Bryson, joined by Judges Timothy Dyk and Sharon Prost, used the “mental steps” doctrine and found that a patent claim was an abstract idea because all of the steps can be performed in the human mind. Similarly, in *Bancorp Servs. LLC v. Sun Life Assur. Co. of Canada*, 687 F.3d 1266 (2012), Judges Alan Lourie and Evan Wallach, along with Prost, held that “[u]sing a computer to accelerate an ineligible mental process does not make that process patent-eligible.”

By contrast, in *Research Technologies Corp. v. Microsoft*, 627 F.3d 859 (2010), Chief Judge Randall Rader, joined by Judges Pauline Newman and S. Jay Plager, upheld the patent eligibility of a method for producing half tone gray scale images. For this panel, Section 101 is only a “coarse filter,” and such claims are only ineligible when “so manifestly abstract as to override the statutory language of section 101.” In *Ultramercial LLC v. Hulu LLC*, 657 F.3d 1325 (Fed. Cir. 2011), vacated *sub nom. WildTangent Inc. v. Ultramercial LLC*, 132 S.Ct. 2431 (2012), Rader, Lourie and Judge Kathleen O’Malley considered a method of distributing digital products over the Internet. The court held that the claims eligible because they recited a “practical application” that required “intricate and complex computer programming.” Importantly, Rader

rejected the assertion that software is an abstract idea, citing *In re Alappat*, 33 F.3d 1526 (Fed. Cir. 1994), which held that “programming creates a new machine, because a general purpose computer in effect becomes a special purpose computer once it is programmed.”

These disparate approaches led Plager to suggest in *MySpace Inc. v. GraphOn Corp*, 672 F.3d 1250 (2012), that district courts should avoid this “murky morass” by insisting that “litigants initially address patent invalidity issues in terms of the conditions of patentability defenses,” a position shared by other members of the court.

These disparate views met head on in *CLS Bank*, which involved a computerized method of providing a third-party escrow system for currency exchanges. The district court held these claims invalid. O’Malley and Judge Richard Linn reversed, finding that the claim was limited to a “very specific application of the concept of using an intermediary to help consummate exchanges between parties.” Taking the case en banc, the enlarged court vacated the panel decision and asked the parties what test it should adopt to determine whether a computer-implemented invention is a patent ineligible abstract idea.

To the dismay of many, the en banc court failed to provide unified guidance. A per curiam opinion affirmed the district court, followed by with six separate concurring and dissenting opinions. Lourie, joined by Dyk, Prost, Wallach and Judge Jimmie Reyna, argued that the key question is whether the claims “preempt” all “real world” “practical applications” of an abstract idea. Lourie offered a three-step approach: (1) determine whether the claims recite one of the statutory categories; (2) if so, identify whether the claim recites an ineligible exception; and (3) if so, determine whether the claim has sufficient limitations. These judges argued that Alice’s patent claims did not have such limitations, and dismissed *Alappat* as being no longer relevant due to changes the law and technology. This view that is scientifically unjustified because *Alappat* is consistent with a fundamental principle in computer science, that anything that can be done by a hardwired computer circuit can be equivalently performed by a program.

Rader, joined by Linn, O’Malley and Judge Kimberly Moore, focused on whether a claim includes “meaningful limitations.” Rader argued that the claims certainly required their implementation by a computer, and thus were statutory. Moore, joined by Rader, Linn and O’Malley, also relied upon *Alappat*, noting that “claims are to a system of tangible machine components with limited specialized functions programmed consistent with detailed algorithms disclosed in the patent,” and that “no contortion of the term ‘abstract idea’ can morph this physical system into an abstract idea.” Newman argued that Section 101 should be interpreted to protect the “right to study and experiment with the knowledge disclosed in patents.” Rader offered a final reflection, lamenting his colleagues’ focus on subjective considerations: “When all else fails, consult the statute!”

Even after *CLS Bank*, the divide in the Federal Circuit continued. In *Ultramercial Inc. v. Hulu LLC*, No. 10-1544 (Fed. Cir. June 21, 2013), Rader adopted in part Lourie’s preemption framework, and again held that the Internet-based advertising system was patent eligible. In *Accenture Global Services v. Guidewire Software Inc.*, No. 2011- 1486 (Fed. Cir. Sept. 5, 2013), Lourie, joined by Reyna, ruled that claims on a computerized insurance application system were not patent eligible, without considering the issue of preemption. Rader dissented, arguing that the claims did not preempt all practical applications because there were non-infringing ways of practicing the abstract idea.

The Supreme Court now has the opportunity to address the question of what constitutes an abstract idea, and thereby the patent eligibility of software. The court’s recent cases may offer clues how it will rule. First, the court tends to consider inventions in broad, general terms, not the specifics of the technology. Thus, the detailed programming shown in Alice’s patents will hold little weight. Further, the court gives no deference to either the USPTO’s considerable experience, or its longstanding practice to grant software patents. Finally, the court may still have the unfortunate view, expressed in *Benson* 40 years ago, that computers “solv[e] a problem by doing arithmetic as a person would do it by head and hand.” Thus, the court is likely to focus on whether the underlying idea

in an invention can be performed mentally, regardless of whether in fact the invention would only be implemented by a computer. If the court does adhere to this factually incorrect view of computers, then Section 101 will remain a “murky morass,” as it will allow different courts to impose their own views on whether a claim can be performed in the human mind.

If on the other hand, the court follows Rader, Moore, Linn and O’Malley’s view of the continued vitality and technological correctness of *Alappat*, then it can set forth a brighter dividing line between inventions that are purely abstract concepts, unlimited in practice, and those that are necessarily implemented by computers in the “real world.”

CLS Bank will be important for the software industry as a whole, and any company that relies on software technologies for its products. A decision is expected by June 2014.

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