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CLS BANK INTERNATIONAL V. ALICE CORP. PTY. LTD.: DETERMINING A

STANDARD FOR ABSTRACT IDEA PATENT ELIGIBILITY

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I. Introduction

To encourage innovation, patent eligibility is defined broadly by the categories identified in

§ 101 of the Patent Act of 1952. The Supreme Court has identified three implicit exceptions to

patent eligibility: "laws of nature, physical phenomena, and abstract ideas,"[1] in order to preserve

free public access to fundamentally important concepts.[2] Patents that involve processing

otherwise-abstract ideas on computers have proven difficult to evaluate under § 101 and the

abstract-idea exception. In determining the patent eligibility of a method claim reciting the use of

a computer as a limitation, the Federal Circuit has looked to whether the computer plays "a

significant part" in the invention or is merely "an obvious mechanism for permitting a solution to

be achieved more quickly."[3] However, the court has not established a clear rule for determining

whether a computer plays a "significant part" in performing a claimed software method.

Recently, in *CLS Bank International v. Alice Corp. Pty. Ltd.*,[4] the Federal Circuit considered the

patent eligibility of claims describing a method and system for "the management of risk relating

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[1] Bilski v. Kappos, 130 S. Ct. 3218, 3225 (2010) (quoting Diamond v. Chakrabarty, 447 U.S. 303, 309 (1980)) (internal quotation marks omitted). In keeping with a broad interpretation of § 101, these exceptions have been interpreted narrowly. *See* Mayo Collaborative Servs. v. Prometheus Labs., Inc., 132 S. Ct. 1289, 1293 (2012) (noting that "too broad an interpretation of [the exceptions to § 101] could eviscerate patent law").
[2] *See Bilski*, 130 S. Ct. at 3253.
[3] SiRF Tech., Inc. v. Int'l Trade Comm'n, 601 F.3d 1319, 1333 (Fed. Cir. 2010).
[4] 717 F.3d 1269 (Fed. Cir. 2013).

to specified, yet unknown, future events."[5] In particular, the court examined how patents relate to a computerized trading platform used for conducting financial transactions in which a third party settles obligations between a first and a second party so as to eliminate "counterparty" or "settlement" risk.[6] Ultimately, the court held that the use of a computer was not sufficiently integral to the claimed invention to avoid patent ineligibility under the abstract-idea exception.[7] *CLS Bank* illustrates that the Federal Circuit's current approach to patent eligibility of software methods is indeterminate and can lead to seemingly contradictory results in similar cases, producing large amounts of uncertainty surrounding patentability and thus harming innovation.

II. Law Before the Case

A. Statutory Subject Matter and Common Law Exceptions

"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."[8] This statute sets forth four broadly stated categories of patent-eligible subject matter: processes, machines, manufactures, and compositions of matter. As the Supreme Court has explained, Congress intended that the statutory categories would be broad and inclusive to best serve the patent system's constitutional objective of encouraging innovation.[9] While the categories of patent-eligible subject matter

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[5] *Id*. at 1274.
[6] *Id.*.
[7] *Id.* at 1288.
[8] 35 U.S.C. § 101 (2006).
[9] *See* Diamond v. Chakrabarty, 447 U.S. 303, 308 (1980) ("In choosing such expansive terms as 'manufacture' and 'composition of matter,' modified by the comprehensive 'any,' Congress plainly contemplated that the patent laws would be given wide scope."); Bilski v. Kappos, 130 S. Ct. 3218, 3225 (2010) ("Congress took this permissive approach to patent eligibility to ensure

recited in § 101 are broad, their scope is limited by three important judicially created exceptions. "[L]aws of nature, natural phenomena, and abstract ideas" are excluded from patent eligibility,[10] because such fundamental discoveries represent "the basic tools of scientific and technological work."[11] The underlying concern is that patents covering such elemental concepts would reach too far and claim too much, thus obstructing rather than catalyzing innovation. But danger also lies in applying the judicial exceptions too aggressively because "all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas." [12] Accordingly, the basic steps in a patent-eligibility analysis can be summarized as follows:[13] We must first ask whether the claimed invention is a process, machine, manufacture, or composition of matter.[14] If not, the claim is ineligible under § 101.[15] If the invention falls within one of the statutory categories, we must then determine whether any of the three judicial exceptions nonetheless bars such a claim—is the claim drawn to a patent-ineligible law of nature, natural phenomenon, or abstract idea?[16] If so, the claim is not patent eligible. Only claims that pass both inquiries satisfy § 101.[17]

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that 'ingenuity should receive a liberal encouragement.' " (quoting *Chakrabarty*, 447 U.S. at 308)).

[10] Diamond v. Diehr, 450 U.S. 175, 191 (1981) .

[11] Gottschalk v. Benson, 409 U.S. 63, 67 (1972).

[12] Mayo Collaborative Servs. v. Prometheus Labs., Inc., 132 S. Ct. 1289, 1293 (2012).

[13] CLS Bank Int'l v. Alice Corp. Pty. Ltd., 717 F.3d 1269, 1277 (Fed. Cir. 2013).

[14] *Id.*

[15] *Id.*

[16] *Id.*

[17] *Id.*

B. Foundational Section 101 Precedents

1. *Gottschalk v. Benson*

In *Benson*, the Supreme Court considered claims to computer-implemented methods "for converting binary-coded decimal (BCD) numerals into pure binary numerals."[18] The claims each recited a series of data manipulation steps for effecting the indicated numerical conversion and "purported to cover any use of the claimed method in a general-purpose digital computer of any type."[19] The Court identified the particular abstraction at issue as the freestanding "algorithm" or "generalized formulation" for performing BCD to pure binary conversion.[20] Next, the Court measured the scope of the claims against the scope of that overarching abstract idea. In practice, the claims were "so abstract and sweeping as to cover both known and unknown uses of the BCD to pure binary conversion" and would thus reach every application of the basic conversion algorithm. This practice is in direct contrast to earlier cases concerning patent-eligible process claims that had been cabined to discrete applications "sufficiently definite to confine the patent monopoly within rather definite bounds."[21] Furthermore, even though the claims required a computer,[22] the Court did not view that as a meaningful limitation: "The mathematical formula involved here has no substantial practical application except in connection with a digital computer, which means that if the judgment below is affirmed, the patent would wholly pre-empt the mathematical formula and in practical effect would be a patent on the

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[18] Gottschalk v. Benson, 409 U.S. 63, 64 (1972).
[19] *Id.*
[20] *Id.*
[21] *Id.* at 65.
[22] Claim 8 required a computer on its face, but the literal terms of claim 13 were not so limited. *See Benson*, 409 U.S. at 73-74. The CCPA, however, had interpreted both claims as requiring a computer and had upheld them on that basis, *see In re* Benson, 441 F.2d 682, 687-88 (1971), and the Supreme Court appeared to adopt that assumption.

algorithm itself."[23] Thus the Court in this case found the invention ineligible patent subject matter under § 101.

2. *Parker v. Flook*

Several years later in *Parker v. Flook*, the Supreme Court again considered the patent eligibility of a computerized process—specifically, a method for updating alarm limits for continuously monitored industrial process variables (e.g., temperature or pressure) according to a disclosed mathematical formula.[24] The claim required three steps: measuring the present value of a process variable, using the mathematical formula to calculate a new alarm limit in view of the present value, and adjusting the previous alarm limit to the newly calculated limit.[25] A further preamble limitation restricted the claim to processes "comprising the catalytic chemical conversion of hydrocarbons," so the claim did not cover "every conceivable application of the formula."[26] Although the claim would not "wholly preempt" the mathematical formula, the Court nonetheless held that the claimed process fell under the abstract ideas exception to patent eligibility.[27] In its analysis, the Court viewed the formula as an abstract principle and stated that the case must "be considered as if the principle or mathematical formula were well known."[28] The Court then asked whether, to confer patent eligibility, the claim contained sufficient substance beyond the abstract mathematical formula itself—that is, "some other inventive concept in its application"?[29] Concluding that the field-of-use, monitoring, adjusting, and

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[23] *Id.* at 71-72.
[24] Parker v. Flook, 437 U.S. 584 (1978).
[25] *Id.* at 585.
[26] *Id.* at 596.
[27] *Id.* at 589.
[28] *Id.* at 592.
[29] *Id.* at 594 ("A competent draftsman could attach some form of post-solution activity to almost any mathematical formula . . . .").

computer limitations were trivial or "well known" under such an analysis, the Court held that the claims were not patent eligible, "[i]f a claim is directed essentially to a method of calculating, using a mathematical formula, even if the solution is for a specific purpose, the claimed method is nonstatutory."[30]

3. *Diamond v. Diehr*

The claims at issue in *Diehr* were drawn to processes for curing synthetic rubber that included "the use of a mathematical formula and a programmed digital computer."[31] The claimed methods included steps for operating a rubber molding press that included constantly determining the temperature inside the mold, repetitively calculating the necessary cure time using a mathematical formula known as the Arrhenius equation, and opening the press whenever the elapsed cure time equaled the calculated necessary cure time.[32] Here the Court held the claims to be patent eligible, a conclusion that was "not altered by the fact that in several steps of the process a mathematical equation and a programmed digital computer are used."[33] In contrast to *Benson and Flook*, the claims in *Diehr* employed a mathematical concept but did "not seek to preempt the use of that equation. Rather, they [sought] only to foreclose from others the use of that equation in conjunction with all of the other steps in their claimed process."[34] In particular, the Court distinguished *Flook* on the basis that the claim there provided no substantive details regarding the method's actual performance—rather, "'[a]ll that it provides is a formula for computing an updated alarm limit.'"[35] In contrast, in *Diehr*, the claimed process incorporating

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[30] *Id.* at 594-95.
[31] Diamond v. Diehr, 450 U.S. 177 (1981).
[32] *Id.* at 179.
[33] *Id*. at 185.
[34] *Id*. at 187.
[35] *Id.* at 186-87 (quoting *Flook*, 437 U.S. at 586).

the Arrhenius equation also called for steps including "constantly measuring the actual temperature inside the mold," a step that was said to be new in the art.[36] The Court also explained that a claim "does not become nonstatutory simply because it uses a mathematical formula, computer program, or digital computer" because "an application of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection.[37] Because the claims at issue in *Diehr* were directed towards a specific application, rather than an abstract idea, the claims satisfied § 101.

4. *Bilski v. Kappos*

Bilski concerned claims to processes for participants in energy commodities markets to hedge against the risk of price changes in those commodities.[38] The claims recited the hedging strategy as a series of steps involving transactions between a commodity provider and commodity consumers and between the commodity provider and other market participants "having a counter-risk position" to the consumers in order to balance risk; other claims articulated the hedging strategy as "a simple mathematical formula."[39] The claimed invention did not involve a computer in *Bilski*. Applying *Benson*, *Flook*, and *Diehr*, the Supreme Court held that the claims failed to recite a patent-eligible process because they covered the abstract idea of hedging against risk.[40] "Allowing [the claims] would pre-empt use of this approach in all fields, and would effectively grant a monopoly over an abstract idea."[41] In addition, the Court reiterated *Flook* 's admonition that such claims cannot be made patent eligible by "limiting an

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[36] *Id.* at 178.
[37] *Id.* at 187.
[38] Bilski v. Kappos, 130 S. Ct. 3218, 3223 (2010).
[39] *Id.*
[40] *Id.* at 3231.
[41] *Id.*

abstract idea to one field of use or adding token post solution components."[42] The Court rejected

the claimed invention, as it did not satisfy the requirements under § 101.

5. *Mayo v. Prometheus*

Most recently, the Supreme Court applied the "laws of nature" exception to claims

covering medical diagnostic methods to provide most guidance regarding patent eligibility. The

claims in *Mayo* laid out methods for optimizing thiopurine administration in a user-based on a

natural correlation between therapeutic efficacy of a particular amount of thiopurine and the

resulting amount of thiopurine metabolites in the patient's blood. If the metabolite was too small

of an amount then the dose was not enough; too much metabolite showed that the dosage was too

large and should be reduced to avoid toxicity.[43] Due to this, the claims laid out the necessary

steps of giving the thiopurine drug and determining the resulting metabolite concentration in the

patient's blood, wherein a concentration higher or lower than predefined limits showed that it

was necessary to alter the dosage.[44]

The Supreme Court held that the claims failed the § 101 test for subject-matter eligibility.

The Court's analysis began by stating that the claims "set forth laws of nature-namely,

relationships between concentrations of certain metabolites in the blood and the likelihood that a

dosage of a thiopurine drug will prove ineffective or cause harm."[45] Therefore, the question was

"whether the claims do significantly more than simply describe these natural relations." Did they

"add enough " to the natural law to render the claimed processes patent eligible?[46] Examining

the other limitations, the Court concluded that the "administering" and "determining" steps did

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[42] *Id.*
[43] Mayo Collaborative Servs. v. Prometheus Labs., Inc., 132 S. Ct. 1289, 1294-95 (2012).
[44] *See id*. at 1295 (claim 1).
[45] *Id.* at 1296.
[46] *Id.* at 1297.

not sufficiently limit or were not inventive enough to confer patent eligibility: "Anyone who wants to make use of these [natural] laws must first administer a thiopurine drug and measure the resulting metabolite concentrations, and so the combination amounts to nothing significantly more than an instruction to doctors to apply the applicable laws when treating their patients."[47] Because these additional steps were mere "routine, conventional activity previously engaged in by scientists who work in the field," the Court held that they did not transform the law of nature into a patent-eligible application of that law.[48]

C. An Integrated Approach to § 101

There are several common threads that go throughout the Supreme Court's decisions that help guide the analysis in § 101 cases. The first and greatest concern is that patents should not be allowed to preempt the fundamental tools of discovery—those must remain "free to all…and reserved exclusively to none."[49] Preemption features highly in the Supreme Court's recent § 101 decisions, and goes back to some of the earliest judicial holdings that go towards subject matter eligibility.[50] The primary aim in applying common law exceptions is to guard against preemption of fundamental principles.

Next, the case law repeatedly illustrates that patent applicants must take caution against overly formalistic approaches to subject-matter eligibility that would ask for manipulation. Allowing the determination of patent eligibility to "depend simply on the draftsman's art ... would ill serve the principles underlying the prohibition against patents for 'ideas' or phenomena

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[47] *Id.* at 1298.
[48] *Id.*
[49] Funk Bros. Seed Co. v. Kalo Inoculant Co., 333 U.S. 127, 130 (1948).
[50] CLS Bank Int'l v. Alice Corp. Pty. Ltd., 717 F.3d 1269, 1280 (Fed. Cir. 2013).

of nature."[51] With that being stated, claim drafting strategies that attempt to go around the basic exceptions of subject-matter eligibility should not be credited. The Supreme Court's precedents necessitate that we look past such strategies when examining to decide its true practical meaning with respect to the purpose of subject matter eligibility, thus preserving the "basic tools" of scientific discovery for everyone and not just patent holders.[52]

Finally, the cases dictate a flexible, claim-by-claim approach to subject matter eligibility that avoids bright line rules. Rigid line drawing may be easy to use, but they are many times impractical and counterproductive when applied to subject matter eligibility. Such rules risk becoming outdated in the face of ever advancing technology; they risk "freez[ing] process patents to old technologies, leaving no room for the revelations of the new, onrushing technology."[53] Stringent eligibility formulas may also lead to misplaced focus, requiring courts to "pose questions of such intricacy and refinement that they risk obscuring the larger object of securing patents for valuable inventions without transgressing the public domain."[54] Accordingly, the Supreme Court has rejected calls for a categorical exclusion of so-called business method claims and has held that the formulaic "machine-or-transformation" test cannot be the exclusive means for determining the patent eligibility of process claims.[55] What is needed is a flexible, pragmatic approach that can adapt and account for unanticipated technological advances while remaining true to the core principles underlying the fundamental exceptions to § 101.

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[51] Parker v. Flook, 437 U.S. 593 (1978).
[52] *CLS Bank*, 717 F.3d at 1281.
[53] Gottschalk v. Benson, 409 U.S. 63, 71 (1972).
[54] Bilski v. Kappos, 130 S. Ct. 3218, 3227 (2010).
[55] *Id*. at 3227-29.

With these basic principles in mind, the courts tend to apply the following analysis in determining whether a computer-implemented claim recites patent-eligible subject matter under § 101 or falls into the common law exception for abstract ideas. The first question is whether the claimed invention fits within one of the four statutory classes. Assuming that condition is achieved, the analysis turns to the judicial exceptions to subject-matter eligibility. A preliminary question in applying the exceptions to such claims is whether the claim raises § 101 abstractness concerns at all. Does the claim pose any risk of preempting an abstract idea? In most cases, the answer will plainly be no.[56]

Where a subject-matter eligibility issue arises, it is important at the beginning to discover and define what fundamental concept appears in the claim so that the next steps can proceed on an even footing. One cannot meaningfully evaluate whether a claim preempts an abstract idea until the idea supposedly at risk of preemption has been unambiguously identified. Although not required, conducting a claim construction analysis before addressing § 101 may be especially helpful in this regard by facilitating a full understanding of what each claim entails.[57]

Now that the abstract idea has been identified, the claim can be evaluated to decide if it contains more limitations so that it does not preempt the full abstract idea itself.[58] The requirement for limitations further than a mere fundamental concept has been referred to as an

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[56] Honeywell Inc. v. Sperry Rand Corp., 180 U.S.P.Q. (BNA) 673 (D.Minn. Oct. 19, 1973), *available at* 1973 WL 903.

[57] *See* Bancorp Servs. v. Sun Life Assurance Co., 687 F.3d 1266, 1273-74 (2012).

[58] *See* Mayo Collaborative Servs. v. Prometheus Labs., Inc., 132 S. Ct. 1289, 1300 (2012) (discussing a patent-eligible process claim that involved a law of nature but included additional steps "that confined the claims to a particular, useful application of the principle"); *Bilski*, 130 S. Ct. at 3231 (rejecting claims that "add [too little] to the underlying abstract principle"); Diamond v. Diehr, 450 U.S. 177, 187 (1981) ("[T]hey do not seek to pre-empt the use of that equation. Rather, they seek only to foreclose from others the use of that equation in conjunction with all of the other steps in their claimed process.").

"inventive concept."[59] An "inventive concept" in the subject-matter eligibility context refers to a genuine human contribution to the claimed subject matter. "The underlying notion is that a scientific principle ... reveals a relationship that has always existed."[60] Given this notion, an inventor cannot truly make an abstract idea. With that being stated, an "inventive concept" under § 101—in contrast to whatever fundamental concept is also represented in the claim—must be "a product of human ingenuity."[61] Also, the human ingenuity must be more than a trivial addition to the abstract idea. Limitations that represent a human contribution but are merely tangential, routine, well-understood, or conventional, or in practice fail to narrow the claim relative to the fundamental principle therein, cannot confer patent eligibility.[62] Whether a particular claim satisfies the § 101 standard will vary based on the balance of factors at play in each case, and the fact that there is no easy bright-line test simply emphasizes the need for the United States Patent and Trademark Office and the courts to apply the flexible analysis above to the facts at hand.[63] Analyzing patent eligibility, in contrast, considers whether steps combined with a natural law or abstract idea are so insignificant, conventional, or routine as to yield a claim that effectively covers the natural law or abstract idea itself.[64]

III. Statement of the Case

A. Alice's Patents

Alice owns the ′479, ′510, ′720, and ′375 patents by assignment. The patents, which all derive from the same family and share close to the same specification, deal with "the

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[59] *See Mayo*, 132 S. Ct. at 1294.
[60] Parker v. Flook, 437 U.S. 593 n.15 (1978).
[61] *See* Diamond v. Chakrabarty, 447 U.S. 303, 309 (1980).
[62] CLS Bank Int'l v. Alice Corp. Pty. Ltd., 717 F.3d 1269, 1283 (Fed. Cir. 2013).
[63] *Id.*
[64] *Id.*

management of risk relating to specified, yet unknown, future events."[65] Specifically, the

patents relate to a computerized exchange stage used for making financial transactions in which

another party settles obligations between a first and second party so as to eliminate

"counterparty" or "settlement" risk.[66] Settlement risk refers to the risk to each party in an

exchange that only one of the two parties will actually pay its obligation, leaving the paying

party without its principal or the benefit of the counterparty's performance. Alice's patents

attempt to hedge that risk by trusting a third party to guarantee the exchange of either both

parties' obligations or neither obligation.[67]

When parties agree to a trade, in some instances there could be a delay between the time

that the parties enter a contractual agreement forcing themselves to abide by the trade and the

time of settlement when the agreed upon trade is actually executed.[68] In most cases, the parties

would complete the trade by paying or exchanging their mutual obligations after the intervening

period, but in some instances a party might be rendered unable to pay during that time and fail to

notify the other party before settlement.[69] As disclosed in Alice's patents, a third party can be

used to "verify each party's ability to perform before actually exchanging either of the parties'

agreed-upon obligations."[70]

The claims currently before the court consist of claims 33 and 34 of the ′479 patent and

all claims of the ′510, ′720, and ′375 patents. The relevant claims of the ′479 and ′510 patents

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[65] *Id.* at 1274.
[66] *Id.*
[67] *Id.*
[68] *Id.*
[69] *Id.*
[70] *Id.*; *see also* U.S. Patent No. 5,970,479 col. 5 ll.61-63 (filed Oct. 19, 1999) ("The invention also encompasses apparatus and method dealing with the handling of contracts at maturity, and specifically the transfer of entitlement.").

recite "methods of exchanging obligations between parties, the claims of the ′720 patent are drawn to data processing systems, and the claims of the ′375 patents claim data processing systems as well as computer-readable media containing a program code for directing an exchange of obligations."[71]

B. District Court Proceedings

On May 24, 2007, CLS brought a suit against Alice seeking a declaratory judgment of non-infringement, invalidity, and unenforceability as to the ′479, ′510, and ′720 patents.[72] Alice responded and counterclaimed, alleging infringement.[73] By the agreement of the parties, the district court allowed limited initial discovery, addressing only the questions of (i) the operations of CLS, and (ii) CLS's relationship with the accused CLS system.[74]

In March 2009, following limited discovery, CLS moved for summary judgment claiming that Alice's claims were ineligible subject matter and therefore invalid under 35 U.S.C. § 101 and that any infringement could not have occurred in the United States.[75] Alice filed cross-motions on both issues. The district court denied CLS's motion as to extraterritoriality holding that CLS's alleged infringing actions fell within the reach of domestic patent law.[76] With regards to subject-matter eligibility under § 101, the district court summarily denied the parties' motions, without prejudice to refiling, after the Supreme Court granted certiorari to review the decision in *In re Bilski*.[77]

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[71] *CLS Bank*, 717 F.3d at 1274.
[72] *Id.*
[73] *Id.*
[74] *Id.*
[75] *Id.* at 1275.
[76] *Id.*
[77] *Id.*

During this time, the ′375 patent issued, and Alice filed amended counter claims also asserting that CLS infringed every claim of the ′375 patent.[78] After the Supreme Court issued its decision in *Bilski v. Kappos*, the parties renewed their cross motions for summary judgment on the question of validity under § 101, with CLS adding invalidity arguments drawn to the newly issued ′375 patent issued.[79] Along with the parties' briefs, the district court also relied on "(i) the asserted patents themselves, (ii) excerpts from the patents' prosecution histories, (iii) various guidelines issued by the United States Patent and Trademark Office ("PTO") regarding the application of § 101 during patent examination, and (iv) a declaration submitted by Alice's expert Paul Ginsberg."[80] Specifically, Paul Ginsberg described the operation of Alice's methods and systems, and opined that "a person of skill in the art reading the asserted patents would conclude that the claimed inventions must be implemented electronically using some type of computing processor and memory."[81]

The district court did not conduct claim construction before reaching the merits of the § 101 issue, but the parties agreed for purposes of deciding their summary judgment motions that Alice's claims should all be interpreted to "require a computer including at least a processor and memory."[82] Using the parties' agreement, the district court assumed that all of the asserted claimed needed electronic implementation, discussing consistent disclosures in the patents' specifications as well as Mr. Ginsberg's statements.[83]

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[78] *Id.*
[79] *Id.*
[80] *Id.*
[81] *Id.*
[82] *Id.*
[83] *Id.*

Given this understanding of the claims, the district court granted summary judgment in favor of CLS, finding that every one of the asserted claims of Alice's patents are invalid under § 101.[84] The district court decided that Alice's method claims "are directed to an abstract idea of employing an intermediary to facilitate simultaneous exchange of obligations in order to minimize risk."[85] Furthermore, the district court found the asserted system claims ineligible as well, as those claims "would preempt the use of the abstract concept of employing a neutral intermediary to facilitate simultaneous exchange of obligations in order to minimize risk on any computer, which is, as a practical matter, how these processes are likely to be applied."[86] The asserted media claims failed on the same ground as "directed to the same abstract concept despite the fact they nominally recite a different category of invention."[87] Accordingly, the district court entered final judgment in favor of CLS, and Alice appealed.

IV. Decision of the Case

It is necessary to note that in deciding this case the United States Court of Appeals for the Federal Circuit had five (5) out of its nine (9) members in concurrence with one another, but there were also five (5) different opinions issued with several members concurring in part and dissenting in part. This anomaly shows just how in flux the law is when deciding patent eligible subject matter for claims using a computer as software.

A. Method Claims

Claim 33 of the ′479 patent is representative of the asserted method claim. The claim thus recites a method for facilitating a previously arranged exchange between two parties

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[84] *Id.*
[85] *Id.*
[86] *Id.*
[87] *Id.* at 1276.

requiring the use of "shadow" records maintained by a third-party "supervisory institution."[88] Although claim 33 did not expressly recite any computer-based steps, the parties had agreed that the recited shadow records and transactions require computer implementation.[89] The court found that the claim is clearly a process claim, and that the analysis next depends upon whether the claim is more than a patent ineligible abstract idea.[90] The methods claimed here draw on the abstract idea of reducing settlement risk by effecting trades through a third-party intermediary (here, the supervisory institution) empowered to verify that both parties can fulfill their obligations before allowing the exchange.[91] The court stated that this claim was an abstract idea, because it is a "disembodied" concept, a basic building block of human ingenuity, untethered from any real-world application.[92]

Given that the court found the claim to be an abstract idea, their analysis next focused on whether the rest of the claim "adds significantly more" to the abstract idea. Apart from the idea of third-party intermediation, the claim's substantive limitations require creating shadow records, using a computer to adjust and maintain those shadow records, and reconciling shadow records and corresponding exchange institution accounts through end-of-day transactions. The court found that none of these limitations added anything of substance to the claim.[93]

In this section of the ruling, the court discussed the reasons for the holding of non-eligible. The court found that the requirement for computer implementation could scarcely be introduced with less specificity: the claim lacks any express language to define the computer's

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[88] *Id.* at 1285.
[89] *Id.*
[90] *Id.* at 1285-86.
[91] *Id.* at 1286.
[92] *Id.*
[93] *Id.*

participation.[94] The court stated, "In a claimed method comprising an abstract idea, generic computer automation of one or more steps evinces little human contribution."[95] The court also found that, "simply appending generic computer functionality to lend speed or efficiency to the performance of an otherwise abstract concept does not meaningfully limit claim scope for purposes of patent eligibility." [96] Thus, the court held that the requirement for computer participation in the claims fails to supply an "inventive concept" that represents a nontrivial, nonconventional human contribution or materially narrows the claims relative to the abstract idea they embrace.[97] The court also held that requiring the supervisory institution to create and adjust a "shadow credit record" and a "shadow debit record" did not save the claims from being abstract. [98] The court similarly held that "providing end-of-day instructions to the exchange institutions to reconcile the parties' real-world accounts with the day's accumulated adjustments to their shadow records is a similarly trivial limitation that does not distinguish the claimed method."[99] Thus, the court found this claim patent ineligible subject matter.

Several of the other judges used different language and reasoning, but nevertheless ultimately found that Alice's asserted method claims were patent ineligible.

B. Computer-Readable Medium Claims

The court next turned their focus towards Claims 39–41 of the ′375 patent. The court found that on the face the claims seems as though they are physical, and not abstract, that in reality the draftsmen had craftily worded the claim in such a way to hide that the claim is in fact

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[94] *Id.*
[95] *Id.*
[96] *Id.*
[97] *Id.*
[98] *Id.* at 1286-87.
[99] *Id.* at 1287.

abstract.[100] The court found that the "claim presents a physical recitation of an abstract method, and parallel claims from the same patent family claim that same abstract method in the same or similar terms."[101] The court held that these claims failed the patent eligibility test for the same reasons as the method claims discussed above.[102] Similarly to the method claims, two other judges, in addition to the majority opinion, concluded that the computer-readable medium claims are patent ineligible.

C. System Claims

The court next looked at the system claims, which were "data processing systems" configured to enable the exchange of mutual obligations through an intermediary—in these claims, the computer system itself.[103] The court found that "the system claims are formally drawn to physical objects and therefore raise a question whether they deserve to be evaluated differently under the abstract ideas exception from the accompanying method claims discussed above."[104] The court answered this question with a no; stating that competent draftsmen (of which the Supreme Court in their jurisprudence has warned of on multiple occasions) would be able to claim draft around the physical objects exception.[105] In this finding the court decided that whenever there is a subject matter eligibility question, regardless of claim format, the analysis should consist of: "Does the claim, in practical effect, place an abstract idea at risk of preemption? And, if so, do the limitations of the claim, including any computer-based limitations, add "enough" beyond the abstract idea itself to limit the claim to a narrower, patent-

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[100] *Id.* at 1288.
[101] *Id.*
[102] *Id.*
[103] *Id.* at 1289.
[104] *Id.*
[105] *Id.*

eligible application of that idea? Or, is it merely a Trojan horse designed to enable abstract claims to slide through the screen of patent eligibility?"[106]

After deciding how the claims should be analyzed the court next turned to the claims themselves to find that "instead of wholly implied computer limitations, the system claims recite a handful of computer components in generic, functional terms that would encompass any device capable of performing the same ubiquitous calculation, storage, and connectivity functions required by the method claims."[107] The court decided that although the claims use computer limitations that in fact none of the recited hardware offers a meaningful limitation beyond generally linking "the use of the system to a particular technological environment," that is, implementation via computers.[108] The court also decided that every general-purpose computer will include "a computer," "a data storage unit," and "a communications controller" that would be capable of performing the same generalized functions required of the claimed systems to carry out the otherwise abstract methods recited therein.[109] One of the separate opinions in this case, concurring in part in the judgment, takes aim at this opinion, asserting that the system claims here are simply claims to a patent-eligible machine, a tangible item one can put on one's desk.[110] In response to this concurring opinion the majority stated that "The Supreme Court has spoken since *Alappat* on the question of patent eligibility, and we must take note of that change. Abstract methods do not become patent-eligible machines by being clothed in computer language."[111]

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[106] *Id.* at 1290.
[107] *Id.*
[108] *Id.* at 1291.
[109] *Id.*
[110] *Id.*
[111] *Id.* at 1292.

The court held that these claims were not limiting enough, and thus ineligible patent subject matter.

V. Analysis

It is clear from the multitude of opinions issued in this case, that there is much flux in regards to subject matter eligibility, specifically computer-enabled expression of an abstract idea. The multitude of opinions shows that the rule creates unnecessary unpredictability. Given the rapidly developing fields in computer science, the innovation may be difficult to predict. Thus, a flexible test may be to the advantage of the courts. It is of the opinion of this Note that the courts should adopt a rule in the context of machine-or-transformation analysis: if the use of a computer in the claimed invention gives any functional benefit other than increased efficiency, the claims should thus satisfy § 101 and be patentable subject matter. This rule could reduce uncertainty, while also giving a little bit of flexibility. The rule also draws on previous Federal Circuit and Supreme Court precedents regarding software included with an abstract idea, similar to *Bilski*. This flexible guideline would allow the courts to look at the functionality of a specific computer based claim, decide on how using a computer would alter the claim as opposed to using it by hand, and then determine if there are any differences that provide a benefit other that added efficiency compared to manual performance. If there were to be a functional benefit, then the claim should be patentable subject matter.

This rule would provide several articulable benefits. Perhaps most importantly it would reconcile the tension between the Federal Circuit and the Supreme Court. This rule would also improve predictability for inventors attempting to discern whether an invention would likely satisfy § 101 and be patent eligible subject matter. It is much easier to discern if executing a

method on a computer provides benefits outside of efficiency, than it is to determine if executing a method on a computer is integral.

Although the Courts in *Mayo* and *Bilski* declined to move toward an exclusive rules based approach in regards to § 101 jurisprudence, this proposed rule does not need to be applied exclusively. This proposed rule can be seen as a new definition for the machine test under the machine-or-transformation test. When there are facts of a case that show other important considerations that are not viewed under the machine-or-transformation test, the courts should be able to view these considerations along with the machine-or-transformation test to determine patent eligibility.

The method claims in *CLS Bank,* most notably the exchange-facilitation platform described by the patents may offer some benefits in addition to efficiency. For example, escrow agents are valuable because they are trusted third parties. The claims in *CLS Bank* provide the functionality of an escrow agent on a computerized trading platform, which may increase trust in an online marketplace. Using the proposed rule, the court would find that this satisfies the machine-or-transformation exception to an abstract idea, as the invention claims the use of a computer in the that gives a functional benefit other than increased efficiency, the claims should thus satisfy § 101 and be patentable subject matter.

IV. Conclusion

The Supreme Court has identified three implicit exceptions to patent eligibility: "laws of nature, physical phenomena, and abstract ideas," in order to preserve free public access to fundamentally important concepts. Patents that involve processing otherwise-abstract ideas on computers have proven difficult to evaluate under § 101 and the abstract-idea exception. In determining the patent eligibility of a method claim reciting the use of a computer as a limitation,

the Federal Circuit has looked to whether the computer plays "a significant part" in the invention or is merely "an obvious mechanism for permitting a solution to be achieved more quickly." However, the court has not established a clear rule for determining whether a computer plays a "significant part" in performing a claimed software method. Recently, in *CLS Bank International v. Alice Corp. Pty. Ltd*., the Federal Circuit considered the patent eligibility of claims describing a method and system for "the management of risk relating to specified, yet unknown, future events… In particular, the patents relate to a computerized trading platform used for conducting financial transactions in which a third party settles obligations between a first and a second party so as to eliminate "counterparty" or "settlement" risk." The court then held that the use of a computer was not sufficiently integral to the claimed invention to avoid patent ineligibility under the abstract-idea exception. *CLS Bank* illustrates that the Federal Circuit's current approach to patent eligibility of software methods is indeterminate and can lead to seemingly contradictory results in similar cases, producing large amounts of uncertainty surrounding patentability and thus harming innovation. Rather than allowing this approach to continue, the Federal Circuit should adopt a rule, derived from its existing jurisprudence, that any software implementation of a method performable without a computer is patent eligible if the computer provides some functional benefit other than efficiency.