

Through the Looking Glass: Exploring the Wonderland of Patent Subject Matter Eligibility after *Alice Corp. v. CLS Bank International*

by

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Today, the demand for modern technology is at an all time high. Mobile devices, for example, represent a vast and ever growing market, where companies invest significant resources into the research and development of new ideas and products. Ultimately, much of this research and development includes software development, and as a result there is a strong desire to protect those investments with software patents. However, under U.S. law, the question of what actually constitutes patentable “software” continues to be a difficult one for the courts. The recent decision in *Alice Corp. v. CLS Bank Intl.* is the Supreme Court’s latest attempt to shed light on this evolving area of law.¹

In *Alice*, Alice Corporation was the assignee of patents directed to the concept of managing financial risk. Generally, the patent claims were drawn to a computerized invention that “enabl[es] the management of risk relating to specified, yet unknown, future events.”² More specifically, the claims included a method for exchanging obligations between parties, a computer running the method, and a system running

¹ *Alice Corp. v. CLS Bank Intl.*, 134 S.Ct. 2347 (2014).

² *Id.*

method. The District Court invalidated the claims as being unpatentable under Title 35, section 101 of the United States Code.³

A three judge panel of the Federal Circuit reversed, but on rehearing, an en banc Federal Circuit panel affirmed the lower court's decision finding the claims to be lacking under section 101. However, the guidance from the en banc panel was hardly clear: the judges wrote seven different opinions, with no single opinion being supported by a majority.

Writing on behalf of a five judge plurality, and relying on Supreme Court precedent set in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, Judge Lourie opined “the underlying concern is that patents covering such elemental concepts would reach too far and claim too much, on balance obstructing rather than catalyzing innovation.”⁴ Under *Mayo*, Judge Lourie found that a court must first “identif[y] the abstract idea represented in the claim,” and then determine “whether the balance of the claim adds ‘significantly more.’”⁵ The concurring judges found the claims closely resembled the abstract idea of risk hedging in *Bilski v. Kappos*.⁶ Applying *Mayo*, the judges concluded that merely coupling an abstract method to a computer failed to add “significantly more” to the abstract idea of intermediated settlement, and were thus invalid under section 101.

³ 35 U.S.C. § 101 (2011) (“Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title”).

⁴ *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 132 S.Ct. 1289 (2012).

⁵ *Id.*

⁶ *Bilski v. Kappos*, 561 U.S. 593 (2010).

Last month, the Supreme Court unanimously affirmed the Federal Circuit’s decision finding Alice Corp.’s patent claims invalid under section 101. In an opinion authored by Justice Thomas, the Court first noted that for over 150 years, the Supreme Court has interpreted section 101 as including an important implicit exception: laws of nature, natural phenomena and abstract ideas are not patentable. The reason is because of the concern that if such a patent were granted, it would effectively “pre-empt” the use of the idea in all fields. Quoting *Association for Molecular Pathology v. Myriad Genetics*,⁷ Justice Thomas wrote “[M]onopolization of those tools through the grant of a patent might tend to impede innovation more than it would tend to promote it[.]” The central concern in *Alice* was thus whether Alice Corp’s patented claims posed a true risk of preemption of the entire concept of intermediated settlement.

The Court then applied the *Mayo* analysis: first, they considered whether the claims were drawn to a patent-ineligible abstract idea; if so, the question is then whether the invention, as claimed, includes an “inventive concept”—i.e., “an element or combination of elements ‘sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.’”⁸

Like the Federal Circuit, the Supreme Court equated the concept of intermediated settlement to the concept of risk hedging in *Bilski v. Kappos*. In *Bilski*, the Supreme Court found that a patent directed to an abstract idea of risk hedging was patent-ineligible under section 101. Comparing the concept presented in *Bilski* to the concept presented in *Alice*, Justice Thomas wrote:

⁷ *Association for Molecular Pathology v. Myriad Genetics*, 133 S.Ct. 2107 (2013).

⁸ *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2355 (2014).

we need not labor to delimit the precise contours of the ‘abstract ideas’ category in this case. It is enough to recognize that there is no meaningful distinction between the concept of risk hedging in *In re Bilski* and the concept of intermediated settlement at issue here. Both are squarely within the realm of ‘abstract ideas’ as we have used that term.²

The Court thus equated the concept at issue to the abstract concept presented in *Bilski*, and in answering the first question in the *Mayo* framework, concluded that intermediated settlement should be classified as an “abstract idea.” Notably, the Court expressly declined to define what an “abstract idea” actually is.

The Court then turned to the second question under *Mayo*: is there an “inventive concept” sufficient to “transform” the claimed abstract idea into a patentable idea. Alice Corp. argued that the claims are patent-eligible because they “require a substantial and meaningful role for the computer.” The representative method claim requires the steps of (1) “creating” shadow records for each party to a transaction; (2) “obtaining” start-of-day balances based on the parties' real-world accounts at exchange institutions; (3) “adjusting” the shadow records as transactions are entered, allowing only those transactions for which the parties have sufficient resources; and (4) “issuing” irrevocable end-of-day instructions to the exchange institutions to carry out the permitted transactions. The Court pointed out that the claimed method, as stipulated, essentially require the use of a computer to create electronic records, track multiple transactions and issue simultaneous instructions. Viewed in this light, the Court concluded that the

² *Id.* at 2357.

patented claims do nothing more than instruct the practitioner to implement the abstract idea of intermediated settlement on a generic computer.

In coming to this conclusion, the Justices examined each claimed step separately, and found the role of the computer to be “purely conventional.”¹⁰ For example, using a computer to create electronic records is “one of the most basic functions of a computer.”¹¹ They also found that using a computer to obtain data, adjust balances and issue automated instructions are all “well-understood, routine and conventional” functions of a computer.¹²

The Court further noted that even when viewed as an ordered combination, nothing is added that is not already present when the steps are considered separately. Moreover, they found that the claims “failed to purport” to either (a) improve the operation of the computer itself, or (b) effect any improvement in any other technological field. As such, the Court reasoned that the claims at issue are “nothing significantly more” than an instruction to apply the abstract idea of intermediated settlement using a generic computer. In concluding that the claims fell short under section 101, Justice Thomas opined “[u]nder our precedents, that is not ‘enough’ to transform an abstract idea into a patent-eligible invention.”

The *Alice* decision does not go so far as to exclude any particular category of subject matter *per se*, such as financial software-related inventions or business methods. Nor does the decision impose any special requirements for patent eligibility of software-

¹⁰ *Id.* at 2358.

¹¹ *Id.*

¹² *Id.*

related inventions. Rather, the *Alice* decision instructs us that, in addition to claims directed to laws of nature, the *Mayo* framework should also be applied to claims directed to abstract ideas. Additionally, the *Alice* Court makes the specific holding that a method claim directed to the abstract idea of intermediated settlement, the steps of which merely require the use of a generic computer to be implemented, is not a patent-eligible claim.

Additionally, the *Alice* decision reinforces previous precedent. First, it reiterates the analytical framework set forth in *Mayo*. Second, it reaffirms the notion that a claim to an abstract idea must have an “inventive concept” that “transforms” the claimed abstract idea into a patentable invention,¹³ and the long-held notion that simply adding conventional steps to apply laws of nature, natural phenomena or abstract ideas does not make those laws, phenomena or ideas patentable.¹⁴

Less than a week after the *Alice* decision, the USPTO published a memorandum titled “*Preliminary Examination Instructions in view of the Supreme Court Decision in Alice Corporation Pty. Ltd. V. CLS Bank International, et al.*,” issued to Examiners on June 25, 2014.¹⁵ The memorandum instructs the Examining Corps to analyze all claims having an abstract idea to use the two part *Mayo* test:

Part 1: “Determine whether the claim is directed to an abstract idea.” The memorandum goes on to cite examples of abstract ideas as referenced in the *Alice*

¹³ See e.g., *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 132 S.Ct. 1289 (2012); *Parker v. Flook*, 437 U.S. 584 (1978).

¹⁴ See e.g., *O'Reilly v. Morse*, 56 U.S. 62 (1853); *Gottschalk v. Benson*, 409 U.S. 63 (1972); *Bilski v. Kappos*, 561 U.S. 593 (2010).

¹⁵ See Andrew H. Hirshfeld, *Preliminary Examination Instructions in view of the Supreme Court Decision in Alice Corporation Pty. Ltd. V. CLS Bank International, et al.*, UNITED STATES PATENT AND TRADEMARK OFFICE (2014), available at https://docs.google.com/viewer?url=http://www.uspto.gov/patents/announce/alice_pec_25jun2014.pdf.

opinion: fundamental economic practices, certain methods of organizing human activities, an idea of itself and mathematical relationships/formulas. If the Examiner determines that the claim does indeed include an abstract idea, the analysis should proceed to Part 2.

Part 2: “If an abstract idea is present in the claim, determine whether any element, or combination of elements, in the claim is sufficient to ensure that the claim amounts to **significantly more** than the abstract idea itself.”¹⁶ Citing *Alice*, the memorandum then provides examples of limitations that might qualify as “significantly more”:

- a. improvements to another technology or technical field;
- b. improvements to the functioning of the computer itself; and
- c. meaningful limitations beyond generally linking the use of an abstract idea to a particular technological environment.

The memorandum also gives examples of things that are not enough to qualify as “significantly more”:

- a. adding the words “apply it” (or an equivalent) to an abstract idea, or mere instructions to implement the abstract idea on a computer; and
- b. requiring no more than a generic computer to perform generic computer functions, which are well-understood, routine and conventional.

Application of the *Mayo* framework presents some practical issues, however, particularly with respect to drafting and prosecuting software-related inventions. For example, one might infer that claims directed to a software-related invention are now

¹⁶ Emphasis in the original document.

required to show a technical improvement, or an improvement to the functioning of the computer running the software. A similar requirement exists in Europe for software-related inventions, where, to be patentable, a computer program must show a “further technical effect that goes beyond the normal physical interaction between the program and the computer.”¹⁷ However, it remains a question as to what extent such an “improvement” needs to be recited in the claim itself, or whether it is enough to disclose it in the specification alone.

Further, exactly what kind of “improvement” constitutes an “improvement to another technology or technical field, or to the functioning of the computer itself, is unknown. In drafting software related inventions, the specification may discuss that the implementation of the “abstract idea” (1) provides faster processing capability, (2), improves memory utilization, and/or (3) displays data that has not been previously displayed. Interestingly, in considering the claims at issue in *Alice*, Justice Thomas wrote “[t]he method claims do not, for example, purport to improve the functioning of the computer itself.” Justice Thomas’ use of the verb “purport” is interesting here because it means “to claim to be or do a particular thing when this claim may not be true.”¹⁸ This begs the question whether claims directed to an abstract idea are patentable as long as they purport, or assert that they improve the functioning of the computer itself, regardless of whether that assertion is true. It is also unknown as to whether or to what extent such an assertion, if claimed, must be enabled under section 112.

¹⁷ Ian Harris, *Patentability of computer-based and business-related inventions from the perspective of a patent attorney*, EPO boards of appeal and key decisions, available at <https://e-courses.epo.org/wbts/caselaw2012/index.html>.

¹⁸ See Merriam-Webster Dictionary, available at <http://www.merriam-webster.com/dictionary/purport>.

Ultimately, there are numerous questions that remain unanswered by *Alice*. As practitioners stare into the looking glass of the *Alice* decision, they mostly see the reflection of prior precedent. Still, the decision provides us with a small glimpse of what the world of software-related inventions is like on the other side of the mirror's reflection. It will now be up to the Federal Circuit, the USPTO, and patent practitioners to further explore the wonderland of subject matter eligibility on a case-by-case basis -- perhaps with some future guidance from the Supreme Court.

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