

**United States Court of Appeals  
for the Federal Circuit**

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**CLS BANK INTERNATIONAL,**  
*Plaintiff-Appellee,*

AND

**CLS SERVICES LTD.,**  
*Counterclaim-Defendant Appellee,*

v.

**ALICE CORPORATION PTY. LTD.,**  
*Defendant-Appellant.*

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2011-1301

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Appeal from the United States District Court for the District of Columbia in No. 07-CV-0974, Judge Rosemary M. Collyer.

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Decided: July 9, 2012

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STEVEN J. GLASSMAN, Kaye Scholer LLP, of New York, New York, argued for plaintiff-appellee and counterclaim-defendant-appellee. With him on the brief were WILLIAM A. TANENBAUM and STEPHEN J. ELLIOTT; and DAVID O. BICKART, of Washington, DC.

ADAM L. PERLMAN, Williams & Connolly LLP, of Washington, DC, argued for defendant-appellant. With him on the brief were BRUCE R. GENDERSON, RYAN T. SCARBOROUGH, STANLEY E. FISHER, and DAVID M. KRINSKY. Of counsel on the brief was CONSTANTINE L. TRELA, JR., Sidley Austin, LLP, of Chicago, Illinois.

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Before LINN, PROST, and O'MALLEY, *Circuit Judges*.

Opinion for the court filed by *Circuit Judge* LINN.

Dissenting opinion filed by *Circuit Judge* PROST.

LINN, *Circuit Judge*.

This case presents, once again, the question of patent eligibility under 35 U.S.C. § 101 of an invention implemented by computers. For the reasons explained below, this court concludes that the system, method, and media claims at issue are not drawn to mere “abstract ideas” but rather are directed to practical applications of invention falling within the categories of patent eligible subject matter defined by 35 U.S.C. § 101. The decision of the district court to the contrary is reversed.

## I. BACKGROUND

### A. The Patents in Suit

Alice Corporation (“Alice”) is the owner of U.S. Patent Nos. 5,970,479 (“the ’479 Patent”), 6,912,510 (“the ’510 Patent”), 7,149,720 (“the ’720 Patent”), and 7,725,375 (“the ’375 Patent”). These patents cover a computerized trading platform for exchanging obligations in which a trusted third party settles obligations between a first and second party so as to eliminate “settlement risk.” Settlement risk is the risk that only one party’s obligation will be paid, leaving the other party without its principal. The trusted third party eliminates this risk by either (a)

exchanging both parties' obligations or (b) exchanging neither obligation.

As Alice's expert explained in a declaration attached to Alice's cross-motion for summary judgment and opposition to CLS Bank International and CLS Services Ltd.'s (collectively "CLS Bank") motion for summary judgment, "[w]hen obligations arise from a trade made between two parties, *e.g.*, a trade of stock or a trade of foreign currency, typically, there is a gap in time between when the obligation arises and when the trade is 'settled.'" Ginsberg Decl., ECF No. 95-3, Ex. 1 ¶ 21. "In a number of financial contexts, the process of exchanging obligations, or settlement, is separate from the process of entering into a contract to perform a trade." *Id.* For example, if two banks wish to exchange large sums of currency, they would enter into a binding agreement to make a particular exchange but would postpone the actual exchange until after the price is set and the agreement confirmed, typically two days. After those two days, both banks would "settle" the trade by paying their predetermined amounts to each other. But there is a risk that, at settlement time, one bank will no longer have enough money to satisfy its obligation to the other. The asserted patent claims—claims 33 and 34 of the '479 Patent, and all claims of the '510, '720, and '375 Patents—seek to minimize this risk. The relevant claims of the '479 and '510 Patents are method claims, whereas the claims of the '720 and '375 Patents are system and product (media) claims.

Claim 33 of the '479 Patent, representative of the method claims, recites:

**33.** A method of exchanging obligations as between parties, each party holding a credit record and a debit record with an exchange institution, the credit records and debit records for exchange of predetermined obligations, the method comprising the steps of:

(a) creating a shadow credit record and a shadow debit record for each stakeholder party to be held independently by a supervisory institution from the exchange institutions;

(b) obtaining from each exchange institution a start-of-day balance for each shadow credit record and shadow debit record;

(c) for every transaction resulting in an exchange obligation, the supervisory institution adjusting each respective party's shadow credit record or shadow debit record, allowing only these [sic] transactions that do not result in the value of the shadow debit record being less than the value of the shadow credit record at any time, each said adjustment taking place in chronological order; and

(d) at the end-of-day, the supervisory institution instructing one of the exchange institutions to exchange credits or debits to the credit record and debit record of the respective parties in accordance with the adjustments of the said permitted transactions, the credits and debits being irrevocable, time invariant obligations placed on the exchange institutions.

'479 Patent col.65 ll.23-50.

Claim 1 of the '720 Patent, representative of the system claims, recites:

1. A data processing system to enable the exchange of an obligation between parties, the system comprising:

a data storage unit having stored therein information about a shadow credit record and shadow debit record for a party, independent from a credit record and debit record maintained by an exchange institution; and

a computer, coupled to said data storage unit, that is configured to (a) receive a transaction; (b) electronically adjust said shadow credit record and/or said shadow debit record in order to effect an exchange obligation arising from said transaction, allowing only those transactions that do not result in a value of said shadow debit record being less than a value of said shadow credit record; and (c) generate an instruction to said exchange institution at the end of a period of time to adjust said credit record and/or said debit record in accordance with the adjustment of said shadow credit record and/or said shadow debit record, wherein said instruction being an irrevocable, time invariant obligation placed on said exchange institution.

'720 Patent col.65 ll.42-61.

Claim 39 of the '375 Patent, representative of the product (media) claims, recites:

**39.** A computer program product comprising a computer readable storage medium having computer readable program code embodied in the medium for use by a party to exchange an obligation between a first party and a second party, the computer program product comprising:

program code for causing a computer to send a transaction from said first party relating to an exchange obligation arising from a currency exchange transaction between said first party and said second party; and

program code for causing a computer to allow viewing of information relating to processing, by a supervisory institution, of said exchange obligation, wherein said processing includes

- (1) maintaining information about a first account for the first party, independent from a second account maintained by a first exchange institution, and information about a third account for the second party, independent from a fourth account maintained by a second exchange institution;
- (2) electronically adjusting said first account and said third account, in order to effect an exchange obligation arising from said transaction between said first party and said second party, after ensuring that said first party and/or said second party have adequate value in said first account and/or said third account, respectively; and
- (3) generating an instruction to said first exchange institution and/or said second exchange institution to adjust said second account and/or said fourth account in accordance with the adjustment of said first account and/or said third account, wherein said instruction being an irrevocable, time invariant obligation placed on said first exchange institution and/or said second exchange institution.

'375 Patent col.68 ll.5-35.

#### B. District Court Proceedings

In May 2007, CLS Bank filed suit against Alice seeking a declaratory judgment that the '479, '510, and '720 Patents are invalid, unenforceable, or otherwise not infringed. In August 2007, Alice filed a counterclaim alleging that CLS Bank infringes claims 33 and 34 of the '479 Patent, and all claims of the '510 and '720 Patents.

In March 2009, CLS Bank moved for summary judgment contending that the asserted claims of the '479, '510, and '720 Patents are invalid under 35 U.S.C. § 101. Alice opposed and cross-moved for summary judgment.

Following the Supreme Court's grant of certiorari in *In re Bilski*, 545 F.3d 943 (Fed. Cir. 2008) (en banc) ("*Bilski I*"), cert. granted sub. nom. *Bilski v. Doll*, 129 S. Ct. 2735 (June 1, 2009), the district court denied the parties' cross motions for summary judgment as to subject matter eligibility without prejudice to re-filing following the Supreme Court's decision on certiorari.

In May 2010, the '375 Patent issued to Alice. In August 2010, Alice filed amended counterclaims additionally asserting that CLS Bank infringes all claims of the '375 Patent. After the Supreme Court decided *Bilski v. Kappos*, 130 S. Ct. 3218 (2010) ("*Bilski II*"), affirming *Bilski I*, 545 F.3d 943, the parties renewed their cross-motions for summary judgment, CLS Bank additionally asserting that the '375 Patent is invalid under 35 U.S.C. § 101. The district court granted CLS Bank's motion for summary judgment and denied Alice's cross-motion, holding that each asserted claim of Alice's four patents is invalid for failure to claim patent eligible subject matter. *CLS Bank Int'l v. Alice Corp.*, 768 F. Supp. 2d 221 (D.D.C. 2011). Alice timely appealed. This court has jurisdiction pursuant to 28 U.S.C. § 1295(a)(1).

## II. DISCUSSION

### A. Standard of Review

This court reviews the grant or denial of summary judgment under the law of the regional circuit. *MicroStrategy, Inc. v. Bus. Objects, S.A.*, 429 F.3d 1344, 1349 (Fed. Cir. 2005). The D.C. Circuit reviews *de novo* a district court's grant of summary judgment. *Theodore Roosevelt Conservation P'ship v. Salazar*, 661 F.3d 66, 72 (D.C. Cir. 2011). "We apply our own law with respect to issues of substantive patent law." *Aero Prods. Intern., Inc. v. Intex Recreation Corp.*, 466 F.3d 1000, 1016 (Fed. Cir. 2006). "Whether a claim is drawn to patent eligible subject matter under § 101 is an issue of law that we review *de novo*." *Bilski I*, 545 F.3d at 951.

### B. District Court's Analysis

In deciding CLS Bank's summary judgment motion, the district court first analyzed the method claims under the machine-or-transformation test. CLS Bank, for the purposes of advancing its § 101 motion, agreed to assume a claim construction favorable to Alice. *CLS Bank*, 768 F. Supp. 2d at 236. Thus, the district court interpreted the shadow credit and debit records to require electronic implementation and a computer. *Id.* However, after a careful examination of the specification and the claims, the district court concluded that the "nominal recitation of a general-purpose computer in a method claim does not tie the claim to a particular machine or apparatus or save the claim from being found unpatentable under § 101." *Id.* at 237.

The district court also analyzed the method claims under the abstract idea exception. *Id.* at 242-43; see *Bilski II*, 130 S. Ct. at 3226 (holding that the machine-or-transformation test is an important and useful clue but that it should not be the sole test). Under this analysis, the district court found the methods to be invalid under § 101 as directed to the "fundamental idea of employing a neutral intermediary to ensure that parties to an exchange can honor a proposed transaction, to consummate the exchange simultaneously to minimize the risk that one party does not gain the fruits of the exchange, and then irrevocably to direct the parties, or their value holders, to adjust their accounts or records to reflect the concluded transaction." *CLS Bank*, 768 F. Supp. 2d at 243-44.

The district court then analyzed the computer system and media claims. The district court assumed that these claims were directed to machines or manufactures, and thus analyzed these claims only to see whether they nonetheless represented nothing more than an abstract idea. *Id.* at 250. After noting its earlier conclusion that the method claims were directed to an abstract concept,



the court concluded that “[t]he system claims . . . represent merely the incarnation of this abstract idea on a computer, without any further exposition or meaningful limitation.” *Id.* at 252. Similarly, with respect to the product claims, the court concluded that they “are also directed to the same abstract concept, despite the fact they nominally recite a different category of invention under § 101 than the other claims.” *Id.* at 255.

### C. The Parties’ Arguments on Appeal

With respect to its method claims, Alice argues that they are patent eligible because, unlike the claims at issue in *Bilski*, its method claims are: (1) “tied to a particular machine or apparatus—*i.e.*, they are to be performed on a computer,” Appellant Br. 42; and (2) not directed to an abstract idea, but rather “are limited to a particular practical and technological implementation,” which requires a particular series of concrete steps performed by an intermediary, *id.* 48-50; *see Research Corp. v. Microsoft Corp.*, 627 F.3d 859, 868-69 (Fed. Cir. 2010). With respect to its computer system and media claims, Alice argues that “computer systems are concrete machines, not abstract ideas,” Appellant Br. 23, and “[n]either this [c]ourt nor the Supreme Court has ever invalidated a claim to a computer system under 35 U.S.C. § 101,” *id.* 2. According to Alice, the district court erred by: (1) identifying and considering only the “heart” of Alice’s invention—which it found to be an abstract concept—instead of the claims “as a whole, with all of [their] limitations given effect,” *id.* 26; (2) determining that “computers that are programmable with software—so-called ‘general purpose’ computers—should be analyzed differently from other machines under section 101,” *id.* 31; *In re Alappat*, 33 F.3d 1526, 1545 (Fed. Cir. 1994); and (3) focusing on the “preemptive force” of the claims as an independent test for eligibility when “[n]either the Supreme Court nor this [c]ourt has ever suggested that ‘preemption’ of a method or idea that is *not*

a fundamental principle renders a patent claim invalid under section 101, nor that preemption is a separate step of the section 101 analysis if a claim has been determined not to be abstract,” *id.* 35-36.

CLS Bank responds that “[a]ll of Alice’s claims are directed to the unpatentable concept of ‘exchanging an obligation’ between parties (*i.e.*, effectuating a legal obligation) after an intermediary ensures that there is ‘adequate value’ in independent accounts maintained for the parties to allow the exchange to go forward—in effect, a two-sided escrow arrangement.” Appellee Br. 7-8. With respect to Alice’s method claims, CLS Bank contends that: (1) they fail the machine or transformation test because, “even assuming a broad claim construction . . . requiring computer implementation, such implementation does not impose a ‘meaningful limitation’ on the scope of the claims, because the computer does not play a ‘significant part in permitting the claimed method to be performed,’ but rather ‘function[s] solely as an obvious mechanism for permitting a solution to be achieved more quickly,” *id.* 11, 37-38 (citing *SiRF Tech., Inc. v. Int’l Trade Comm’n*, 601 F.3d 1319, 1333 (Fed. Cir. 2010)); (2) like “the claims in *Bilski*, [*Gottshalk v.*] *Benson*[, 409 U.S. 64 (1972)], and [*Parker v.*] *Flook*[, 437 U.S. 584 (1978)], Alice’s method claims would effectively preempt the use of the abstract business concept for exchanging an obligation which is recited in all of the claims,” *id.* 30; and (3) “[l]ike the claims at issue in *Benson* and *Flook*, Alice’s method claims . . . [are] effectively drawn to a formula or algorithm . . . with data collection preceding use of the algorithm, and account adjustments and instructions that are ‘post-solution activity,” *id.* 38. With respect to Alice’s computer-implemented system and product claims, CLS Bank contends that they are also directed to abstract ideas because, under *Benson*, a mere “redrafting of method claims” to recite a “computer” and “data storage unit” that are “‘configured’ to carry out the abstract

method” does not save the claims from abstractness. *Id.* 41-42.

For the reasons discussed below, this Court agrees with Alice that its asserted method, system, and product claims are all directed to patent eligible subject matter under 35 U.S.C. § 101.

#### D. Analysis

##### i. Patent Eligibility

The Patent Act defines patent eligible subject matter broadly: “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.” 35 U.S.C. § 101 (emphasis added). Section 101 is a “dynamic provision designed to encompass new and unforeseen inventions.” *J.E.M. Ag. Supply, Inc. v. Pioneer HiBred Int’l, Inc.*, 534 U.S. 124, 135 (2001). As the Supreme Court has recognized, “Congress intended statutory subject matter to ‘include anything under the sun that is made by man,’” *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980) (citing S. Rep. No. 82-1979, at 5 (1952) and H.R. Rep. No. 82-1923, at 6 (1952)).

It is true, however, that not *everything* can be patented. The Supreme Court has explained that “laws of nature, physical phenomena, and abstract ideas” fall outside the scope of § 101, and are reserved to the public domain. *Bilski II*, 130 S. Ct. at 3225. In *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, the Supreme Court explained that these exceptions to statutory subject matter are “implicit” in the statute. 132 S. Ct. 1289, 1293 (2012). “Such discoveries are ‘manifestations of . . . nature, free to all men and reserved exclusively to none.’” *Id.* at 2 (citing *Chakrabarty*, 447 U.S. at 309 (quoting *Funk Bros. Seed Co. v. Kalo Inoculant Co.*, 333 U.S. 127, 130 (1948))). In practice,

these three exceptions should arise infrequently and should not be understood to subvert the patent's constitutional mandate "[t]o promote the Progress of Science and useful Arts." U.S. Const. art. I, § 8, cl. 8; *see, e.g., Research Corp.*, 627 F.3d at 868 (Fed. Cir. 2010) ("[S]ection 101 does not permit a court to reject subject matter categorically because it finds that a claim is not worthy of a patent.").

In contrast to § 101, which sets forth the type of subject matter that is patent eligible, §§ 102 and 103 broadly ensure that the public remains free to use that which is *known* and *obvious variants* thereof. *See* 35 U.S.C. §§ 102, 103. In addition, § 112 protects the public storehouse of knowledge by preventing persons from obtaining patent protection for inventions not fully disclosed, enabled, or claimed with particularity. *See* 35 U.S.C. § 112. The comprehensive provisions of 35 U.S.C. §§ 102, 103, and 112 do the substantive work of disqualifying those patent eligible inventions that are "not worthy of a patent." *Research Corp.*, 627 F.3d at 868. "Section 101 is a general statement of the type of subject matter that is eligible for patent protection 'subject to the conditions and requirements of this title.' Specific conditions for patentability follow . . . . The question therefore of whether an invention is novel 'is wholly apart from whether the invention falls into a category of statutory subject matter.'" *Diamond v. Diehr*, 450 U.S. 188, 198-90 (1981) (citing *In re Bergy*, 596 F.2d 952, 961 (CCPA 1979)).

It should be self-evident that each of these four statutory provisions—§§ 101, 102, 103, and 112—serves a different purpose and plays a distinctly different role. No one section is more important than any other. Together, they evince the intent of Congress in furthering the constitutional objective of promoting the progress of the useful arts. Because each of these sections serves a different purpose and plays a different role, invalidity,

patentability, and patent eligibility challenges under these sections present distinctly different questions. *See Prometheus*, 132 S. Ct. at 1303-04. District courts have great discretion to control the conduct of proceedings before them, including the order of presentation of issues and evidence and the sequence of events proscribed by the Federal Rules and leading up to judgment. *See, e.g., Amado v. Microsoft Corp.*, 517 F.3d 1353, 1358 (Fed. Cir. 2008) (“District courts . . . are afforded broad discretion to control and manage their dockets, including the authority to decide the order in which they hear and decide issues pending before them.”). Although § 101 has been characterized as a “threshold test,” *Bilski II*, 130 S. Ct. at 3225, and certainly *can* be addressed before other matters touching the validity of patents, it need not *always* be addressed first, particularly when other sections might be discerned by the trial judge as having the promise to resolve a dispute more expeditiously or with more clarity and predictability. *See MySpace, Inc. v. GraphOn Corp.*, 672 F.3d 1250, 1260 (Fed. Cir. 2012). Thus, consistent with its role as the master of its own docket, a district court properly acts within its discretion in deciding when to address the diverse statutory challenges to validity.

Here, the district court exercised its discretion to entertain a challenge to the validity of the patents in suit under 35 U.S.C. § 101. The district court’s decision ultimately turned on, and thus this appeal is primarily directed to, the issue of whether the claimed inventions fall within the “abstract ideas” exception to patent eligibility. While the Supreme Court’s recent decision in *Prometheus* reiterated the trilogy of “implicit” exceptions to patent eligibility, including the exception for abstract ideas, it did not directly address how to determine whether a claim is drawn to an abstract idea in the first instance.

The abstractness of the “abstract ideas” test to patent eligibility has become a serious problem, leading to great

uncertainty and to the devaluing of inventions of practical utility and economic potential. See Donald S. Chisum, *Weeds and Seeds in the Supreme Court's Business Method Patent Decision: New Directions for Regulating Patent Scope*, 15 Lewis & Clark L. Rev. 11, 14 (2011) ("Because of the vagueness of the concepts of an 'idea' and 'abstract,' . . . the Section 101 abstract idea preemption inquiry can lead to subjectively-derived, arbitrary and unpredictable results. This uncertainty does substantial harm to the effective operation of the patent system."). In *Bilski*, the Supreme Court offered some guidance by observing that "[a] principle, in the abstract, is a fundamental truth; an original cause; a motive; these cannot be patented, as no one can claim in either of them an exclusive right." *Bilski II*, 130 S. Ct. at 3230 (quoting *Le Roy v. Tatham*, 55 U.S. (14 How.) 156, 175 (1852)). This court has also attempted to define "abstract ideas," explaining that "abstract ideas constitute disembodied concepts or truths which are not 'useful' from a practical standpoint standing alone, i.e., they are not 'useful' until reduced to some practical application." *Alappat*, 33 F.3d at 1542 n.18 (Fed. Cir. 1994). More recently, this court explained that the "disqualifying characteristic" of abstractness must exhibit itself "manifestly" "to override the broad statutory categories of patent eligible subject matter." *Research Corp.*, 627 F.3d at 868. Notwithstanding these well-intentioned efforts and the great volume of pages in the Federal Reporters treating the abstract ideas exception, the dividing line between inventions that are directed to patent ineligible abstract ideas and those that are not remains elusive. "Put simply, the problem is that no one understands what makes an idea 'abstract.'" Mark A. Lemley et al., *Life After Bilski*, 63 Stan. L. Rev. 1315, 1316 (2011).

Several decisions have looked to the notion of "preemption" to further elucidate the "abstract idea" exception. In *Bilski*, the Supreme Court explained that

“[a]llowing petitioners to patent risk hedging would *pre-empt use of this approach in all fields*, and would effectively grant a monopoly over an abstract idea.” 130 S.Ct. 3231 (emphasis added). Previously, in *O’Reilly v. Morse*, 56 U.S. 62 (1853), the Supreme Court held that a claim to electromagnetism was not eligible for patent protection because the patentee “claim[ed] *the exclusive right to every improvement* where the motive power is the electric or galvanic current, and the result is the marking or printing intelligible characters, signs, or letters at a distance.” *Id.* at 112-13 (emphases added). The *Morse* Court reasoned that the claim would effectively “*shut[] the door against inventions of other persons . . . in the properties and powers of electro-magnetism*” because “*it matters not by what process or machinery the result is accomplished.*” *Id.* at 113 (emphasis added). Again, in *Gottshalk v. Benson*, 409 U.S. 64 (1972), the Supreme Court emphasized the concept of “pre-emption,” holding that a claim directed to a mathematical formula with “no substantial practical application except in connection with a digital computer” was directed to an unpatentable abstract idea because “the patent would *wholly pre-empt the mathematical formula* and in practical effect would be a patent on an algorithm itself.” *Id.* at 71-72 (emphasis added). In *Parker v. Flook*, 437 U.S. 584 (1978), the Court again emphasized the importance of claims not “pre-empting” the “basic tools of scientific and technological work,” and further held that mere field of use limitations—there, to the oil refining and petrochemical industries—or the addition of “post-solution” activity—there, adjusting an “alarm limit” according to a claimed mathematical calculation—could not “transform an unpatentable principle into a patentable process.” *Id.* at 589.

In contrast to *Morse*, *Benson*, and *Flook*—where the claims were found to “pre-empt” an “idea” or algorithm—in *Diehr*, the Supreme Court held that the claims at issue

(directed to a process for curing rubber using the mathematical “Arrhenius” equation) *did not* “pre-empt the use of that equation.” *Diehr*, 450 U.S. at 187. Rather, the claims “only foreclose[d] from others the *use of that equation in conjunction with all of the other steps in the[] claimed process.*” *Id.* (emphasis added). The *Diehr* Court held that the claims were “not barred at the threshold by § 101” because they were “an *application* of a law of nature or mathematical formula to a known structure or process,” which “incorporate[d] in it a more efficient solution of the equation.” *Id.* at 187, 188.

Our Constitution gave Congress the power to establish a patent system “[t]o promote the Progress of Science and useful Arts . . . .” U.S. Const. art. I, § 8, cl. 8. The patent system is thus intended to foster, not foreclose, innovation. *See id.* While every inventor is granted the right to exclude, or “pre-empt,” others from practicing his or her claimed invention, no one is entitled to claim an exclusive right to a fundamental truth or disembodied concept that would foreclose *every future innovation* in that art. *See Morse*, 56 U.S. at 112-13. As the Supreme Court has “repeatedly emphasized . . . patent law [must] not inhibit further discovery by improperly tying up the future use of laws of nature.” *Prometheus*, 132 S. Ct. at 1301. “[T]here is a danger that grant of patents that tie up [laws of nature, physical phenomena, and abstract ideas] will inhibit future innovation premised upon them, a danger that becomes acute when a patented process amounts to *no more than* an instruction to ‘apply the natural law,’ or otherwise forecloses more future invention than the underlying discovery could reasonably justify.” *Id.* (emphasis added); *see also Benson*, 409 U.S. at 68 (“Here the ‘process’ claim is so abstract and sweeping as to cover both known and *unknown* uses of the BCD to pure binary conversion.” (emphasis added)). Thus, the essential concern is not preemption, *per se*, but the extent to which preemption



results in the foreclosure of innovation. Claims that are directed to no more than a fundamental truth and foreclose, rather than foster, future innovation are not directed to patent eligible subject matter under § 101. No one can claim the exclusive right to all future inventions. *Morse*, 56 U.S. at 112-13; *Benson*, 409 U.S. at 68.

In determining whether a claim is directed to a non-statutory abstract idea, the Supreme Court acknowledged this court's "machine-or-transformation test [as] a useful and important clue, an investigative tool," but not as a dispositive test. *Bilski II*, 130 S. Ct. at 3227. As four Supreme Court Justices acknowledged, during the Industrial Age, few patents were granted for discoveries that did not satisfy the machine-or-transformation test. *Id.* Today, computers play a role in every part of our daily life. They are found in everything from toasters to transponders. The computer, with all of its hardware and software variations, may be one of the greatest inventions of all time, and there can be no question that advances in computer technology have fostered and will continue to foster innovation in all areas of science and technology. Many patents drawn to inventions implemented in computer hardware or software, however, are argued not to pass the machine-or-transformation test. Thus, courts must sometimes look beyond the machine-or-transformation test to distinguish eligible from ineligible computer-related claims. *See Bilski II*, 130 S. Ct. at 3227.

The mere implementation on a computer of an otherwise ineligible abstract idea will not render the asserted "invention" patent eligible. *See Fort Props. Inc. v. Am. Master Lease LLC*, 671 F.3d 1317, 1322 (Fed. Cir. 2011) ("[An] abstract concept cannot be transformed into patentable subject matter merely because of connections to the physical world."); *Dealertrack Inc. v. Huber*, 674 F.3d 1315, 1333 (Fed. Cir. 2012) ("Simply adding a 'computer aided' limitation to a claim covering an abstract concept, without more, is insufficient to render the claim

patent eligible.”); *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1375 (Fed. Cir. 2011) (“[W]e have never suggested that simply reciting the use of a computer to execute an algorithm that can be performed entirely in the human mind” is sufficient to render a claim patent eligible.). On the other hand, where the “addition of a machine impose[s] a meaningful limit on the scope of a claim,” and “play[s] a significant part in permitting the claimed method to be performed, *rather than function[ing] solely as an obvious mechanism for permitting a solution to be achieved more quickly*, i.e., through the utilization of a computer for performing calculations,” that machine limitation renders the method patent eligible. *SiRF Tech., Inc. v. Int’l Trade Comm’n*, 601 F.3d 1319, 1333 (Fed. Cir. 2010) (emphasis added); *see also Diehr*, 450 U.S. at 187 (“It is now commonplace that an *application* of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection.”); *Research Corp.*, 627 F.3d at 868 (holding that a process is patent eligible subject matter when it “presents functional and palpable application in the field of computer technology.”); *Alappat*, 33 F.3d at 1544-45 (holding that claims directed to a specially-programmed computer—a “specific machine to produce a useful, concrete, and tangible result”—are directed to patent eligible subject matter). It can, thus, be appreciated that a claim that is drawn to a *specific way* of doing something with a computer is likely to be patent eligible whereas a claim to *nothing more than the idea* of doing that thing on a computer may not.<sup>1</sup> But even with that appreciation,

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<sup>1</sup> See Lemley, 63 Stan. L. Rev. at 1345 (“Under an appropriate § 101 scope analysis, the relevant concern is not whether there is a physical machine per se in the specification or claim language. Rather, the question should be whether the claim is so abstract and sweeping as to preclude all uses of the inventive idea, or whether it is sufficiently applied.”).

great uncertainty remains, and the core of that uncertainty is the meaning of the “abstract ideas” exception.

As the Supreme Court has recently acknowledged, “too broad an interpretation of [the exceptions to § 101] could eviscerate patent law. For all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.” *Prometheus*, 132 S. Ct. at 1293. Any claim can be stripped down, or simplified, removing all of its concrete limitations, until at its core, something that could be characterized as an abstract idea is revealed. But nothing in the Supreme Court’s precedent, nor in ours, allows a court to go hunting for abstractions by ignoring the concrete, palpable, tangible, and otherwise not abstract invention the patentee actually claims. It is fundamentally improper to paraphrase a claim in overly simplistic generalities in assessing whether the claim falls under the limited “abstract ideas” exception to patent eligibility under 35 U.S.C. § 101. Patent eligibility must be evaluated based on what the claims recite, not merely on the ideas upon which they are premised. In assessing patent eligibility, a court must consider the asserted claim as a whole. *Diehr*, 540 U.S. at 188.

It is inappropriate to dissect the claim into old and new elements and then to ignore the presence of the old elements in the analysis. This is particularly true in a process claim because a new combination of steps in a process may be patentable even though all the constituents of the combination were well known and in common use before the combination was made. The ‘novelty’ of any element or steps in a process, or even of the process itself, is of no relevance in determining whether the subject matter of a claim falls within the § 101 categories of possibly patentable subject matter.

*Id.* at 188-89.<sup>2</sup>

In light of the foregoing, this court holds that when—after taking all of the claim recitations into consideration—it is not manifestly evident that a claim is directed to a patent ineligible abstract idea, that claim must not be deemed for that reason to be inadequate under § 101. It would undermine the intent of Congress to extend a judicially-crafted exception to the unqualified statutory eligibility criteria of § 101 beyond that which is “implicitly” excluded as a “fundamental truth” that is “free to all men and reserved exclusively to none.” *Bilski II*, 130 S. Ct. at 3225, 3230 (citations omitted); *see also id.* at 3226 (“This Court has ‘more than once cautioned that

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<sup>2</sup> The dissent contends that following *Prometheus*, “there is no doubt that to be patent eligible under § 101, the claims must include an ‘inventive concept.’” Dissent 3. From this, the dissent criticizes the majority for not inquiring whether the asserted claims include such an inventive concept or even whether the claims disclose anything inventive. But that is precisely what the majority has done in examining the language of the claims themselves and in criticizing the district court for ignoring the invention the patentee actually claims. The Supreme Court’s reference to an “inventive concept” cannot be read to endorse overlooking the actual terms of the claims or the distillation of claim language to mere generalities. *Prometheus* simply states “that a process that focuses upon the use of a natural law also contain *other elements or a combination of elements*, sometimes referred to as an ‘inventive concept,’ *sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the natural law itself.*” *Prometheus*, 132 S. Ct. at 1294 (emphases added). This is not a new idea, and imposes no “novelty” or “nonobviousness” inquiry into the patent eligibility analysis under § 101. *See Diehr*, 540 U.S. at 188-89.

courts should not read into the patent laws limitations and conditions which the legislature has not expressed.” (quoting *Diehr*, 450 U.S. 175, 182 (citation omitted)). Unless the single most reasonable understanding is that a claim is directed to nothing more than a fundamental truth or disembodied concept, with no limitations in the claim attaching that idea to a specific application, it is inappropriate to hold that the claim is directed to a patent ineligible “abstract idea” under 35 U.S.C. § 101.<sup>3</sup>

## ii. Application

Alice’s asserted claims are directed generally to the exchange of obligations between parties using a computer. The asserted patents, with the exception of minor differences, share a common specification. While the method, system, and media claims fall within different statutory categories, the form of the claim in this case does not change the patent eligibility analysis under § 101. *CyberSource*, 654 F.3d at 1374. “Regardless of

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<sup>3</sup> The dissent expresses concern that the majority “devises a new approach to subject matter patentability” in the face of perceived Supreme Court guidance. Dissent 3. With all due respect for my sister in the dissent, the majority does no such thing. The majority merely recognizes that before the “implicit” exception for abstractness recognized by the Supreme Court and acknowledged by this court is allowed to overtake the intent of Congress as reflected in the broad statutory language of § 101, the determination of abstractness must be manifest. If a court, in applying all of the guidance of the Supreme Court in cases like *Prometheus*, *Bilski II*, *Diehr*, *Flook*, and *Benson*, and in considering all of the precedent from this court in cases like *Fort Properties*, *Dealertrack*, *CyberSource*, *Research Corp.*, *SiRF*, and *Alappat*, is not wholly convinced that the subject matter of the claims is abstract, the claims in question must be held patent eligible.

what statutory category (“process, machine, manufacture, or composition of matter,” . . . ) a claim’s language is crafted to literally invoke, we look to the underlying invention for patent eligibility purposes.” *Id.* “Labels are not determinative in § 101 inquiries . . . because the form of the claim is often an exercise in drafting.” *In re Maucorps*, 609 F.2d 481, 485 (CCPA 1979) (internal citation omitted). Contrary to Alice’s argument, therefore, the fact that computer systems are “machines” does not end the inquiry. *Alappat*, 33 F.3d at 1542 (“Because claim 15 is directed to a ‘machine,’ . . . [it] appears on its face to be directed to § 101 subject matter. This does not quite end the analysis, however, because the Board majority argues that the claimed subject matter falls within . . . the ‘mathematical algorithm’ exception.”). “[T]he basic character of a process claim . . . is not changed by claiming only its performance by computers, or by claiming the process embodied in program instructions on a computer readable medium.” *CyberSource*, 654 F.3d at 1375.

Because mere computer implementation cannot render an otherwise abstract idea patent eligible, *see id.* at 1374-75, the analysis here must consider whether the asserted claims (method, system, and media) are substantively directed to nothing more than a fundamental truth or disembodied concept without any limitation in the claims tying that idea to a specific application, *see supra* Part II.D.i. The district court looked past the details of the claims in characterizing them as being directed to the fundamental concept “of employing an intermediary to facilitate simultaneous exchange of obligations in order to minimize risk.” *CLS Bank*, 768 F. Supp. 2d at 243. By doing so, the district court was able to treat the claims as encompassing nothing more than fundamental truths, much like the patent ineligible “abstract ideas” in *Bilski*, and this court’s post-*Bilski* cases: *CyberSource*, *Dealertrack*, and

*Fort Properties.* As explained above, however, ignoring claim limitations in order to abstract a process down to a fundamental truth is legally impermissible.<sup>4</sup>

Determining whether Alice’s claims are directed to nothing more than a fundamental truth or disembodied concept requires this court to consider the scope and content of the claims. For the purpose of deciding patent eligibility at the district court, the parties agreed to a broad claim construction that was favorable to Alice. The district court concluded that each claim, including each of Alice’s method claims, discussed below, requires computer implementation. *See CLS Bank*, 768 F. Supp. 2d at 236 (“CLS has agreed to a broad construction of terms favorable to Alice, and because the specification reveals a computer based invention, the Court can reasonably assume for present purposes that the terms ‘shadow’ credit and/or debit record and ‘transaction’ in the ’479 Patent recite electronic implementation and a computer or an analogous electronic device.”).

The patent specifications are consistent with the understanding that each asserted claim requires computer implementation. The asserted system and media claims of the ’720 and ’375 Patents explicitly recite “machine” limitations. *See, e.g.*, ’720 Patent col.65 ll.42-48 (“A data processing system . . . comprising a data storage unit . . . ; and a computer . . . .”); ’375 Patent col.68 ll.5-7 (“A computer program product comprising a computer readable storage medium having computer readable program code embodied in the medium . . . .”).

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<sup>4</sup> The dissent engages in the same flawed analysis as the district court by allegedly “[s]tripp[ing the claims] of jargon” and creating a table of the “plain English translation” for each claim element. Dissent 5. It is impermissible for the court to rewrite the claims as it sees them. The invention is defined in the claims by the patentee, not the court. *See* 35 U.S.C. § 112.

With respect to the asserted method claims, the '510 Patent claims recite an “electronic adjustment” limitation, *see, e.g.*, '510 Patent col.64 ll.11-12 (independent claim 1), which, for the purpose of this motion, CLS Bank agreed “requir[es] the use of a computer.” Appellee Br. 6. The '510 Patent specification is consistent with the understanding that the claims require the use of a computer system. *See* '510 Patent col.3 ll.45-46 (disclosure of the invention) (“The entities submit such orders to a ‘system’ which seeks to price and match the most appropriate counter-party . . . .”); col.28 l.45-col.29 l.4 (explaining that the shadow debit/credit records are electronically stored in a system called “INVENTICO”); col.29 ll.41-56 (“[E]ach [participating] entity electronically notifies the applicable CONTRACT APP of the ‘opening balances’ of all the debit and credit INVENTICO accounts it maintains. . . . Upon receipt of [these] notifications, the applicable CONTRACT APP updates/confirms its stakeholder shadow balances. Thus, at this point-in-time, all credit and debit shadow account balances should be equivalent to their actual debit and credit account balances.”).

The specification of the '479 Patent is similarly consistent with the understanding that the asserted claims require computer implementation. '479 Patent col.3 ll.29-38 (disclosure of the invention) (same as '510 Patent); col.4 ll.8-12 (“The present invention also provides an automated infrastructure . . . [which] allows the parties to participate directly without requiring an intermediary.”) According to Alice’s expert, “the person of ordinary skill in the art would understand . . . that claims 33 and 34 of the '479 [P]atent are limited to electronically implemented methods.” Ginsberg Decl., ECF No. 95-3, Ex. 1, ¶ 32. While the asserted claims of the '479 Patent do not contain the “electronic adjustment” limitation, they do contain the same “shadow credit record” and “shadow debit record” limitations as the '510 Patent claims. The



specification of the '479 Patent, like the '510 Patent, supports the understanding that the shadow debit/credit record limitations require computer implementation. *See* '479 Patent col.24 l.59-col.25 l.2 (explaining that the "CONTRACT APP" effects debits and credits to accounts in the INVENTICO system by "debiting/crediting, on a real-time basis, the relevant shadow records (in the data file PAYACC SHADOW) of applicable stakeholder accounts . . ., [which are] external to INVENTICO."). Alice's expert testified in his declaration that one of skill in the art understands that the "data file PAYACC SHADOW" is a "data file[] in a data storage unit." Ginsberg Decl., ECF No. 95-3, Ex. 1, ¶ 32. We find no basis to question the district court's assumption, for the purposes of this motion, that all of Alice's asserted claims require a computer system. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1315-16 (Fed. Cir. 2005) (en banc).

Although computer implementation indicates that these claims would likely satisfy the "machine" prong of the machine-or-transformation test, *see CyberSource*, 654 F.3d at 1375 and *Alappat*, 33 F.3d at 1545, the mere fact of computer implementation alone does not resolve the patent eligibility question, *see Dealertrack*, 674 F.3d at 1333 ("Simply adding a 'computer aided' limitation to a claim covering an abstract concept, without more, is insufficient to render the claim patent eligible."); *CyberSource*, 654 F.3d at 1375. Indeed, almost every method in the Digital Age can be implemented on a specially-programmed computer. *See, e.g., SiRF Tech.*, 601 F.3d at 1333 ("In order for the addition of a machine to impose a meaningful limit on the scope of a claim, it must play a significant part in permitting the claimed method to be performed, rather than function solely as an obvious mechanism for permitting a solution to be achieved more quickly, i.e., through the utilization of a computer for performing calculations.").

In *Bilski*, *CyberSource*, *Dealertrack*, and *Fort Properties* (“the *Bilski* line of cases”), the Supreme Court or this court found some basis in the claims upon which to determine that they were directed to nothing more than patent ineligible abstract ideas. Unlike the *Bilski* line of cases, however, it is difficult to conclude that the computer limitations here do not play a significant part in the performance of the invention or that the claims are not limited to a very specific application of the concept of using an intermediary to help consummate exchanges between parties. The dissent criticizes the majority for failing to explain “why the specific computer implementation in this case brings the claims within patentable subject matter,” Dissent 3, but this criticism is misplaced. The limitations of the *claims as a whole*, not just the computer implementation standing alone, are what place meaningful boundaries on the meaning of the claims in this case.

The asserted claims appear to cover the practical application of a business concept in a specific way, which requires computer implemented steps of exchanging obligations maintained at an exchange institution by creating electronically maintained shadow credit and shadow debit records, and particularly recite that such shadow credit and debit records be held independently of the exchange institution by a supervisory institution; that start-of-the-day balances be obtained from the exchange institution; that adjustments be made to the credit records based on only certain specified allowed transactions under the “adjusting” limitation; that such adjustments be made in chronological order; that at the end of the day, instructions be given to the exchange institution to reflect the adjustments made on the basis of the permitted transactions; and that such adjustments affect irrevocable, time invariant obligations placed on the exchange institution. ’479 Patent col.65 ll.28-50. Transactions “that do not result in the value of the

shadow debit record being less than the value of the shadow credit record at any time” are not permitted under the “adjusting” limitation, and do not result in any ultimate exchange of obligations in the INVENTICO system. *Id.* col.65 ll.36-43, col.24 l.59-col.25 l.2. The claim limitations can be characterized as being integral to the method, as “play[ing] a significant part in permitting the method to be performed,” and as not being token post-solution activity. It is clear, moreover, that the limitations requiring specific “shadow” records leave broad room for other methods of using intermediaries to help consummate exchanges, whether with the aid of a computer or otherwise, and, thus, do not appear to preempt much in the way of innovation.

While the use of a machine in these limitations is less substantial or limiting than the industrial uses examined in *Diehr* (curing rubber) or *Alappat* (a rasterizer), the presence of these limitations prevents us from finding it manifestly evident that the claims are patent ineligible under § 101. *See Research Corp.*, 627 F.3d at 868. In such circumstances, we must leave the question of validity to the other provisions of Title 35.

Accordingly, this court holds that Alice’s method, system, and product claims are directed to statutory subject matter under § 101.

### III. CONCLUSION

For the foregoing reasons, this court reverses the district court’s summary judgment of invalidity under 35 U.S.C. § 101 of claims 33 and 34 of the ’479 Patent and each claim of the ’510, ’720, and ’375 Patents.

**REVERSED**

**United States Court of Appeals  
for the Federal Circuit**

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**CLS BANK INTERNATIONAL,**  
*Plaintiff-Appellee,*

AND

**CLS SERVICES LTD.,**  
*Counterclaim-Defendant Appellee,*

v.

**ALICE CORPORATION PTY. LTD.,**  
*Defendant-Appellant.*

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2011-1301

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Appeal from the United States District Court for the District of Columbia in case no. 07-CV-0974, Judge Rosemary M. Collyer.

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PROST, *Circuit Judge*, dissenting.

The majority resists the Supreme Court's unanimous directive to apply the patentable subject matter test with more vigor. Worse yet, it creates an entirely new framework that in effect allows courts to avoid evaluating patent eligibility under § 101 whenever they so desire. I too find it difficult to answer the questions presented here with absolute certainty. Nonetheless, I believe that

precedent and common sense counsel that the asserted patent claims are abstract ideas repackaged as methods and systems. Thus, with respect, I dissent.

## I

When it comes to subject matter patentability, we do not write on a blank slate. Just a few months ago, the Supreme Court reversed us in a § 101 case for a second time in its last three terms, hinting (not so tacitly) that our subject matter patentability test is not sufficiently exacting. *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289 (2012); *Bilski v. Kappos*, 130 S. Ct. 3218 (2010); *see also WildTangent, Inc. v. Ultramercial, LLC*, (No. 11-962), 2012 WL 369157 (2012), *granting cert., vacating, and remanding Ultramercial, LLC v. Hulu, LLC*, 657 F.3d 1323 (Fed. Cir. 2011). The Court once again iterated that “the prohibition against patenting abstract ideas cannot be circumvented by attempting to limit the use of the formula to a particular technological environment.” *Prometheus*, 132 S. Ct. at 1294 (quoting *Bilski*, 130 S. Ct. at 3230). But this time the Court also made clear what had been written between the lines before: It is not sufficient to put an abstract idea into use with “[p]urely ‘conventional or obvious’ ‘pre-solution activity.’” *Prometheus*, 132 S. Ct. at 1298; *cf. Bilski*, 130 S. Ct. at 3231 (noting that the claimed invention was directed at a “fundamental economic practice long prevalent in our system of commerce”); *Parker v. Flook*, 437 U.S. 584, 594 (1978) (“Respondent’s process is unpatentable under § 101, not because it contains a mathematical algorithm as one component, but because once that algorithm is assumed to be within the prior art, the application, considered as a whole, contains no patentable invention.”). The Court accordingly declined the Solicitor General’s invitation to leave the screening of low quality

patents to § 102 and § 103, even though the government promised that “the claims are likely invalid under those provisions.” Brief for the United States as Amicus Curiae in Support of Neither Party at 9, *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289 (2012) (No. 10-1150). Now there is no doubt that to be patent eligible under § 101, the claims must include an “inventive concept.” *Prometheus*, 132 S. Ct. at 1294.

The majority has failed to follow the Supreme Court’s instructions—not just in its holding, but more importantly in its approach. The majority does not inquire whether the asserted claims include an inventive concept. Even more fundamentally, the majority questions whether the Supreme Court’s abstract idea test is workable at all. Maj. Op. 13-14. Based on this apprehension, I take it, the majority devises a new approach to subject matter patentability. We must now avoid deciding a § 101 case unless unpatentability is “manifestly evident.” Maj. Op. 20.

I would be more empathetic if the majority’s approach was based on a case-specific determination, made upon the application of the Supreme Court’s abstract idea test to the asserted claims. As mentioned, however, the majority does not even attempt to inquire whether the claims disclose anything inventive. The bulk of the analysis focuses on the fact that the claims require “computer implementation,” which the majority itself deems insufficient to pass muster under § 101. Maj. Op. 21-25. Nor is there any explanation for why the specific computer implementation in this case brings the claims within patentable subject matter. *See also infra* Part III. The majority merely posits that the additional limitations in the claims “can be characterized as being integral to the [invention],” but it does not explain whether they

*should* be characterized as such, and what “integral” means in the context of § 101 in the first place. Maj. Op. 27.

So why does the majority reverse the district court? Frankly, because “it is difficult to conclude that the computer limitations here do not play a significant part in the performance of the invention.” Maj. Op. 26. That suggests that the majority’s “manifestly evident” standard is more of an escape hatch than a yardstick. In other words, the majority has resurrected the very approach to § 101 that the Solicitor General advocated—and the Supreme Court laid to rest—in *Prometheus*. I cannot agree.

## II

Even if we were to punt the subject matter issue whenever it is difficult, we would not have any justification for reversing the district court in this case—especially on the method claims. The basic idea behind the claimed invention is the use of an intermediary in a financial transaction. At its most basic form, in a transaction between parties ‘A’ and ‘B,’ a middle-man collects funds from ‘A’ but will not pass them to ‘B’ until ‘B’ has also performed. In more complicated settings, the intermediary makes intelligent choices in selecting the parties to the transaction in a way to minimize or hedge the transaction risk. In any event, this basic idea of “credit intermediation” is not just abstract; it is also literally ancient. See Temin, Peter, *Financial Intermediation in the Early Roman Empire* (November 2002), MIT Department of Economics Working Paper No. 02-39, available at <http://ssrn.com/abstract=348103> or <http://dx.doi.org/10.2139/ssrn.348103> (exploring the use of financial intermediaries in the Early Roman Empire).

So where is the invention? The majority states that it is not the computer implementation, but “the claims as a whole” that make the invention patentable. Maj. Op. at 26. But setting any need for computer implementation aside, there is nothing in the method steps themselves that brings the invention within patentable subject matter. Stripped of jargon, representative method claim 33 simply breaks down the idea of a financial intermediary into four steps: (a) creating a debit and credit account for each party, (b) checking the account balances in the morning, (c) adjusting the account balances through the day, and (d) paying the parties at the end of the day if both parties have performed.<sup>1</sup> The claim in effect pre-

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<sup>1</sup> Table 1:

The Recited Steps	Plain English Translation
(a) creating a shadow credit record and a shadow debit record for each stakeholder party to be held independently by a supervisory institution from the exchange institutions;	(a) creating a debit and credit account for each party.
(b) obtaining from each exchange institution a start-of-day balance for each shadow credit record and shadow debit record;	(b) checking the account balances in the morning,
(c) for every transaction resulting in an exchange obligation, the supervisory institution adjusting each respective party’s shadow credit record or shadow debit record, allowing only these [sic] transactions that do not result in the value of the shadow debit record being less than the value of the shadow credit record at any time, each said adjustment taking place in chronological order; and.	(c) adjusting the account balances through the day, and
(d) at the end-of-day, the supervisory institution instructing one of the exchange institutions to exchange credits or debits to the credit record and debit record of the respective parties in accordance with the adjustments of the said permitted transactions, the credits and debits being irrevocable, time invariant obligations placed on the exchange institutions	(d) paying the parties at the end of the day if both parties have sufficiently performed.



sents an abstract idea and then says “apply it.” That is not enough. *Prometheus*, 132 S. Ct. at 1294 (“[T]o transform an unpatentable law of nature into a patent-eligible *application* of such a law, one must do more than simply state the law of nature while adding the words ‘apply it.’”).

The majority objects that “[i]t is impermissible for the court to rewrite claims as it sees them.” Maj. Op. 23 n.4. But that is precisely what courts do in claim construction everyday. Perhaps what the majority actually means is that the plain English translation in Table 1 somehow glosses over a limitation that would otherwise narrow the claims to something that is non-abstract. One would wish that the majority had not kept that limitation a secret. The only hint appears where the majority points to the phrase “shadow records,” as if that alone transmutes the abstract idea of the claims into patentable subject matter. Maj. Op. 27. But the claims use “shadow” to simply define an account that is used to track a party’s payments (the account is a shadow of the party’s performance). That is not a limiting feature at all; any financial intermediation would in one way or another use a “shadow” account. Therefore, the representative method claim does not limit the method steps in a way that the Supreme Court considers to be meaningful. It merely recites the steps of performing as an intermediary in a financial transaction, which is an abstract idea, nothing more and nothing less. *Cf. Bilski*, 130 S. Ct. at 3231.

That leaves determining whether the computer implementation—assuming one is required by the method claims—makes the invention patentable. It does not. As the majority itself notes, “the mere fact of computer implementation alone does not resolve the patent eligibility question.” Maj. Op. 25. Nor is there anything about

the use of computers in the method claims in this case that brings them within patentable subject matter. In *Gottschalk v. Benson*, 409 U.S. 63, 65 (1972), for example, the Supreme Court considered a patent “on a method of programming a general-purpose digital computer to convert signals from binary-coded decimal form into pure binary form.” *Id.* Most of the steps of representative claim 8 expressly required the use of a shift register, a form of digital computer. *Id.* at 73. Indeed, the Supreme Court emphasized that the conversion method had “no substantial practical application except in connection with a digital computer.” *Id.* at 71. That did not prevent the Court from holding, however, that the asserted claims were abstract. *Id.* at 72-73. More recently, we evaluated the patentability of a claim for “[a] computer aided method of managing a credit application” that recited a “display device” and “terminal devices,” which the district court correctly construed as some form of computer implementation. *Dealertrack, Inc. v. Huber*, 674 F.3d 1315, 1331-35 (Fed. Cir. 2012). We nonetheless looked beyond the computer implementation to the inventive concept of the patent and held that the claim disclosed an abstract idea. *Id.* at 1333 (“Dealertrack’s claimed process in its simplest form includes three steps: receiving data from one source (step A), selectively forwarding the data (step B, performed according to step D), and forwarding reply data to the first source (step C). The claim ‘explain[s] the basic concept’ of processing information through a clearinghouse [and is therefore abstract.]”); *see also Fort Props., Inc. v. Am. Master Lease, LLC*, 671 F.3d 1317, 1323-24 (Fed. Cir. 2012) (holding that a claim limitation that required a computer to generate deedshares was abstract).

These authorities should have compelled us to hold that the asserted method claims in this case are abstract.

The connection between the basic idea behind the claimed invention and the use of computers is not any stronger here than the relationship between the binary conversion system and the shift register in *Benson*, or the credit application system and computers in *Dealertrack*. Indeed, unlike in *Benson* and *Dealertrack*, the representative method claim does not even recite the use of a computer. And while some of the dependent claims recite computers, the specification shows that the use of computers is simply incidental. *See also infra* Part III. As I see it, therefore, the method claims do not present a difficult case. But district courts and litigants will now face a difficult task in deciphering the law and harmonizing precedent: What is it that sets *Benson*, *Bilski*, and *Prometheus*—and *Dealertrack*—apart from this case, and what legal principle justifies responding to a unanimous Supreme Court decision against patentability with even a stricter subject matter standard? I do not know, and I cannot find the answer in the majority opinion.

### III

The system claims present somewhat of a closer question, in part because the Supreme Court has not decided a § 101 case that involves system claims. There is a perfectly reasonable argument that system claims are never abstract as a matter of law. After all, systems comprise objects, and objects are literally not abstract. A bright-line rule that brings all systems within patentable subject matter is also easy to comprehend and administer. Evaluating whether systems are abstract, on the other hand, may run the risk of stepping too far into making novelty and obviousness determinations under the guise of the abstractness test.

Nonetheless, I would affirm the district court on the system claims as well. To begin with, I do not believe that we are free to decide that system claims may never be abstract. The Supreme Court has warned that “patent eligibility [does not] ‘depend simply on the draftsman’s art.’” *Prometheus*, 132 S. Ct. at 1294 (quoting *Flook*, 437 U.S. at 593). A bright-line rule would conflict with the Supreme Court’s admonition against putting form before substance in this area of patent law. More fundamentally, however, providing all system claims with immunity from the subject matter inquiry would eviscerate the abstract idea test altogether. Any method claim that uses a general purpose computer may also be drafted as a system (containing computers) that carries out the method. The close similarity between the representative system and method claims in this case provides a great example. Thus, I generally agree with the majority that the mere fact that a claim recites a system does not put it beyond the abstract idea test. Maj. Op. 21-22.

Once we accept that system claims may be abstract, however, there is little room to suggest that the system claims in this case fall within patentable subject matter. As already mentioned, the Supreme Court has directed us to inquire whether the claim limitations that are added to the abstract idea are inventive. Of course, I do not understand that prescription as a permit to collapse the obviousness and novelty inquiries into § 101. But there are cases where we may simply consult the claims and the specification in order to conclude that the additions are mere pre or post solution activity. That is, there are cases in which we can easily tell that the invention is not about systems or computers; it is merely an abstract idea clothed as something more tangible. In those circumstances, we may not simply defer the threshold question of patentability to other provisions of the Act; rather,

where the case squarely presents the issue, we must invalidate the patent under § 101. *See supra* Part I.

This is one such case. Apart from the abstract idea of avoiding transaction risk by using financial intermediaries, representative system claim 1 of the '720 patent recites 1) a computer memory that contains account balance information, and 2) a computer that can track the account balance. '720 patent col.65 ll.42-61. One need not be a computer scientist to suspect that this level of computer implementation is not inventive. But intuition is not our only guide; we also have the patent specification. The “disclosure of the invention” section of the '720 patent almost exclusively discusses the concept of risk minimization in financial transactions. Although it summarily states that “[t]he invention also encompasses apparatus . . . dealing with the handling of contracts,” it does not mention what aspect of the apparatus is an advancement in the art. *Id.* col.5 ll.27-29. Quite the opposite: it explains that the object of the invention can be “achieved by a computing/telecommunications infrastructure that is capable of being accessed worldwide by any enterprise/individual having access to a computer and a telephone network.” *Id.* col.5 ll.47-50. The rest of the 65-column-long specification is similarly devoid of any teaching for how one must implement computer systems. For example, there is no instruction for connecting various components of the system and no discussion of how existing systems need be modified or improved in order to implement the one that is claimed. Indeed, even the “preferred embodiment” is not limited to a single system: According to the specification, the best mode of the invention may be implemented with “[a] large range of communication hardware products,” “[o]ne amongst many of [which] are personal computers and associated printers.” *Id.* col.7 l.65–col.8 l.3. Other options include “a mini or

mainframe computer,” “a tone dialing telephone,” or even “a voice connection via an operator.” *Id.* col.8 ll.6-12. As far as an actual system is concerned, therefore, implementation is irrelevant—anything goes. Instead, the specification discusses at length and in painful detail various forms of transactions, contracts, order processing, order authorization, risk management, and other financial concepts. Even a quick glance at the ’720 patent reveals that the claimed *invention* is not about physical systems; it is the abstract idea of risk-management in financial transactions carried out on an already known infrastructure. That invention, even if new, is an unpatentable abstract idea.

In sum, if we are to assess system claims for subject matter patentability—and I believe that we are currently so obligated—we must also follow the Supreme Court’s instructions on how the abstract idea test should be applied. That is, we must look beyond the non-inventive aspect of the claims and ask whether the remaining portion is an abstract idea. Following that approach, in my view, unavoidably leads to the conclusion that similar to the method claims, the asserted system claims are not patentable. Perhaps, the Supreme Court will reconsider its broad instructions in *Prometheus* once it considers system claims, but until then we would only add confusion and uncertainty by creating our own ad-hoc approach. I respectfully dissent.<sup>2</sup>

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<sup>2</sup> I am also of the view that the computer medium claims are not patentable under § 101. But since the majority has not addressed the issue separately, I see no need to discuss it.