# UNITED STATES PATENT AND TRADEMARK OFFICE

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PTOL-90A (Rev. 04/07)

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* JOHN LABUSZEWSKI, JOHN NYHOFF, DAVID BOBERSKI,
MIKE KAMRADT, ROBERTA PAFFARO, EDWARD GOGOL,
JOHN WILEY, RICHARD CO, and STEVE YOUNGREN

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Appeal 2018-004183
Application 15/079,760
Technology Center 3600

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Before CARL W. WHITEHEAD JR., JOSEPH P. LENTIVECH, and
MICHAEL M. BARRY, *Administrative Patent Judges*.

LENTIVECH, *Administrative Patent Judge*.


DECISION ON APPEAL


Pursuant to 35 U.S.C. § 134(a), Appellants[1] appeal from the
Examiner's decision to reject claims 1–23, all the claims pending in the
application on appeal. We have jurisdiction over the pending claims under
35 U.S.C. § 6(b).

We AFFIRM.

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[1] According to Appellants, Chicago Mercantile Exchange Inc. is the real
party in interest. App. Br. 2.

## STATEMENT OF THE CASE

### *Appellants' Invention*

Appellants' invention generally relates to "[a] system for moving money between accounts of traders by a central counterparty to facilitate payments, i.e., the movement of funds, there between." Spec. ¶ 10. Claim 1, which is illustrative of the claimed invention, reads as follows:

1.     A computer implemented method of facilitating a payment between traders based on a first position in a first instrument held by a first trader to which a second trader is a counterparty, the method comprising:

determining, by a payment processor based on the first position, the amount of a payment to be made from one of the first or second trader to the other of the first or second trader in advance of settlement thereof, the amount of the payment being further based on a differential between a fixed interest rate defined by the first instrument and a floating instrument rate, a value of which is defined at a time of payment of the amount;

assigning, automatically by the payment processor based on the first position in the first instrument held by the first trader to which the second trader is a counterparty, a second position to the first trader in a futures contract characterized by a settlement date, a quantity and a price, the second position being characterized by a value based on the quantity and the price of the futures contract as of the assigning, and a third position to the second trader, counter to the second position, in the futures contract, the first and second traders not being identified to each other;

valuing, by a settlement processor upon occurrence of the settlement date, the futures contract at a spot value different from the price of the futures contract, the spot value being based on the determined payment amount; and

modifying, by a margin processor, a first account record associated with the first trader and a second account record associated with the second trader, both stored in an account

database stored in a memory coupled with the processor, to
reflect a credit to the account of the first trader and a debit from
the account of the second trader in the amount of the difference
between the value of the second position and the spot value
when the difference represents a loss for the second trader or to
reflect a debit from the account of the first trader and a credit to
the account of the second trader in the amount of the difference
between the value of the second position and the spot value
when the difference represents a loss for the first trader.

*Rejection[2]*

Claims 1–23 stand rejected under 35 U.S.C. § 101 because the
claimed subject matter is judicially-excepted from patent eligibility under 35
U.S.C. § 101. Final Act. 6–9.

ANALYSIS

Regarding the rejection of claims 1–23 under 35 U.S.C. § 101,
Appellants do not substantively argue the claims separately, but instead rely
on the same arguments for all claims. *See* App. Br. 5–17. In accordance
with 37 C.F.R. § 41.37(c)(1)(iv), we select independent claim 1 as the
representative claim. Remaining claims 2–23 stand or fall together with
claim 1.

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[2] In the event of further prosecution of the application, the Examiner should
determine whether the claim is indefinite under 35 U.S.C. § 112(b). Claim 1
recites "a memory coupled with the processor." It is unclear whether "the
processor" refers to the recited "payment processor," "settlement processor,"
or "margin processor."

PRINCIPLES OF LAW

An invention is patent-eligible if it claims a "new and useful process, machine, manufacture, or composition of matter." 35 U.S.C. § 101. However, the Supreme Court has long interpreted 35 U.S.C. § 101 to include implicit exceptions: "[l]aws of nature, natural phenomena, and abstract ideas" are not patentable. *E.g.*, *Alice Corp. Pty. Ltd. v. CLS Bank International*, 573 U.S. 208, 216 (2014) (citations omitted).

In determining whether a claim falls within an excluded category, we are guided by the Supreme Court's two-step framework, described in *Mayo Collaborative Services v. Prometheus Labs., Inc.*, 566 U.S. 66 (2012) and *Alice*. *Alice*, 573 U.S. at 217–18 (citing *Mayo*, 566 U.S. at 75–77). In accordance with that framework, we first determine what concept the claim is "directed to." *See Alice*, 573 U.S. at 219 ("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."); *see also Bilski v. Kappos*, 561 U.S. 593, 611 (2010) ("Claims 1 and 4 in petitioners' application explain the basic concept of hedging, or protecting against risk.").

Concepts determined to be abstract ideas, and, thus, patent ineligible, include certain methods of organizing human activity, such as fundamental economic practices (*Alice*, 573 U.S. at 219–20; *see also Bilski*, 561 U.S. at 611); mathematical formulas (*Parker v. Flook*, 437 U.S. 584, 594–95 (1978)); and mental processes (*Gottschalk v. Benson*, 409 U.S. 63, 69 (1972)). Concepts determined to be patent eligible include physical and chemical processes, such as "molding rubber products" (*Diamond v. Diehr*, 450 U.S. 175, 191 (1981)); "tanning, dyeing, making water-proof cloth, vulcanizing India rubber, smelting ores" (*id.* at 184 n.7) (quoting *Corning v.*

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*Burden*, 56 U.S. 252, 267–68 (1853)); and manufacturing flour (*Benson*, 409 U.S. at 69 (citing *Cochrane v. Deener*, 94 U.S. 780, 785 (1876))).

In *Diehr*, the claim at issue recited a mathematical formula, but the Supreme Court held that "[a] claim drawn to subject matter otherwise statutory does not become nonstatutory simply because it uses a mathematical formula." *Diehr*, 450 U.S. at 176; *see also id.* at 191 ("We view respondents' claims as nothing more than a process for molding rubber products and not as an attempt to patent a mathematical formula."). Having said that, the Supreme Court also indicated that a claim "seeking patent protection for that formula in the abstract . . . is not accorded the protection of our patent laws, . . . and this principle cannot be circumvented by attempting to limit the use of the formula to a particular technological environment." *Id.* (citing *Benson* and *Flook*); *see, e.g., id.* 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.").

If the claim is "directed to" an abstract idea, we turn to the second step of the *Alice* and *Mayo* framework, where "we must examine the elements of the claim to determine whether it contains an 'inventive concept' sufficient to 'transform' the claimed abstract idea into a patent-eligible application." *Alice*, 573 U.S. at 221 (citation omitted). "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.* (quoting *Mayo*, 566 U.S. at 77). "[M]erely requir[ing] generic computer implementation[] fail[s] to transform that abstract idea into a patent-eligible invention." *Id.*

OUR REVIEW

The PTO recently published revised guidance on the application of

§ 101. 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed.

Reg. 50 (Jan. 7, 2019) ("Memorandum"). Under that guidance, we first look

to whether the claim recites:

> (1) any judicial exceptions, including certain groupings of
> abstract ideas (i.e., mathematical concepts, certain methods of
> organizing human activity such as a fundamental economic
> practice, or mental processes); and

> (2) additional elements that integrate the judicial exception into
> a practical application (see MANUAL OF PATENT EXAMINING
> PROCEDURE (MPEP) § 2106.05(a)–(c), (e)–(h) (9th Ed., Rev.
> 08.2017, Jan. 2018)).

See Memorandum, 84 Fed. Reg. 52, 54–55. Only if a claim (1) recites a

judicial exception and (2) does not integrate that exception into a practical

application, do we then look to whether the claim:

> (3) adds a specific limitation beyond the judicial exception that
> is not "well-understood, routine, conventional" in the field (see
> MPEP § 2106.05(d)); or

> (4) simply appends well-understood, routine, conventional
> activities previously known to the industry, specified at a high
> level of generality, to the judicial exception.

See Memorandum, 84 Fed. Reg. at 56.

At the outset, we note the Memorandum governs all patent-eligibility

analysis under Alice and 35 U.S.C. § 101 effective as of January 7, 2019. In

particular, the PTO has acknowledged that the Federal Circuit's common

law, analogy-driven approach (a.k.a. "analogous claim" test) was effective

soon after Alice was decided by the Supreme Court, but that approach has

since become impractical as the growing body of Federal Circuit precedent

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has become increasingly more difficult for the Office and examiners to apply in a predicable manner. As a result, the PTO has synthesized, for purposes of clarity, predictability, and consistency, the "abstract idea" exception to include three categories of abstract ideas: (1) mathematical concepts— mathematical relationships, mathematical formulas or equations, mathematical calculations; (2) mental processes—concepts performed in the human mind (including an observation, evaluation, judgment, opinion); and (3) certain methods of organizing human activity—fundamental economic principles or practices (including hedging, insurance, mitigating risk); commercial or legal interactions (including agreements in the form of contracts; legal obligations; advertising, marketing or sales activities or behaviors; business relations); managing personal behavior or relationships or interactions between people (including social activities, teaching, and following rules or instructions). *See* Memorandum, 84 Fed. Reg. 54–55.

*Step 1 of the Alice/Mayo Analysis*
<u>Step 2A, Prong One</u>

Under "Step 2A, Prong One," we determine whether the claim recites a judicial exception. Memorandum, 84 Fed. Reg. 54. Claim 1 recites the limitation:

> determining, by a payment processor based on the first position, the amount of a payment to be made from one of the first or second trader to the other of the first or second trader in advance of settlement thereof, the amount of the payment being further based on a differential between a fixed interest rate defined by the first instrument and a floating instrument rate, a value of which is defined at a time of payment of the amount.

This limitation, as drafted, is a process that, under its broadest reasonably interpretation, covers performance of the limitation in the mind but for the recitation of generic computer components. That is, other than reciting "by a payment processor," nothing in the claim precludes the determining step from practically being performed in the human mind. For example, but for the "by a payment processor" language, the limitation encompasses a person manually calculating the amount of the payment to be made. Thus, this limitation recites a mental process.

Claim 1 recites the limitation:

> assigning, automatically by the payment processor based on the first position in the first instrument held by the first trader to which the second trader is a counterparty, a second position to the first trader in a futures contract characterized by a settlement date, a quantity and a price, the second position being characterized by a value based on the quantity and the price of the futures contract as of the assigning, and a third position to the second trader, counter to the second position, in the futures contract, the first and second traders not being identified to each other.

This limitation, as drafted, is a process that, under its broadest reasonable interpretation is a fundamental economic practice similar to risk the intermediated settlement in *Alice* (*see Alice*, 573 U.S. at 218–19), verifying credit card transactions in *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1370 (Fed. Cir. 2011), and guaranteeing transactions in *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1354 (Fed. Cir. 2014). As such, the claims recite a fundamental economic practice—i.e., certain methods of organizing human activity found to be an abstract idea. *See* Memorandum, 84 Fed. Reg. at 54–55. That the limitation requires the assigning to be performed "by the payment processor" fails to take the claim

limitations out of the method of organizing human activity grouping because an abstract idea (such as a fundamental economic practice) is not rendered patent-eligible merely by coupling it to a machine or manufacture. *See Alice*, 537 U.S. at 223. Additionally, as our reviewing court noted in *In re TLI Commc'ns LLC Patent Litig.*, 823 F.3d 607 (Fed. Cir. 2016), "not every claim that recites concrete, tangible components escapes the reach of the abstract-idea inquiry." *TLI Communications*, 823 F.3d at 611.

Claim 1 also recites the limitation "valuing, by a settlement processor upon occurrence of the settlement date, the futures contract at a spot value different from the price of the futures contract, the spot value being based on the determined payment amount." This limitation, as drafted, is a process that, under its broadest reasonably interpretation, covers performance of the limitation in the mind but for the recitation of generic computer components. That is, other than reciting "by a settlement processor," nothing in the claim precludes the determining step from practically being performed in the human mind. For example, but for the "by a settlement processor" language, the limitation encompasses a person manually valuing the futures contract. Thus, this limitation recites a mental process.

Claim 1 further recites the limitation:

> modifying, by a margin processor, a first account record associated with the first trader and a second account record associated with the second trader, both stored in an account database stored in a memory coupled with the processor, to reflect a credit to the account of the first trader and a debit from the account of the second trader in the amount of the difference between the value of the second position and the spot value when the difference represents a loss for the second trader or to reflect a debit from the account of the first trader and a credit to the account of the second trader in the amount of the difference

>between the value of the second position and the spot value when
the difference represents a loss for the first trader.

This limitation, as drafted, is a process that, under its broadest reasonably interpretation, covers performance of the limitation by a human using pen and paper but for the recitation of generic computer components. That is, other than reciting "by a margin processor" and requiring the first and second account records to be stored in "an account database stored in a memory coupled with the processor," nothing in the claim precludes the modifying step from practically being performed by a human making changes to a paper document. For example, but for the "by a margin processor" and "both [the first and second account records] stored in an account database stored in a memory coupled with the processor" language, the limitation encompasses a person manually modifying paper documents representing the first and second account records. Thus, this limitation recites a mental process.


## Step 2A, Prong Two

Because the claim recites a judicial exception (e.g., one or more abstract ideas), we next determine whether the claim as a whole integrates the recited judicial exception into a practical application of the exception. Memorandum, 84 Fed. Reg. 54. Claim 1 recites the following additional elements: (1) "a payment processor;" (2) "a settlement processor;" (3) "a margin processor;" and (4) "an account database stored in a memory coupled to the processor." We find these additional limitations fail to integrate the judicial exception into a practical application. For example, the claims do not: (1) improve the functioning of a computer or other technology; (2) are

not applied with any particular machine (except for a generic computer); (3)
do not effect a transformation of a particular article to a different state and
(4) are not applied in any meaningful way beyond generally linking the use
of the judicial exception to a particular technological environment, such that
the claim as a whole is more than a drafting effort designed to monopolize
the exception. *See* Memorandum, 84 Fed. Reg. 54–55; *see also* MPEP
§§ 2106.05(a)–(c), (e)–(h). Instead, generic computer components, such as,
for example, a processor and a memory, are merely used as tools to facilitate
the payment between traders. *See BASCOM Glob. Internet Servs., Inc. v.
AT&T Mobility LLC*, 827 F.3d 1348 (Fed. Cir. 2016).

In particular, we are unpersuaded by Appellants' contention that the
do not preempt the abstract ideas to which they are directed. *See* App.
Br. 5–6. We agree the Supreme Court has described "the concern that drives
this exclusionary principle [i.e., the exclusion of abstract ideas from patent
eligible subject matter] as one of pre-emption." *Alice*, 573 U.S. at 216. But
characterizing preemption as a driving concern for patent eligibility is not
the same as characterizing preemption as the sole test for patent eligibility.
As our reviewing court has explained, "[t]he Supreme Court has made clear
that the principle of preemption is the basis for the judicial exceptions to
patentability" and "[f]or this reason, questions on preemption are inherent in
and resolved by the § 101 analysis." *Ariosa Diagnostics, Inc. v. Sequenom,
Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015) (citing *Alice*, 573 U.S. at 216).
And although "preemption may signal patent ineligible subject matter, the
absence of complete preemption does not demonstrate patent eligibility." *Id.*
Moreover, "[w]here a patent's claims are deemed only to disclose patent
ineligible subject matter under the [*Alice/Mayo*] framework . . . , preemption

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concerns are fully addressed and made moot." *Id.*; *see also OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362–63 (Fed. Cir. 2015) ("[T]hat the claims do not preempt all price optimization or may be limited to price optimization in the e-commerce setting do not make them any less abstract.").

We are also not persuaded by Appellants' argument that the claims "are directed to a specific, novel and patentable system for indirectly moving monetary value among accounts of traders specifically within the environment of a central counter-party based trading system where, due to novation by the central counter-party in any transaction, direct movement between accounts is not permitted." App. Br. 6. These limitations, however, are ones that we point to above as reciting an abstract idea. Limitations which recite solely an abstract idea, such as these, as a matter of law cannot recite significantly more than the abstract idea. *See Alice*, 573 U.S. at 217–18 ("[W]e 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.") (emphasis added). To the extent Appellant argues the claims are directed to novel and nonobvious subject matter and, therefore, necessarily entail an inventive concept that transforms the claims to significantly more than the abstract idea, we disagree. Although the second step in the *Alice/Mayo* framework is termed a search for an "inventive concept," the analysis is not an evaluation of novelty or non-obviousness, but rather a search for "an 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.'" *Alice*, 573 U.S. at 217–

18. A novel and nonobvious claim directed to a purely abstract idea is, nonetheless, patent-ineligible. *See Mayo*, 566 U.S. at 90.

We are also unpersuaded by Appellants' argument that the claims "require a specific structure" and "it is this claimed structure which improves the underlying technology, not necessarily the use of a computer alone." App. Br. 6–7. The claimed improvements to facilitating payments between parties are improvements to a business process and are not a technical solution to a technical problem as required by *DDR Holdings*. *See DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257 (Fed. Cir. 2014).

Appellants further argue:

> [T]he claimed invention improves upon the technical field of anonymized data and transaction processing by providing a system which efficiently facilitates the necessary crediting and debiting of accounts to indirectly effect a transfer therebetween and which leverages existing risk management systems/techniques, in a novel and specific manner, to do so. Further, the system accomplishes these goals while maintaining anonymity between the payor and payee.

App. Br. 7; *see also* App. Br. 15 (arguing the claims are similar to the claims in *Trading Technologies International Inc. v. CQG, Inc.*, 675 Fed.Appx. 1001 (Fed. Cir. 2017) (nonprecedential). We do not find Appellants' arguments persuasive because Appellants' arguments overlook that the argued "solution" must be a technical solution. Appellants' argument does not explain how either the problem or solution are technical. Unlike the claims at issue in cases such as *DDR* (*see DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257 (Fed. Cir. 2014) (Claims at issue are "necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks.")) and *Enfish* (*see*

*Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1339 (Fed. Cir. 2016)
(Claims at issue are "directed to a specific implementation of a solution to a
problem in the software arts.")), the claims here merely address a business
challenge through the use of generic, computer-related recitations that do not
add meaningful limitations to steps otherwise directed to an abstract idea.

Appellants contend that arguments similar to those discussed above
were presented and found persuasive during the prosecution of the
application to which the present application claims priority. App. Br. 5; *see
also* Reply Br. 2–3. This contention is not persuasive. The prior
prosecution does not represent persuasive much less binding precedent for
our decision here.

Because claim 1 fails to integrate the recited abstract ideas (i.e.,
mental processes and certain methods of organizing human activity) into a
practical application, we find claim 1 is directed to the recited abstract ideas.

*Step 2 of the Alice/Mayo Analysis*
<u>Step 2B</u>

Because the claim is directed to the recited abstract ideas, we evaluate
the claim to determine whether the claim provides an "inventive concept"
(e.g., recites significantly more than the abstract idea). Memorandum, 84
Fed. Reg. 56.

In this case, we find no element or combination of elements recited in
Appellants' claim that adds a specific limitation or combination of
limitations that are not well-understood, routine, conventional activity in the
field. *See* Memorandum, 84 Fed. Reg. 56. We agree with the Examiner
(Ans. 10) that the claimed computer elements are recited at a high level of

generality and provide conventional computer functions that do not add meaningful limits to practicing the abstract idea.

We are not persuaded by Appellants' argument that the claimed method:

> [I]s a specific implementation which has NOT been used before and therefore is not well understood, routine or conventional in the art. In particular, as noted below, the claimed invention operates in a manner which upends the known margin computation process by valuing the claimed second position based on a previously determined payment amount so as to cause the margining system to move that amount, as opposed to valuing the position based on a current market value so as to determine a change, e.g. gain or loss, thereto.

App. Br. 11. It is well-settled that placing an abstract idea in the context of a computer does not improve the computer or convert the idea into a patent-eligible application of that idea. *See Alice*, 573 U.S. at 222–24. While the claims require various processors and a memory, it is clear, from the claims themselves and the Specification, that these limitations require no improved computer resources Appellants claim to have invented, just already available computers, with their already available basic functions, to use as tools in executing the claimed process. *See e.g.,* Spec. ¶¶ 138 ("The processor 402 may be one or more general processors, digital signal processors, application specific integrated circuits, combinations thereof, or other now known or later developed devices for analyzing and processing data."), 139 ("The memory 404 may include, but is not limited to computer readable storage media such as various types of volatile and non-volatile storage media, including but not limited to random access memory, read-only memory, programmable read-only memory, electrically programmable read-only

memory, electrically erasable read-only memory, flash memory, magnetic tape or disk, optical media and the like.").

For the foregoing reasons, we find claim 1 is directed to a patent-ineligible abstract concept, and does not recite something "significantly more" under the second prong of the *Alice/Mayo* analysis. Accordingly, we sustain the Examiner's rejection of claim 1, and claims 2–23, which fall with claim 1, under 35 U.S.C. § 101.

## DECISION

We affirm the Examiner's rejection of claims 1–23 under 35 U.S.C. § 101.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

## AFFIRMED