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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* PAUL ANDREW BAUERSCHMIDT, ARI L. STUDNITZER,  
WILLIAM J. ALBERT, PAUL J. CALLAWAY, JAMES W. FARRELL,  
and A. SHANTHI THIRUTHUVA DOSS

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Appeal 2017-003271  
Application 12/764,413  
Technology Center 3600

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Before ALLEN R. MacDONALD, ERIC B. CHEN, and  
AARON W. MOORE, *Administrative Patent Judges*.

MacDONALD, *Administrative Patent Judge*.

DECISION ON APPEAL<sup>1</sup>

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<sup>1</sup> Appellants indicate the real party in interest is Chicago Mercantile Exchange Inc. App. Br. 2.

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) from a Final Rejection of claims 1–3, 5–9, 11, 14–22, 24, 27, and 28. Appellants have cancelled claims 4, 10, 12, 13, 23, 25, and 26. July 22, 2016 Response to the Notification of Non-Compliant Appeal Brief 2–6. We have jurisdiction under 35 U.S.C. § 6(b). We AFFIRM.

*Representative Claim*

Representative claim 14 under appeal reads as follows (emphasis, formatting, and bracketed material added):

14. A system, comprising:

[A.] ***a processor***; and

[B.] a non-transitory computer readable medium, comprising:

[i.] instructions executable ***by the processor*** to reduce an allocated amount of risk based on ***a first transaction proposed by a market participant*** but not yet matched with another proposed transaction at least partially counter thereto;

[ii.] instructions executable ***by the processor*** to increase the allocated amount of risk based on the first transaction subsequent to the first transaction being canceled or at least partially matched with another proposed transaction at least partially counter thereto;

[iii.] instructions executable ***by the processor*** to monitor fluctuations in the allocated amount of risk based on the reduction or increase of the allocated amount of risk and determine a magnitude thereof;

[iv.] instructions executable ***by the processor*** to receive a second transaction proposed by the market participant but not yet matched with another proposed transaction counter thereto;

[v.] instructions executable *by the processor* to compare the magnitude of the fluctuation of the allocated amount of risk against a threshold; and

[vi.] prior to determining, *by the processor*, whether the second proposed transaction at least partially matches another proposed transaction at least partially counter thereto, determining whether the magnitude of the fluctuation of the allocated amount of risks exceeds the threshold and

[a.] blocking the determining of whether the second proposed transaction at least partially matches another proposed transaction at least partially counter thereto when the threshold is exceeded by the magnitude of the fluctuations and

[b.] allowing the determining of whether the second proposed transaction at least partially matches another proposed transaction at least partially counter thereto when the threshold is not exceeded.

#### *References*

Kraus et al.	US 7,991,667 B2	Aug. 2, 2011
Balson et al.	US 2003/0033240 A1	Feb. 13, 2003

#### *Rejections*

1. The Examiner rejected claims 1–3, 5–9, 11, 14–22, 24, 27, and 28 under 35 U.S.C. § 101 “because the claimed invention is directed to non-statutory subject matter.” That is, “because the claimed invention is directed to a judicial exception (i.e., a law of nature, a natural phenomenon, or an abstract idea) without significantly more.” Final Act. 2.<sup>2</sup>

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<sup>2</sup> We select claim 14 as representative. Separate patent eligibility is not argued for claims 1–3, 5–9, 11, 15–22, 24, 27, and 28. Except for our

2. The Examiner rejected claims 1, 3, 5–9, 14, 16–22, 27, and 28 under 35 U.S.C. § 103(a) as being unpatentable over Kraus. Final Act. 5–7.<sup>3</sup>

3. The Examiner rejected claims 2, 11, 15, and 24 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Kraus and Balson. Final Act. 7–8.<sup>4</sup>

### *Issues on Appeal*

Did the Examiner err in rejecting claim 14 as being directed to non-statutory subject matter?

Did the Examiner err in rejecting claim 1 as being obvious?

### ANALYSIS

We have reviewed the Examiner’s rejections in light of Appellants’ arguments (Appeal Brief and Reply Brief) that the Examiner has erred.

#### *A. Section 101*

Under 35 U.S.C. § 101, a patent may be obtained for “any new and useful process, machine, manufacture, or composition of matter, or any new

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ultimate decision, we do not discuss the § 101 rejection of claims 1–3, 5–9, 11, 15–22, 24, 27, and 28 further herein.

<sup>3</sup> We select claim 1 as representative. Appellants do not argue separate patentability for claims 3, 5–9, 14, 16–22, 27, and 28. Except for our ultimate decision, we do not discuss the § 103 rejection of claims 3, 5–9, 14, 16–22, 27, and 28 further herein.

<sup>4</sup> Appellants argue claims 2, 11, 15, and 24 solely by reference to their independent claims. Therefore, the § 103 rejection of these claims turns on our decision as to the § 103 rejection of claim 1. Except for our ultimate decision, we do not discuss the § 103 rejection of claims 2, 11, 15, and 24 further herein.

and useful improvement thereof.” The Supreme Court has “long held that this provision contains an important implicit exception: Laws of nature, natural phenomena, and abstract ideas are not patentable.” *Alice Corp. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2354 (2014) (quoting *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013)). The Supreme Court in *Alice* reiterated the two-step framework previously set forth in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66, 82–83 (2012), “for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts.” *Alice*, 134 S. Ct. at 2355. The first step in that analysis is to “determine whether the claims at issue are directed to one of those patent-ineligible concepts,” such as an abstract idea. For example, a fundamental economic practice is an abstract idea:

[In *Bilski v. Kappos*], 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.

*Alice*, 134 S. Ct. at 2357.

The Court acknowledged in *Mayo* that “all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.” *Mayo*, 566 U.S. at 71. We, therefore, look to whether the claims focus on a specific means or method that improves the relevant technology or are instead directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery. *See Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1336 (Fed. Cir. 2016). If the claims are not directed to an abstract idea, the inquiry ends. Otherwise, the inquiry proceeds to the second step where the elements of the claims are

considered “individually and ‘as an ordered combination’ to determine whether the additional elements ‘transform the nature of the claim’ into a patent-eligible application.” *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 566 U.S. at 79, 78).

B. *Examiner’s § 101 Rejection - Alice/Mayo - Steps 1 and 2*

Applying step 1 of the *Alice/Mayo* analysis, the Examiner concludes claim 14 is directed to an abstract idea because:

Claim [14 is] directed to (i) a fundamental economic practice (i.e. blocking or processing financial transactions) and (ii) a method of organizing human activities. (i.e. blocking or processing financial transactions).

Final Act. 2.

Applying step 2 of the *Alice/Mayo* analysis, the Examiner concludes “[t]he claims [] do not include additional elements that are sufficient to amount to significantly more than the judicial exception because”

the additional element(s) or combination of elements in the claim(s) other than the abstract idea per se amount(s) to no more than: (i) mere instructions to implement the idea on a computer, and/or (ii) recitation of generic computer structure that serves to perform generic computer functions that are well-understood, routine, and conventional activities previously known to the pertinent industry.

Final Act. 2.

*C. Appellants' § 101 Arguments*

1

Appellants first raise the following argument in contending that the Examiner erred in rejecting claim 14 as directed to non-statutory subject matter.

Appellants submit that the present claims are not directed to an abstract idea and the claimed invention is not a mere statement of a general concept and a person of ordinary skill in the art would not find, that the claims are directed to a fundamental economic practice, nor directed to methods of organizing human activities, an idea in and of itself or a mathematical relationship or formula.

Instead, the claims are directed to a novel and patentable system for controlling the processing, i.e. matching, of transactions in view of an allocated quantity which is reduced while a transaction is waiting to be processed, i.e. evaluated for a match with a counter transaction (or otherwise canceled) and increased once a transaction has been matched or canceled so as to control the number of unprocessed/unmatched transactions which may be allowed to be active for a given participant. Effectively, this mitigates a likelihood of a participant submitting an excess of open-ended transactions which they may not intend to actually be processed. The claimed invention effectively acts as a *gatekeeper or throttle/rate limiter on the volume of proposed transactions* any given user of the system may have pending processing at any given time but does not otherwise limit the volume of transactions which may actually be processed overall.

App. Br. 6 (emphasis added).

We are unpersuaded by Appellants' argument. By the explicit language of claim 14 as a whole, it is directed to a system for determining whether to allow or block the matching of proposed transactions by market participants based on an amount of risk. We find no reasonable basis

presented by Appellants to question the Examiner’s conclusion that blocking or processing financial transactions is a fundamental economic practice, i.e., an abstract idea. Final Act. 2. See, e.g., *In re Chorna*, 656 F. App’x 1016, 1020 (Fed. Cir. 2016) (“financial instruments that are designed to protect against the risk of investing in financial instruments” is an abstract idea); *OIP Technologies, Inc. v. Amazon.com, Inc.*, 788 F.3d 1359 (Fed. Cir. 2015), *cert. denied*, 136 S. Ct. 701 (2015) (“offer-based price optimization” is an abstract idea); and *Chicago Bd. Options Exch., Inc. v. Int’l Sec. Exch., LLC*, 640 F. App’x 986 (2016) (nonprecedential) (Rule 36) (affirming this Board’s determination that “managing trading risk (“risk management’”)” is an abstract idea).

2

Appellants also raise the following argument in contending that the Examiner erred in rejecting claim 14 as directed to non-statutory subject matter.

As opposed to claiming algorithms themselves or otherwise merely providing instructions to implement or apply such algorithms, the claimed invention improves upon the technical field of data and ***transaction processing*** by providing a system which efficiently and selectively ***determines when transactions may or may not be processed based on incomplete transactions still waiting for processing***. This is neither a routine nor conventional activity previously known in the industry, or a generic computerization thereof, as evidenced by the lack of prior art, but is instead a patentable application and meaningful limitation beyond generally linking the use of an abstract idea to a particular technological environment.

Appellants respectfully submit that the claimed invention—to the extent that it may represent a judicial exception, a point that Appellants do not concede—clearly

satisfies the Supreme Court’s criterion of qualifying as “significantly more” than the judicial exception at least inasmuch as it *improves the functioning of a trading and data transaction processing computer system* and is akin to the subject matter deemed allowable in the DDR Holdings case. In particular, the claimed invention acts as *a transaction submission rate limiter limiting the number of unprocessed/unmatched transactions* which a user may submit at any given time but not otherwise limiting the volume of transactions which may be completed, i.e. matched or canceled.

App. Br. 6–7 (emphasis added).

Upon receipt of the first data transaction request message, and before anything is done with that first transaction, the allocated amount of risk is reduced. . . . This represents that the first data transaction request is still open and represents an open risk that it could be transacted by a later received suitable counter request. *This is the point of the invention in that these “resting orders” (or as the Examiner puts it, the orders in limbo), represent open risk which this invention is attempting to mitigate.*

*These elements of Appellants’ claims are additional elements that provide “something more” than mere classification and storing of data in a database.* The combination of steps recited show that the claim is not to the idea of allowing or blocking transactions, or otherwise enabling trading, but rather that the steps impose meaningful limits that allow for a system which throttles or otherwise limits the volume of proposed transactions any given user of the system may have pending processing at any given time but does not otherwise limit the volume of transactions which may actually be processed overall. Thus, the claim amounts to significantly more than the judicial exception.

Reply Br. 11–12 (emphasis added).

We disagree. We see no reason on the record to question Appellants’ assertion that the claimed invention improves determining “when

transactions may or may not be processed based on incomplete transactions still waiting for processing.” App. Br. 7. However, the fact that a claimed concept is “[g]roundbreaking, innovative, or even brilliant” does not “itself satisfy the § 101 inquiry.” *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 2107, 2117 (2013). A claim directed to a unique and advantageous financial arrangement is nonetheless directed to a financial arrangement and constitutes an abstract idea.<sup>5</sup> “[U]nder the *Mayo/Alice* framework, a claim directed to a newly discovered law of nature (or natural phenomenon or abstract idea) cannot rely on the novelty of that discovery for the inventive concept necessary for patent eligibility.” *Genetic Techs. Ltd. v. Merial L.L.C.*, 818 F.3d 1369, 1376 (Fed. Cir. 2016); see *Diamond v. Diehr*, 450 U.S. 175, 188–89 (1981).

We conclude that the improvement of claim 14 is an improved “determin[ation] of whether to allow or block the matching of proposed transactions by market participants based on an amount of risk” (*supra*) (a fundamental commercial practice), that is, an improved abstract idea. Further, in contrast to *Bascom*, we conclude claim 14 contains no technical solution. *Bascom Global Internet Servs., Inc. v. AT&T Mobility LLC*, 827

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<sup>5</sup> See *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709 (Fed. Cir. 2014). In that case, the patentee argued that its financial arrangement (a method of using advertising as an exchange or currency) was distinguishable from the “routine,” “long prevalent,” or “conventional” abstract idea in *Alice* because it was “directed to a specific method of advertising and content distribution that was previously unknown.” *Id.* at 714. The court rejected the patentee’s position that “abstract ideas remain patent-eligible under § 101 as long as they are new ideas not previously well known, and not routine activity.” *Id.*

F.3d 1341 (Fed. Cir. 2016). Unlike the claims at issue in *Bascom*, claim 14 does not introduce a technical advance or improvement. It contains nothing that amounts to significantly more than a patent upon the [abstract idea] itself. *Id.* See *Synopsys, Inc. v. Mentor Graphics Corporation*, 839 F.3d 1138, 1152 (Fed. Cir. 2016). To the extent claim 14 adds anything to the abstract idea, it is a statement to use a “processor,” i.e., a computer, to perform the fundamental economic practice. “[I]f a patent’s recitation of a computer amounts to a mere instruction to ‘implemen[t]’ an abstract idea ‘on ... a computer,’ that addition cannot impart patent eligibility.” *Alice*, 134 S. Ct. at 2358 (quoting *Mayo*, 566 U.S. at 84).

3

Appellants further raise the following argument in contending that the Examiner erred in rejecting claim 14 as directed to non-statutory subject matter.

Appellants submit that the claims are directed to a specific, *novel* and patentable system for controlling the processing, i.e. matching, of transactions in view of an allocated quantity which is reduced while a transaction is waiting to be processed, i.e. evaluated for a match with a counter transaction (or otherwise canceled) and increased once a transaction has been matched or canceled so as to control the number of unprocessed/unmatched transactions which may be allowed to be active for a given participant.

Reply Br. 6 (emphasis added).

Regarding Appellants’ above argument, essentially Appellants argue that because the system is specific and novel, claim 14 must add significantly more to the alleged abstract idea. Appellants’ argument does not persuade us of Examiner error.

Although the second step in the *Alice/Mayo* analysis includes a search for an inventive concept, the analysis is not an evaluation of novelty or nonobviousness, 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*, 134 S. Ct. at 2355 (quoting *Mayo*, 566 U.S. at 73). A novel and nonobvious claim directed to a purely abstract idea is, nonetheless, patent-ineligible. *See Mayo*, 566 U.S. at 89–90. Further, “under the *Mayo/Alice* framework, a claim directed to a newly discovered law of nature (or natural phenomenon or abstract idea) cannot rely on the novelty of that discovery for the inventive concept necessary for patent eligibility.” *Genetic Techs*, 818 F.3d at 1376. Here, the argued feature “matching . . . transactions in view of an allocated quantity which is reduced while a transaction is waiting to be processed” (App. Br. 6) is directed to the abstract idea in the first step of the *Alice/Mayo* analysis.

4

Appellants also raise the following argument in contending that the Examiner erred in rejecting claim 14 as directed to non-statutory subject matter.

In particular, Appellants submit that the claims, even if directed to an abstract idea, e.g. allowing trading of OTC FX contracts on a centralized matching and clearing mechanism or allowing or blocking trade transaction, ***do not entirely preempt*** that abstract idea and are instead directed to a practical application of controlling the processing, i.e. matching, of transactions in view of an allocated quantity which is reduced while a transaction is waiting to be processed, i.e. evaluated for a match with a counter transaction (or otherwise canceled) and

increased once a transaction has been matched or canceled so as to control the number of unprocessed/unmatched transactions which may be allowed to be active for a given participant.

Reply Br. 8 (emphasis added).

Appellants assert that the claims “do not entirely preempt that abstract idea.” Reply Br. 8. This argument is not persuasive because although “preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility.” *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015). We are instructed that “[w]here a patent’s claims are deemed only to disclose patent ineligible subject matter under the [*Alice/Mayo*] framework . . . , preemption concerns are fully addressed and made moot.” *Id.*

#### D. Section 103 Argument

Appellants raise the following argument in contending that the Examiner erred in rejecting claim 1 under 35 U.S.C. § 103(a).

[T]here are known systems to address risk, after transaction are matched, that either ***or both of the participants*** will fail to meet their obligations under the transaction. Appellants’ claims are directed to the risk that any one participant will place too many open/unmatched orders and be unable to meet their obligations if all of those orders were to be matched.

Neither Krause nor Balson address this latter situation. Instead, both Krause and Balson disclose systems which prevent a participant from entering into positions based on the risk of loss of the positions they already hold, i.e. based on completed/processed/matched transactions. In particular, Krause teaches a system which evaluates a ***proposed transaction*** against the current positions, i.e. completed transactions, already held by the participant to determine if allowing the ***proposed transaction*** will increase the participant’s risk of loss for their held positions

above a threshold amount. Krause does not teach or suggest evaluating a *proposed transaction* against the participant's other *proposed transactions* as claimed by Appellants.

App. Br. 12 (Appellants' emphasis omitted; Panel emphasis added).<sup>6</sup>

We conclude, consistent with Appellants' above argument as to claim 1, there is insufficient articulated reasoning to support the Examiner's findings that Krause discloses the argued proposed transaction limitations. Therefore, we conclude that there is insufficient articulated reasoning to support the Examiner's conclusion that claim 1 is rendered obvious by Krause.

#### CONCLUSIONS

(1) The Examiner has not erred in rejecting claims 1–3, 5–9, 11, 14–22, 24, 27, and 28 under 35 U.S.C. § 101, as being directed to non-statutory subject matter.

(2) Appellants have established that the Examiner erred in rejecting claims 1–3, 5–9, 11, 14–22, 24, 27, and 28 as being unpatentable under 35 U.S.C. § 103(a).

(3) Claims 1–3, 5–9, 11, 14–22, 24, 27, and 28 are not patentable.

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<sup>6</sup> Although “proposed” is a term used in independent claims 14, 27, and 28, but not independent claim 1, we deem the term as reasonably descriptive of the process in representative claim 1.

DECISION

The Examiner's rejection of claims 1–3, 5–9, 11, 14–22, 24, 27, and 28 under 35 U.S.C. § 101, as being directed to non-statutory subject matter, is **affirmed**.

The Examiner's rejection of claims 1–3, 5–9, 11, 14–22, 24, 27, and 28 as being unpatentable under 35 U.S.C. § 103(a) is **reversed**.

Because we have affirmed at least one ground of rejection with respect to each claim on appeal, the Examiner's decision is affirmed. *See* 37 C.F.R. § 41.50(a)(1).

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