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Gregory J. Mesaros

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Lewis Roca Rothgerber LLP - eWinWin Inc.

4300 Bohannon Drive

Suite 230

Menlo Park, CA 94025

EXAMINER

FADOK, MARK A

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PAPER NUMBER

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NOTIFICATION DATE

DELIVERY MODE

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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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gmesaros@ewinwin.com

ipdockets@lrrlaw.com

cspringer@lrrlaw.com

Office Action Summary	Application No. 13/269,360	Applicant(s) MESAROS, GREGORY J.	
	Examiner MARK FADOK	Art Unit 3684	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/4/2013.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

- 5) ☒ Claim(s) 24-30 is/are pending in the application.
5a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) _____ is/are allowed.
- 7) ☒ Claim(s) 24-30 is/are rejected.
- 8) ☐ Claim(s) _____ is/are objected to.
- 9) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

- a) ☐ All b) ☐ Some** c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 3) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)
Paper No(s)/Mail Date _____ | 4) <input type="checkbox"/> Other: _____ |

The present application is being examined under the pre-AIA first to invent provisions.

DETAILED ACTION

Response to Amendment

The examiner is in receipt of applicant's response to office action mailed 12/6/2013, which was received 3/4/2014. Acknowledgment was made that there was no amendment to the claims. The applicant's amendments were not considered persuasive and are rejected for the same rationale as provided in the office action mailed 12/6/2013. Applicant's amendment and remarks were not considered persuasive, however, after review of the US Supreme Court decision *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 110 U.S.P.Q.2d 1976, 2014 ILRC 2109 (U.S. 2014) [2014 BL 170103] the following rejection under USC 101 is provided:

Claim Rejections - 35 USC § 101

The claimed invention is directed to non-statutory subject matter because the supreme court has determined that the use of abstract ideas that functioned on a computer are not patentable. (see decision as copied below).

No. 13-298. Argued March 31, 2014-Decided June 19, 2014

Petitioner Alice Corporation is the assignee of several patents that disclose a scheme for mitigating "settlement risk," i.e., the risk that only one party to an agreed-upon financial exchange will satisfy its obligation. In particular, the patent claims are designed to facilitate the exchange of financial obligations between two parties by using a

Art Unit: 3684

computer system as a third-party intermediary. The patents in suit claim (1) a method for exchanging financial obligations, (2) a computer system configured to carry out the method for exchanging obligations, and (3) a computer-readable medium containing program code for performing the method of exchanging obligations.

Respondents (together, CLS Bank), who operate a global network that facilitates currency transactions, filed suit against petitioner, arguing that the patent claims at issue are invalid, unenforceable, or not infringed. Petitioner counterclaimed, alleging infringement. After *Bilski v. Kappos*, 561 U.S. 593 , was decided, the District Court held that all of the claims were ineligible for patent protection under 35 U.S.C. §101 because they are directed to an abstract idea. The en banc Federal Circuit affirmed.

Held: Because the claims are drawn to a patent-ineligible abstract idea, they are not patent eligible under §101 .

(a) The Court has long held that §101 , which defines the subject matter eligible for patent protection, contains an implicit exception for ' "[l]aws of nature, natural phenomena, and abstract ideas.' " *Association for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. ____ , _____. In applying the §101 exception, this Court must distinguish patents that claim the " 'buildin[g] block[s]' " of human ingenuity, which are ineligible for patent protection, from those that integrate the building blocks into something more, see *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. ____ , ____ , thereby "transform[ing]" them into a patent-eligible invention, *id.* , at ____.

Art Unit: 3684

(b) Using this framework, the Court must first determine whether the claims at issue are directed to a patent-ineligible concept. 566 U.S., at ____ . If so, the Court then asks whether the claim's elements, considered both individually and "as an ordered combination," "transform the nature of the claim" into a patent-eligible application. *Id.* , at ____.

(1) The claims at issue are directed to a patent-ineligible concept: the abstract idea of intermediated settlement. Under "the longstanding rule that '[a]n idea of itself is not patentable,' " *Gottschalk v. Benson*, 409 U.S. 63 , 67, this Court has found ineligible patent claims involving an algorithm for converting binary-coded decimal numerals into pure binary form, *id.* , at 71-72; a mathematical formula for computing "alarm limits" in a catalytic conversion process, *Parker v. Flook*, 437 U.S. 584 , 594-595; and, most recently, a method for hedging against the financial risk of price fluctuations, *Bilski*, 561 U. S, at 599 . It follows from these cases, and *Bilski* in particular, that the claims at issue are directed to an [*2] abstract idea. On their face, they are drawn to the concept of intermediated settlement, i.e., the use of a third party to mitigate settlement risk. Like the risk hedging in *Bilski*, the concept of intermediated settlement is " 'a fundamental economic practice long prevalent in our system of commerce,' " *ibid.* , and the use of a third-party intermediary (or "clearing house") is a building block of the modern economy. Thus, intermediated settlement, like hedging, is an "abstract idea" beyond §101's scope.

(2) Turning to the second step of Mayo's framework: The method claims, which merely require generic computer implementation, fail to transform that abstract idea into a patent-eligible invention.

Art Unit: 3684

(i) "Simply appending conventional steps, specified at a high level of generality," to a method already "well known in the art" is not "enough" to supply the "'inventive concept'" needed to make this transformation. Mayo, supra, at ___, _____. The introduction of a computer into the claims does not alter the analysis. Neither stating an abstract idea "while adding the words 'apply it,'" Mayo, supra, at ___, nor limiting the use of an abstract idea "to a particular technological environment," Bilski, supra, at 610-611, is enough for patent eligibility. Stating an abstract idea while adding the words "apply it with a computer" simply combines those two steps, with the same deficient result. Wholly generic computer implementation is not generally the sort of "additional featur[e]" that provides any "practical assurance that the process is more than a drafting effort designed to monopolize the [abstract idea] itself." Mayo, supra, at ____.

(ii) Here, the representative method claim does no more than simply instruct the practitioner to implement the abstract idea of intermediated settlement on a generic computer. Taking the claim elements separately, the function performed by the computer at each step-creating and maintaining "shadow" accounts, obtaining data, adjusting account balances, and issuing automated instructions-is "[p]urely 'conventional.'" Mayo, 566 U.S., at _____. Considered "as an ordered combination," these computer components "ad[d] nothing . . . that is not already present when the steps are considered separately." Id., at _____. Viewed as a whole, these method claims simply recite the concept of intermediated settlement as performed by a generic computer. They do not, for example, purport to improve the functioning of the computer itself or effect an improvement in any other technology or technical field. An instruction

Art Unit: 3684

to apply the abstract idea of intermediated settlement using some unspecified, generic computer is not "enough" to transform the abstract idea into a patent-eligible invention.

Id., at ____ .

(3) Because petitioner's system and media claims add nothing of substance to the underlying abstract idea, they too are patent ineligible under §101 . Petitioner conceded below that its media claims rise or fall with its method claims. And the system claims are no different in substance from the method claims. The method claims recite the abstract [*3] idea implemented on a generic computer; the system claims recite a handful of generic computer components configured to implement the same idea. This Court has long "warn[ed] . . . against" interpreting §101 "in ways that make patent eligibility 'depend simply on the draftsman's art.' " Mayo, supra, at ____ . Holding that the system claims are patent eligible would have exactly that result.

717 F. 3d 1269 , affirmed.

THOMAS, J., delivered the opinion for a unanimous Court. SOTOMAYOR, J., filed a concurring opinion, in which GINSBURG and BREYER, JJ., joined.

Opinion of the Court

JUSTICE THOMAS delivered the opinion of the Court.

The patents at issue in this case disclose a computer-implemented scheme for mitigating "settlement risk" (i.e., the risk that only one party to a financial transaction will pay what it owes) by using a third-party intermediary. The question presented is

Art Unit: 3684

whether these claims are patent eligible under 35 U.S.C. §101 , or are instead drawn to a patent-ineligible abstract idea. We hold that the claims at issue are drawn to the abstract idea of intermediated settlement, and that merely requiring generic computer implementation fails to transform that abstract idea into a patent-eligible invention. We therefore affirm the judgment of the United States Court of Appeals for the Federal Circuit.

I

A

Petitioner Alice Corporation is the assignee of several patents that disclose schemes to manage certain forms of financial risk.¹ According to the specification largely shared by the patents, the invention "enabl[es] the management of risk relating to specified, yet unknown, future events." App. 248. The specification further explains that the "invention relates to methods and apparatus, including electrical computers and data processing systems applied to financial matters and risk management." Id., at 243.

The claims at issue relate to a computerized scheme for mitigating "settlement risk"-i.e., the risk that only one party to an agreed-upon financial exchange will satisfy its obligation. In particular, the claims are designed to facilitate the exchange of financial obligations between two parties by using a computer system as a third-party intermediary. Id., at 383-384.² The intermediary creates "shadow" credit and debit records (i.e., account ledgers) that mirror the balances in the parties' real-world accounts at "exchange institutions" (e.g., banks). The intermediary updates the shadow

Art Unit: 3684

records in real time as transactions are entered, allowing "only those transactions for which the parties' updated shadow records indicate sufficient resources to satisfy their mutual obligations." 717 F. 3d 1269 , 1285 (CA Fed. 2013) (Lourie, J., concurring). At the end of the day, the intermediary instructs the relevant financial institutions to carry out the "permitted" transactions in accordance with the updated shadow records, *ibid.* , thus mitigating the risk that only one party will perform the agreed-upon exchange. In sum, the patents in suit claim (1) the foregoing method for exchanging obligations (the method claims), (2) a computer system configured to carry out the method for exchanging [*4] obligations (the system claims), and (3) a computer-readable medium containing program code for performing the method of exchanging obligations (the media claims). All of the claims are implemented using a computer; the system and media claims expressly recite a computer, and the parties have stipulated that the method claims require a computer as well.

B

Respondents CLS Bank International and CLS Services Ltd. (together, CLS Bank) operate a global network that facilitates currency transactions. In 2007, CLS Bank filed suit against petitioner, seeking a declaratory judgment that the claims at issue are invalid, unenforceable, or not infringed. Petitioner counterclaimed, alleging infringement. Following this Court's decision in *Bilski v. Kappos*, 561 U.S. 593 (2010), the parties filed cross-motions for summary judgment on whether the asserted claims are eligible for patent protection under 35 U.S.C. §101 . The District Court held that all of the claims

Art Unit: 3684

are patent ineligible because they are directed to the abstract idea of "employing a neutral intermediary to facilitate simultaneous exchange of obligations in order to minimize risk." 768 F. Supp. 2d 221 , 252 (DC 2011).

A divided panel of the United States Court of Appeals for the Federal Circuit reversed, holding that it was not "manifestly evident" that petitioner's claims are directed to an abstract idea. 685 F. 3d 1341 , 1352 , 1356 (2012). The Federal Circuit granted rehearing en banc, vacated the panel opinion, and affirmed the judgment of the District Court in a one-paragraph per curiam opinion. 717 F. 3d, at 1273 . Seven of the ten participating judges agreed that petitioner's method and media claims are patent ineligible. See *id.*, at 1274 (Lourie, J., concurring); *id.*, at 1312-1313 (Rader, C. J., concurring in part and dissenting in part). With respect to petitioner's system claims, the en banc Federal Circuit affirmed the District Court's judgment by an equally divided vote. *Id.*, at 1273 .

Writing for a five-member plurality, Judge Lourie concluded that all of the claims at issue are patent ineligible. In the plurality's view, under this Court's decision in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. ____ (2012), a court must first "identif[y] the abstract idea represented in the claim," and then determine "whether the balance of the claim adds 'significantly more.' " 717 F. 3d, at 1286 . The plurality concluded that petitioner's claims "draw on the abstract idea of reducing settlement risk by effecting trades through a third-party intermediary," and that the use of a computer to maintain, adjust, and reconcile shadow accounts added nothing of substance to that abstract idea. *Ibid.* .

Art Unit: 3684

Chief Judge Rader concurred in part and dissented in part. In a part of the opinion joined only by Judge Moore, Chief Judge Rader agreed with the plurality that petitioner's method and media claims are drawn to an abstract idea. *Id.*, at 1312-1313 . In a part of the opinion joined by Judges Linn, Moore, and O'Malley, Chief Judge Rader would have held that the system claims are patent eligible because they involve computer "hardware" that is "specifically programmed to solve a complex problem." *Id.*, at 1307 . Judge Moore wrote a separate opinion dissenting [*5] in part, arguing that the system claims are patent eligible. *Id.*, at 1313-1314 . Judge Newman filed an opinion concurring in part and dissenting in part, arguing that all of petitioner's claims are patent eligible. *Id.*, at 1327 . Judges Linn and O'Malley filed a separate dissenting opinion reaching that same conclusion. *Ibid* .

We granted certiorari, 571 U.S. ____ (2013), and now affirm.

II

Section 101 of the Patent Act defines the subject matter eligible for patent protection. It provides:

"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 .

"We have long held that this provision contains an important implicit exception: Laws of nature, natural phenomena, and abstract ideas are not patentable." *Association for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. ____ , ____ (2013) (slip op., at 11)

Art Unit: 3684

(internal quotation marks and brackets omitted). We have interpreted §101 and its predecessors in light of this exception for more than 150 years. *Bilski*, supra, at 601-602; see also *O'Reilly v. Morse*, 15 How. 62, 112-120 (1854); *Le Roy v. Tatham*, 14 How. 156, 174-175 (1853).

We have described the concern that drives this exclusionary principle as one of pre-emption. See, e.g., *Bilski*, supra, at 611-612 (upholding the patent "would pre-empt use of this approach in all fields, and would effectively grant a monopoly over an abstract idea"). Laws of nature, natural phenomena, and abstract ideas are " ' the basic tools of scientific and technological work." ' " *Myriad*, supra, at ____ (slip op., at 11).

"[M]onopolization of those tools through the grant of a patent might tend to impede innovation more than it would tend to promote it," thereby thwarting the primary object of the patent laws. *Mayo*, supra, at ____ (slip op., at 2); see U.S. Const., Art. I, §8, cl. 8 (Congress "shall have Power . . . To promote the Progress of Science and useful Arts").

We have "repeatedly emphasized this . . . concern that patent law not inhibit further discovery by improperly tying up the future use of" these building blocks of human ingenuity. *Mayo*, supra, at ____ (slip op., at 16) (citing *Morse*, supra, at 113).

At the same time, we tread carefully in construing this exclusionary principle lest it swallow all of patent law. *Mayo*, 566 U.S., at ____ (slip op., at 2). At some level, "all inventions . . . embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas." *Id.*, at ____ (slip op., at 2). Thus, an invention is not rendered ineligible for patent simply because it involves an abstract concept. See *Diamond v. Diehr*, 450 U.S. 175, 187 (1981). "[A]pplication[s]" of such concepts " ' to a

Art Unit: 3684

new and useful end,' " we have said, remain eligible for patent protection. *Gottschalk v. Benson*, 409 U.S. 63 , 67 (1972).

Accordingly, in applying the §101 exception, we must distinguish between patents that claim the " 'buildin[g] block[s]' " of human ingenuity and those that integrate the building blocks into something more, *Mayo*, 566 U.S., at ____ (slip op., at 20), thereby "transform[ing]" them into a patent-eligible invention, *id.*, at ____ (slip op., at 3). The former "would risk disproportionately tying up the use of the underlying" ideas, *id.*, at ____ (slip op., at 4), and are therefore ineligible for patent protection. [*6] The latter pose no comparable risk of pre-emption, and therefore remain eligible for the monopoly granted under our patent laws.

III

In *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. ____ (2012), we set forth a framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts. First, we determine whether the claims at issue are directed to one of those patent-ineligible concepts. *Id.*, at ____ (slip op., at 8). If so, we then ask, "[w]hat else is there in the claims before us?" *Id.*, at ____ (slip op., at 9). To answer that question, we consider the elements of each claim both individually and "as an ordered combination" to determine whether the additional elements "transform the nature of the claim" into a patent-eligible application. *Id.*, at ____ (slip op., at 10, 9). We have described step two of this analysis as a search for an " 'inventive concept' "-i.e., an

Art Unit: 3684

element or combination of elements that is "sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself."

Id., at ____ (slip op., at 3).³

A

[1] We must first determine whether the claims at issue are directed to a patent-ineligible concept. We conclude that they are: These claims are drawn to the abstract idea of intermediated settlement.

The "abstract ideas" category embodies "the longstanding rule that '[a]n idea of itself is not patentable.'" Benson, supra, at 67 (quoting Rubber-Tip Pencil Co. v. Howard, 20 Wall. 498, 507 (1874)); see also Le Roy, supra, at 175 ("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"). In Benson, for example, this Court rejected as ineligible patent claims involving an algorithm for converting binary-coded decimal numerals into pure binary form, holding that the claimed patent was "in practical effect . . . a patent on the algorithm itself." 409 U.S., at 71-72. And in Parker v. Flook, 437 U.S. 584, 594-595 (1978), we held that a mathematical formula for computing "alarm limits" in a catalytic conversion process was also a patent-ineligible abstract idea.

We most recently addressed the category of abstract ideas in Bilski v. Kappos, 561 U.S. 593 (2010). The claims at issue in Bilski described a method for hedging against the financial risk of price fluctuations. Claim 1 recited a series of steps for hedging risk, including: (1) initiating a series of financial transactions between providers and

Art Unit: 3684

consumers of a commodity; (2) identifying market participants that have a counterrisk for the same commodity; and (3) initiating a series of transactions between those market participants and the commodity provider to balance the risk position of the first series of consumer transactions. *Id.*, at 599 . Claim 4 "pu[t] the concept articulated in claim 1 into a simple mathematical formula." *Ibid* . The remaining claims were drawn to examples of hedging in commodities and energy markets.

"[A]ll members of the Court agree[d]" that the patent at issue in *Bilski* claimed an "abstract idea." *Id.*, at 609 ; see also *id.*, at 619 (Stevens, J., concurring in judgment). Specifically, the claims described "the basic concept of hedging, [*7] or protecting against risk." *Id.*, at 611 . The Court explained that " '[h]edging is a fundamental economic practice long prevalent in our system of commerce and taught in any introductory finance class.' " *Ibid* . "The concept of hedging" as recited by the claims in suit was therefore a patent-ineligible "abstract idea, just like the algorithms at issue in *Benson* and *Flook*." *Ibid* .

It follows from our prior cases, and *Bilski* in particular, that the claims at issue here are directed to an abstract idea. Petitioner's claims involve a method of exchanging financial obligations between two parties using a third-party intermediary to mitigate settlement risk. The intermediary creates and updates "shadow" records to reflect the value of each party's actual accounts held at "exchange institutions," thereby permitting only those transactions for which the parties have sufficient resources. At the end of each day, the intermediary issues irrevocable instructions to the exchange institutions to carry out the permitted transactions.

Art Unit: 3684

On their face, the claims before us are drawn to the concept of intermediated settlement, i.e., the use of a third party to mitigate settlement risk. Like the risk hedging in *Bilski*, the concept of intermediated settlement is " 'a fundamental economic practice long prevalent in our system of commerce.' " *Ibid.* ; see, e.g., Emery, *Speculation on the Stock and Produce Exchanges of the United States*, in 7 *Studies in History, Economics and Public Law* 283, 346-356 (1896) (discussing the use of a "clearing-house" as an intermediary to reduce settlement risk). The use of a third-party intermediary (or "clearing house") is also a building block of the modern economy. See, e.g., Yadav, *The Problematic Case of Clearinghouses in Complex Markets*, 101 *Geo. L. J.* 387, 406-412 (2013); J. Hull, *Risk Management and Financial Institutions* 103-104 (3d ed. 2012). Thus, intermediated settlement, like hedging, is an "abstract idea" beyond the scope of §101 .

Petitioner acknowledges that its claims describe intermediated settlement, see Brief for Petitioner 4, but rejects the conclusion that its claims recite an "abstract idea." Drawing on the presence of mathematical formulas in some of our abstract-ideas precedents, petitioner contends that the abstract-ideas category is confined to "preexisting, fundamental truth[s]" that " 'exis[t] in principle apart from any human action.' " *Id.*, at 23, 26 (quoting *Mayo*, 566 U.S., at ____ (slip op., at 8)).

Bilski belies petitioner's assertion. The concept of risk hedging we identified as an abstract idea in that case cannot be described as a "preexisting, fundamental truth."

The patent in *Bilski* simply involved a "series of steps instructing how to hedge risk." 561 U.S., at 599 . Although hedging is a longstanding commercial practice, *id.*, at 599 , it is a

Art Unit: 3684

method of organizing human activity, not a "truth" about the natural world " 'that has always existed,' " Brief for Petitioner 22 (quoting Flook, supra, at 593 , n. 15). One of the claims in Bilski reduced hedging to a mathematical formula, but the Court did not assign any special significance to that fact, much less the sort of talismanic [*8] significance petitioner claims. Instead, the Court grounded its conclusion that all of the claims at issue were abstract ideas in the understanding that risk hedging was a " 'fundamental economic practice.' " 561 U.S., at 611 .

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

B

Because the claims at issue are directed to the abstract idea of intermediated settlement, we turn to the second step in Mayo's framework. We conclude that the method claims, which merely require generic computer implementation, fail to transform that abstract idea into a patent-eligible invention.

1

At Mayo step two, we must examine the elements of the claim to determine whether it contains an " 'inventive concept' " sufficient to "transform" the claimed abstract idea into

Art Unit: 3684

a patent-eligible application. 566 U.S., at ____ , ____ (slip op., at 3, 11). A claim that recites an abstract idea must include "additional features" to ensure "that the [claim] is more than a drafting effort designed to monopolize the [abstract idea]." Id., at ____ (slip op., at 8-9). Mayo made clear that transformation into a patent-eligible application requires "more than simply stat[ing] the [abstract idea] while adding the words 'apply it.'" Id., at ____ (slip op., at 3).

Mayo itself is instructive. The patents at issue in Mayo claimed a method for measuring metabolites in the bloodstream in order to calibrate the appropriate dosage of thiopurine drugs in the treatment of autoimmune diseases. Id., at ____ (slip op., at 4-6). The respondent in that case contended that the claimed method was a patent-eligible application of natural laws that describe the relationship between the concentration of certain metabolites and the likelihood that the drug dosage will be harmful or ineffective. But methods for determining metabolite levels were already "well known in the art," and the process at issue amounted to "nothing significantly more than an instruction to doctors to apply the applicable laws when treating their patients." Id., at ____ (slip op., at 10). "Simply appending conventional steps, specified at a high level of generality," was not "enough" to supply an "'inventive concept.'" Id., at ____ , ____ , ____ (slip op., at 14, 8, 3).

The introduction of a computer into the claims does not alter the analysis at Mayo step two. In Benson, for example, we considered a patent that claimed an algorithm implemented on "a general-purpose digital computer." 409 U.S., at 64 . Because the algorithm was an abstract idea, see supra, at 8, the claim had to supply a "'new and

Art Unit: 3684

useful' " application of the idea in order to be patent eligible. 409 U.S., at 67 . But the computer implementation did not supply the necessary inventive concept; the process could be "carried out in existing computers long in use." Ibid . We accordingly "held that simply implementing a mathematical principle on a physical [*9] machine, namely a computer, [i]s not a patentable application of that principle." Mayo, supra, at ____ (slip op., at 16) (citing Benson, supra, at 64).

Flook is to the same effect. There, we examined a computerized method for using a mathematical formula to adjust alarm limits for certain operating conditions (e.g., temperature and pressure) that could signal inefficiency or danger in a catalytic conversion process. 437 U.S., at 585-586 . Once again, the formula itself was an abstract idea, see supra, at 8, and the computer implementation was purely conventional. 437 U.S., at 594 (noting that the "use of computers for 'automatic monitoring-alarming' " was "well known"). In holding that the process was patent ineligible, we rejected the argument that "implement[ing] a principle in some specific fashion" will "automatically fal[l] within the patentable subject matter of §101 ." Id., at 593 . Thus, "Flook stands for the proposition that the prohibition against patenting abstract ideas cannot be circumvented by attempting to limit the use of [the idea] to a particular technological environment." Bilski, 561 U.S., at 610-611 (internal quotation marks omitted).

In Diehr, 450 U.S. 175 , by contrast, we held that a computer-implemented process for curing rubber was patent eligible, but not because it involved a computer. The claim employed a "well-known" mathematical equation, but it used that equation in a process

Art Unit: 3684

designed to solve a technological problem in "conventional industry practice." *Id.*, at 177 , 178 . The invention in *Diehr* used a "thermocouple" to record constant temperature measurements inside the rubber mold-something "the industry ha[d] not been able to obtain." *Id.*, at 178 , and n. 3. The temperature measurements were then fed into a computer, which repeatedly recalculated the remaining cure time by using the mathematical equation. *Id.*, at 178-179 . These additional steps, we recently explained, "transformed the process into an inventive application of the formula." *Mayo*, *supra*, at ____ (slip op., at 12). In other words, the claims in *Diehr* were patent eligible because they improved an existing technological process, not because they were implemented on a computer.

These cases demonstrate that the mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention. Stating an abstract idea "while adding the words 'apply it' " is not enough for patent eligibility. *Mayo*, *supra*, at ____ (slip op., at 3). Nor is limiting the use of an abstract idea " 'to a particular technological environment.' " *Bilski*, *supra*, at 610-611 . Stating an abstract idea while adding the words "apply it with a computer" simply combines those two steps, with the same deficient result. Thus, if a patent's recitation of a computer amounts to a mere instruction to "implemen[t]" an abstract idea "on . . . a computer," *Mayo*, *supra*, at ____ (slip op., at 16), that addition cannot impart patent eligibility. This conclusion accords with the pre-emption concern that undergirds our §101 jurisprudence. Given the ubiquity of computers, see 717 F. 3d, at 1286 (Lourie, J., concurring), wholly generic computer implementation is [*10] not generally the sort of

Art Unit: 3684

"additional featur[e]" that provides any "practical assurance that the process is more than a drafting effort designed to monopolize the [abstract idea] itself." Mayo, 566 U.S., at ____ (slip op., at 8-9).

The fact that a computer "necessarily exist[s] in the physical, rather than purely conceptual, realm," Brief for Petitioner 39, is beside the point. There is no dispute that a computer is a tangible system (in §101 terms, a "machine"), or that many computer-implemented claims are formally addressed to patent-eligible subject matter. But if that were the end of the §101 inquiry, an applicant could claim any principle of the physical or social sciences by reciting a computer system configured to implement the relevant concept. Such a result would make the determination of patent eligibility "depend simply on the draftsman's art," Flook, supra, at 593 , thereby eviscerating the rule that " '[l]aws of nature, natural phenomena, and abstract ideas are not patentable,' " Myriad, 569 U.S., at ____ (slip op., at 11).

2

The representative method claim in this case recites the following steps: (1) "creating" shadow records for each counterparty to a transaction; (2) "obtaining" start-of-day balances based on the parties' real-world accounts at exchange institutions; (3) "adjusting" the shadow records as transactions are entered, allowing only those transactions for which the parties have sufficient resources; and (4) issuing irrevocable end-of-day instructions to the exchange institutions to carry out the permitted transactions. See n. 2, supra. Petitioner principally contends that the claims are patent

Art Unit: 3684

eligible because these steps "require a substantial and meaningful role for the computer." Brief for Petitioner 48. As stipulated, the claimed method requires the use of a computer to create electronic records, track multiple transactions, and issue simultaneous instructions; in other words, "[t]he computer is itself the intermediary." *Ibid.* (emphasis deleted).

In light of the foregoing, see *supra*, at 11-14, the relevant question is whether the claims here do more than simply instruct the practitioner to implement the abstract idea of intermediated settlement on a generic computer. They do not.

Taking the claim elements separately, the function performed by the computer at each step of the process is "[p]urely conventional." *Mayo*, *supra*, at ____ (slip op., at 10) (internal quotation marks omitted). Using a computer to create and maintain "shadow" accounts amounts to electronic recordkeeping—one of the most basic functions of a computer. See, e.g., *Benson*, 409 U.S., at 65 (noting that a computer "operates . . . upon both new and previously stored data"). The same is true with respect to the use of a computer to obtain data, adjust account balances, and issue automated instructions; all of these computer functions are "well-understood, routine, conventional activit[ies]" previously known to the industry. *Mayo*, 566 U.S., at ____ (slip op., at 4). In short, each step does no more than require a generic computer to perform generic computer functions.

Considered "as an ordered combination," the computer [*11] components of petitioner's method "ad[d] nothing . . . that is not already present when the steps are considered separately." *Id.*, at ____ (slip op., at 10). Viewed as a whole, petitioner's method claims

Art Unit: 3684

simply recite the concept of intermediated settlement as performed by a generic computer. See 717 F. 3d, at 1286 (Lourie, J., concurring) (noting that the representative method claim "lacks any express language to define the computer's participation"). The method claims do not, for example, purport to improve the functioning of the computer itself. See *ibid.* ("There is no specific or limiting recitation of . . . improved computer technology . . ."); Brief for United States as Amicus Curiae 28-30. Nor do they effect an improvement in any other technology or technical field. See, e.g., *Diehr*, 450 U.S., at 177-178. Instead, the claims at issue amount to "nothing significantly more" than an instruction to apply the abstract idea of intermediated settlement using some unspecified, generic computer. *Mayo*, 566 U.S., at ____ (slip op., at 10). Under our precedents, that is not "enough" to transform an abstract idea into a patent-eligible invention. *Id.*, at ____ (slip op., at 8).

C

Petitioner's claims to a computer system and a computer-readable medium fail for substantially the same reasons. Petitioner conceded below that its media claims rise or fall with its method claims. En Banc Response Brief for Defendant-Appellant in No. 11-1301 (CA Fed.) p. 50, n. 3. As to its system claims, petitioner emphasizes that those claims recite "specific hardware" configured to perform "specific computerized functions." Brief for Petitioner 53. But what petitioner characterizes as specific hardware—a "data processing system" with a "communications controller" and "data storage unit," for example, see App. 954, 958, 1257—is purely functional and generic.

Art Unit: 3684

Nearly every computer will include a "communications controller" and "data storage unit" capable of performing the basic calculation, storage, and transmission functions required by the method claims. See 717 F. 3d, at 1290 (Lourie, J., concurring). As a result, none of the hardware recited by the system claims "offers a meaningful limitation beyond generally linking 'the use of the [method] to a particular technological environment,' that is, implementation via computers." *Id.*, at 1291 (quoting *Bilski*, 561 U.S., at 610-611).

Put another way, the system claims are no different from the method claims in substance. The method claims recite the abstract idea implemented on a generic computer; the system claims recite a handful of generic computer components configured to implement the same idea. This Court has long "warn[ed] . . . against" interpreting §101 "in ways that make patent eligibility 'depend simply on the draftsman's art.' " *Mayo*, *supra*, at ____ (slip op., at 3) (quoting *Flook*, 437 U.S., at 593); see *id.*, at 590 ("The concept of patentable subject matter under §101 is not 'like a nose of wax which may be turned and twisted in any direction . . . ' "). Holding that the system claims are patent eligible would have exactly that result.

Because petitioner's system and media claims add nothing of substance to the underlying abstract [*12] idea, we hold that they too are patent ineligible under §101 .

* * *

For the foregoing reasons, the judgment of the Court of Appeals for the Federal Circuit is affirmed.

It is so ordered.

JUSTICE SOTOMAYOR, with whom JUSTICE GINSBURG and JUSTICE BREYER join, concurring.

I adhere to the view that any "claim that merely describes a method of doing business does not qualify as a 'process' under §101 ." *Bilski v. Kappos*, 561 U.S. 593 , 614 (2010) (Stevens, J., concurring in judgment); see also *In re Bilski*, 545 F. 3d 943 , 972 (CA Fed. 2008) (Dyk, J., concurring) ("There is no suggestion in any of th[e] early [English] consideration of process patents that processes for organizing human activity were or ever had been patentable"). As in *Bilski*, however, I further believe that the method claims at issue are drawn to an abstract idea. Cf. 561 U.S., at 619 (opinion of Stevens, J.). I therefore join the opinion of the Court.

Argued by Mr. Carter G. Phillips for the petitioner, by Mr. Mark Perry for the respondents, and by Mr. Solicitor General Donald B. Verrilli, Jr. for the United States as amicus curiae, by special leave of the Court, supporting the respondents.

Brief for the United States as amicus curiae in support of respondents filed 2/26/14, by U.S. Solicitor General Donald B. Verrilli Jr., Stuart F. Delery, Malcolm L. Stewart, Ginger D. Anders, Mark R. Freeman and Lindsey Powell, all of the attorney general's office, Washington, and Nathan K. Kelley and Scott C. Weidenfeller, both of U.S. Patent and Trademark Office, Alexandria, Va. Brief for respondents filed 2/20/14, by Mark A. Perry, Helgi C. Walker, Brian M. Buroker and Alexander N. Harris, all of Gibson, Dunn &

Art Unit: 3684

Crutcher LLP, Washington. Brief for the petitioner filed 1/21/14, by Carter G. Phillips and Jeffrey P. Kushan, both of Sidley Austin LLP, Washington, Constantine L. Trela Jr., Tacy F. Flint, Timothy R. Hargadon and Benjamin M. Flowers, all of Sidley Austin LLP, Chicago, Adam L. Perlman of Williams & Connolly LLP, Washington, and Robert E. Sokohl of Sterne, Kessler, Goldstein & Fox PLLC, Washington.

fn 1

The patents at issue are United States Patent Nos. 5,970,479 (the '479 patent), 6,912,510 , 7,149,720 , and 7,725,375 .

fn 2

The parties agree that claim 33 of the '479 patent is representative of the method claims. Claim 33 recites:

"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;

Art Unit: 3684

"(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 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 on[e] 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." App. 383-384.

fn 3

Because the approach we made explicit in Mayo considers all claim elements, both individually and in combination, it is consistent with the general rule that patent claims "must be considered as a whole." *Diamond v. Diehr*, 450 U.S. 175 , 188 (1981); see *Parker v. Flook*, 437 U.S. 584 , 594 (1978) ("Our approach . . . is . . . not at all inconsistent with the view that a patent claim must be considered as a whole").

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 24-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Ojha, (patent 6,598,026).

In regards to claim 24, Ojha discloses a non-transitory computer readable storage medium having embodied thereon instructions executable by a processor to providing discounted deals, the method comprising:

offering at least one deal from at least one supplier for an item for sale by way of an online account (Ojha, FIG 13E, Account info);

generating details about the at least one supplier and contact information for the at least one supplier (Ojha, FIG 13A, Email bids to:);

wherein the at least one supplier allows the details about the at least one supplier, the contact information for the at least one supplier, and the at least one deal

Art Unit: 3684

to be reviewed by at least one potential customer over the one or more servers and made available for purchase during a limited period of time (Ojha, FIG 8, FIG 13A, Offer good for 8hrs);

permitting the at least one potential customer to choose and store a type of category or a supplier of interest for the at least one deal presented to the at least one potential customer (Ojha, col 3, lines 22-43),

wherein the at least one potential customer receives an offer for the at least one deal based on the type of category or the supplier of interest when the at least one deal is available (Ojha, FIG 6, Product type, keywords, FIG 8, in stock?);

allowing the at least one potential customer to agree to terms and conditions of the sale (Ojha, FIG 2a); and

storing past orders of the at least one potential customer, including at least one of a location of the at least one potential customer, a category of purchase, supplier information, or a date of purchase for the past orders (Ojha, FIG 18, purchase date);

collecting information from at least one customer from the registered prospective customers concerning a particular supplier, wherein the information is presented to the supplier and other buyers (Ojha, FIG 11, para 12, line 45 – para 14, line 22);

presenting a ranking associated with a supplier to prospective buyers (Ojha, FIG 5, lowest price, FIG 8, merchants are ranked by offered price); and

providing a customer with the ability to receive an extra discount for the already discounted deal (Ojha, FIG 13H).

In regards to claim 25, Ojha teaches wherein adjustments to the at least one deal for the item are made in real time to allow the at least one potential customer to review updated information regarding the at least one deal for the item (Ojha, FIG 9).

In regards to claim 26, Ojha teaches wherein a system administrator that is different than the at least one supplier presents the at least one deal for the item to the at least one potential customer (Ojha, para 6, line 33 – para 7, line 58).

In regards to claim 27, Ojha teaches wherein the system administrator offers the at least one deal based on a determination of a potential or confirmed interest of the at least one potential customer (Pjha, FIG 2).

In regards to claim 28, Ojha discloses a non-transitory computer readable storage medium having embodied thereon instructions executable by a processor to:
offer at least one deal from at least one supplier for an item for sale by way of an online account on one or more servers;
generate details about the at least one supplier and contact information for the at least one supplier, wherein the at least one supplier allows the details about the at least one supplier, the contact information for the at least one supplier, and the at least one deal to be reviewed by at least one potential customer over the one or more servers and made available for purchase during a limited period of time;
permit the at least one potential customer to choose and store a type of category and or

Art Unit: 3684

supplier of interest for the at least one deal presented to the at least one potential customer, wherein the at least one potential customer receives an offer for the at least one deal based on the type of category or the supplier of interest when the at least one deal is available;

allow the at least one potential customer to agree to terms and conditions of the sale; and save past orders of the at least one customer, including at least one of a location of the at least one customer, a category of purchase, supplier information, or a date of purchase for the past orders;

collecting information from at least one customer from the registered prospective customers concerning a particular supplier, wherein the information is presented to the supplier and other buyers;

presenting a ranking associated with a supplier to prospective buyers; and

providing a customer with the ability to receive an extra discount for the already discounted deal (see response to claim 24).

In regards to claim 29, Ojha teaches wherein a system administrator that is different than the at least one supplier presents the at least one deal to the at least one potential customer (see response to claim 26).

In regards to claim 30, Ojha teaches wherein the system administrator presents the at least one deal based on the details about the at least one deal that are reviewed

Art Unit: 3684

by the at least one potential customer over the one or more servers (Ojha, FIG 2).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Mark Fadok** whose telephone number is **571.272.6755**.

The examiner can normally be reached Monday thru Friday 8:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Jeffrey Smith** can be reached on **571.272.6763**.

Any response to this action should be mailed to:

Commissioner for Patents

P.O. Box 1450

Alexandria, Va. 22313-1450

or faxed to:

571-273-8300

[Official communications; including

After Final communications labeled

"Box AF"]

Art Unit: 3684

For general questions the receptionist can be reached at

571.272.3600

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/Mark Fadok/

Mark Fadok

Primary Examiner, Art Unit 3625