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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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Ex parte AMY JOY FARNSTROM

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Appeal 2017-000356[1]
Application 14/683,256[2]
Technology Center 3600

_____

Before HUBERT C. LORIN, NINA L. MEDLOCK, and
BRADLEY B. BAYAT, *Administrative Patent Judges*.

MEDLOCK, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant appeals under 35 U.S.C. § 134(a) from the Examiner's final
rejection of claims 1, 2, 4–8, and 10–14. We have jurisdiction under
35 U.S.C. § 6(b).

We AFFIRM.

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[1] Our decision references Appellant's Appeal Brief ("App. Br.," filed
March 30, 2016) and Reply Brief ("Reply Br.," filed September 30, 2016),
and the Examiner's Answer ("Ans.," mailed August 10, 2016) and Final
Office Action ("Final Act.," mailed February 1, 2016).
[2] Appellant identifies NYSE Group, Inc. as the real party in interest. App.
Br. 1.

CLAIMED INVENTION

Appellant's claimed invention "generally relates to the field of electronic trading systems," and, more particularly, "to calculating and mitigating risk for traders participating in the electronic trading system" (Spec. ¶ 1).

Claims 1 and 7 are the independent claims on appeal. Claim 1, reproduced below, is illustrative of the claimed subject matter:

> 1. A computer-implemented method for mitigating trading risks of a market participant, the method comprising:
> receiving, by a risk mitigation (RM) module, an electronic message associated with the market participant, the electronic message indicating a breach of a trading risk threshold, said RM module comprising computer-readable instructions stored on a non-transitory computer readable storage medium and executed by at least one processor;
> determining, by the RM module, whether the breach of the trading risk threshold occurred within a rolling time period;
> automatically activating, by the RM module, a risk counter when the breach occurs within the rolling time period;
> incrementing, by the risk counter, a total number of breaches;
> receiving, by the RM module, the total number of breaches;
> determining, by the RM module, whether the total number of breaches exceeds a predetermined maximum; and
> automatically deactivating, by the RM module, a trading status of the market participant thereby preventing execution of any further trades associated with the market participant when it is determined that the breach exceeds the predetermined maximum.

REJECTION[3]

Claims 1, 2, 4–8, and 10–14 are rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter.

ANALYSIS

Appellant argues claims 1, 2, 4–8, and 10–14 as a group (App. Br. 7–13). We select independent claim 1 as representative. The remaining claims stand or fall with claim 1. *See* 37 C.F.R. §41.37(c)(1)(iv).

Under 35 U.S.C. § 101, an invention is patent-eligible if it claims a "new and useful process, machine, manufacture, or composition of matter." 35 U.S.C. § 101. The Supreme Court, however, has long interpreted § 101 to include an implicit exception: "[l]aws of nature, natural phenomena, and abstract ideas" are not patentable. *See, e.g., Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2354 (2014).

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 (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 Corp.*, 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." *Id.* If the claims are not directed to a patent-ineligible concept, e.g., an abstract idea, the inquiry ends. Otherwise, the inquiry proceeds to the second step where

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[3] The Examiner's rejections of claims 1, 2, 4–8 and 10–14 under 35 U.S.C. § 112(b), and claims 1, 2, 4–8 and 10–14 under 35 U.S.C. § 103(a) have been withdrawn. *See* Ans. 8–9.

the elements of the claims are considered "individually and 'as an ordered combination'" to determine whether there are additional elements that "'transform the nature of the claim' into a patent-eligible application." *Id.* (quoting *Mayo*, 566 U.S. at 79, 78).

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. Therefore, the Federal Circuit has instructed that claims are to be considered in their entirety to determine "whether their character as a whole is directed to excluded subject matter." *McRO, Inc. v. Bandai Namco Games Am., Inc.*, 837 F.3d 1299, 1312 (Fed. Cir. 2016) (quoting *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015)).

Here, in rejecting the pending claims under 35 U.S.C. § 101, the Examiner determined that the claims are "directed to mitigating trading risk," and, therefore, to an abstract idea (Final Act. 7 (citing the USPTO's 2014 Interim Guidance on Subject Matter Eligibility, 79 Fed. Reg. 74618 (Dec. 16, 2014) and the "July 2015 Update: Subject Matter Eligibility"[4])); and that the claims do not include additional elements that are sufficient to amount to significantly more than the judicial exception itself (*id.* at 9–10).

Appellant first argues that the § 101 rejection cannot be sustained because claim 1 includes "features such as a unique system topography having separate specialized computer components [i.e., a specialized risk management ("RM") module and risk counter] that are activated to perform specified functions only when certain conditions are met" (App. Br. 6).

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[4] Available at https://www.uspto.gov/sites/default/files/documents/ieg-july2015-update.pdf.

Appellant maintains that this constitutes an improvement to a technical field, and that the claims are, therefore, patent-eligible under *Diamond v. Diehr*, 450 U.S. 175 (1981) (*id.* at 6–8).

Appellant's reliance on *Diehr* is misplaced. The claims in *Diehr* were directed to a process for curing synthetic rubber, and recited a series of steps (e.g., installing rubber in a press, closing the mold, constantly determining the temperature of the mold, constantly recalculating the appropriate cure time through the use of the Arrhenius equation and a digital computer, and automatically opening the press at the proper time) that together provided a significant and novel practical application of the well-known Arrhenius equation and transformed uncured synthetic rubber into a new state or thing. *See Diehr*, 450 U.S. at 184–87. The Court determined that although the invention employed a well-known equation, it used that equation in a process designed to solve a technological problem in conventional industry practice. *Alice Corp.*, 134 S. Ct. 2348 (citing *Diehr*, 450 U.S. at 177). The claims in *Diehr* were, thus, found patent-eligible because they improved an existing technological process. *Id.*

Appellant argues that separating the computer components, i.e., the RM module and risk counter, and only selectively activating and deactivating them, "enhances the operational efficiency of the overall system" (App. Br. 7) and that Appellant's claims provide "improvements to the field of electronic trading systems and also to the functioning of the computer itself" (*id.* at 8). Yet, there is nothing in the record, short of attorney argument, to support Appellant's position. For example, we find nothing in the Specification, nor does Appellant direct us to anything in the

Specification, that attributes any improvement in operational efficiency or any improvement in computer functionality to the claimed invention.

Claim 1 is directed to a method for mitigating trading risks of a market participant, and recites that the method comprises: (1) receiving an electronic message indicating a breach of a trading risk threshold; (2) activating a risk counter if the breach occurred within a rolling time period; (3) determining whether the total number of breaches exceeds a predetermined maximum; and (4) deactivating the trading status of the market participant if the predetermined maximum is exceeded. The claimed invention, as the Specification discloses, is intended to address the need for "systems, methods, and apparatus" capable of mitigating the financial risk to which market makers and/or market participants are exposed due to sudden and/or dramatic changes in market conditions or trading activity (*see, e.g.*, Spec. ¶¶ 2, 21–23). The Specification, thus, describes that the claimed system and method are configured to provide risk mitigation for market participants by disabling further trading upon the occurrence of trading events indicative of an increased risk (*see id.* ¶¶ 24–26).

It appears clear, when considered in light of the Specification, that the focus of the claimed invention, as recited in claim 1, is on achieving a business objective (i.e., mitigating trading risk), and not on any claimed means for achieving that goal that improves technology.

Ostensibly seeking to draw a further analogy to the claims at issue in *Diehr*, Appellant argues that "the activation of a risk counter is no different than the opening of a molding press in *Diehr*" (App. Br. 8). Yet, we fail to see how activating a risk counter to count the number of breaches of a trading risk threshold is similar to controlling a physical process, like the

rubber molding process in *Diehr*. Appellant's claimed method does not involve any industrial or physical and chemical process, and does not involve the transformation of an article into a different state or thing. Instead, the activation of the risk counter in claim 1 is, in our view, akin to the electronic recordkeeping involved in *Alice*, which the Court determined was not patent-eligible.

The claims in *Alice* related to a computerized scheme for mitigating risk ("settlement risk"), and were designed to facilitate the exchange of financial obligations between two parties by using a computer system as a third-party intermediary. *Alice Corp.*, 134 S. Ct. at 2352. The computer updated shadow account records in real time as transactions were entered, and allowed only those transactions for which the parties' updated shadow records indicated sufficient resources to satisfy their mutual obligations. *See id.* In finding that the claims did no more than instruct a practitioner to implement the abstract idea of intermediated settlement on a generic computer, the Court observed that "[u]sing a computer to create and maintain 'shadow' accounts amounts to electronic recordkeeping—one of the most basic functions of a computer." *Id.* at 2359.

Similarly here, Appellant's claim 1 involves updating "a risk counter"; determining "whether the total number of breaches exceeds a predetermined maximum"; and "preventing execution of any further trades associated with the market participant when it is determined that the breach exceeds the predetermined maximum." We find no indication in the record, nor does Appellant point us to any indication, that the particular operations recited in claim 1 require any specialized computer hardware or other inventive computer components, invoke any assertedly inventive

programming, or that the claimed invention is implemented using other than generic computer components to perform the claimed operations, which the Court made clear in *Alice* is not enough for patent-eligibility.

We also cannot agree with Appellant that claim 1 is similar to claim 2 of the USPTO's Example 21 in the "July 2015 Update Appendix 1: Examples"[5] and, therefore, patent-eligible, because the "claims perform

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[5] Exemplary claim 2, which appears at pages 2–3 of Appendix 1 of the July 2015 Update (available at https://www.uspto.gov/sites/default/files /documents/ieg-july-2015-app1.pdf), reads:

> 2. A method of distributing stock quotes over a network to a remote subscriber computer, the method comprising:
>
> providing a stock viewer application to a subscriber for installation on the remote subscriber computer;
>
> receiving stock quotes at a transmission server sent from a data source over the Internet, the transmission server comprising a microprocessor and a memory that stores the remote subscriber's preferences for information format, destination address, specified stock price values, and transmission schedule, wherein the microprocessor
>
> filters the received stock quotes by comparing the received stock quotes to the specified stock price values;
>
> generates a stock quote alert from the filtered stock quotes that contains a stock name, stock price and a universal resource locator (URL), which specifies the location of the data source;
>
> formats the stock quote alert into data blocks according to said information format; and
>
> transmits the formatted stock quote alert over a wireless communication channel to a wireless device associated with a subscriber based upon the destination address and transmission schedule,
>
> wherein the alert activates the stock viewer application to cause the stock quote alert to display on the remote subscriber computer and to enable connection via the URL to the data source over the Internet when the wireless device is locally

unconventional functions while working within the computing system," such as "a specialized RM module configured to deactivate the trading status of the market participant to prevent the execution of any further trades" (App. Br. 9).

Exemplary claim 2 was not found patent-eligible merely because it provided "unconventional functions" or a "specialized" module in a "computing system"; nor would that alone have been sufficient for patent-eligibility. *Cf. Mayo*, 566 U.S. at 88–89 ("[O]ur cases have not distinguished among different laws of nature according to whether or not the principles they embody are sufficiently narrow"). Instead, exemplary claim 2 was deemed patent-eligible because it addressed an Internet-centric challenge, i.e., alerting a subscriber with time sensitive information when the subscriber's computer is offline. Appellant has not demonstrated that claim 1 addresses any comparable Internet-centric challenge.

Contrary to Appellant's assertions, we also find no parallel between the present claims and those in *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014). In *DDR Holdings*, the Federal Circuit held that the claims were directed to patent-eligible subject matter because they claim a solution "necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks," and that the claimed invention did not simply use computers to serve a conventional business purpose. *Id.* at 1257. Rather, there was a change to the routine, conventional functioning of Internet hyperlink protocol. *Id.*

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connected to the remote subscriber computer and the remote subscriber computer comes online.

Appellant argues that, similar to *DDR Holdings*, the claimed invention involves "a new computer system with new specialized modules that . . . run only under certain conditions (e.g., when certain parameters are met)" while, at the same time, "eliminating human intervention by deactivating the trading status of the market participant and preventing the execution of any further trades" and that these features cause "the claimed computer system to operate more efficiently (and unconventionally) when compared against typical computer systems in this technology space" (App. Br. 11) (citing paragraph 21 of Appellant's Specification). Yet, contrary to Appellant's assertion, we find no indication in paragraph 21 of Appellant's Specification that the claimed invention improves system efficiency. And, unlike the situation in *DDR Holdings*, there is no indication that the claimed "at least one processor" is used other than in its normal, expected, and routine manner to perform the abstract business practice of managing market participant trading status, which, as the court in *DDR Holdings* explained, is not patent-eligible. *DDR Holdings*, 773 F.3d at 1256 ("[T]hese claims [of prior cases] in substance were directed to nothing more than the performance of an abstract business practice on the Internet or using a conventional computer. Such claims are not patent-eligible.").

Critically too, unlike the situation in *DDR Holdings*, there is no indication here that Appellant's claims yield a result that overrides the routine and conventional sequence of events ordinarily triggered by the operation of generic technology. *See id.*

Appellant further argues that the claims are patent-eligible because "the public will not be preempted from performing the alleged abstract

concept of 'mitigating trading risk.'" (App. Br. 11–13). That argument is similarly unpersuasive.

There is no dispute that the Supreme Court has described "the concern that drives [the exclusion of abstract ideas from patent eligible subject matter] as one of pre-emption." *Alice Corp.*, 134 S. Ct. at 2354. But characterizing preemption as a driving concern for patent eligibility is not the same as characterizing preemption as the sole test for patent eligibility. "The 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 Corp.*, 134 S. Ct. at 2354). "[P]reemption may signal patent ineligible subject matter, [but] the absence of complete preemption does not demonstrate patent eligibility." *Id.*

We also are not persuaded of Examiner error to the extent that Appellant maintains that the claimed invention is patent-eligible, i.e., that the recited functions of claim 1 are not "well-understood, routine and conventional in the field," because the "claimed invention provides an unconventional mechanism for preventing the execution of further trades that is not taught by conventional electronic trading systems" (App. Br. 13) and "the Examiner has withdrawn all prior art rejections, indicating that the claims are not anticipated by or obvious in view of any prior art" (Reply Br. 9). A finding of novelty or non-obviousness does not automatically lead to the conclusion that the claimed subject matter is patent-eligible. Although the second step in the *Mayo/Alice* framework is termed a search for an "inventive concept," the analysis is not an evaluation of novelty or non-

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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 Corp.*, 134 S. Ct. at 2355. "Groundbreaking, innovative, or even brilliant discovery does not by itself satisfy the § 101 inquiry." *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 591 (2013). A novel and non-obvious claim directed to a purely abstract idea is, nonetheless, patent-ineligible. *See Mayo*, 566 U.S. at 90; *see also Diamond v. Diehr*, 450 U.S. 175, 188–89 (1981) ("The 'novelty' of any element or steps in a process, or even of the process itself, is of no relevance in determining whether the subject matter of a claim falls within the § 101 categories of possibly patentable subject matter.").

Responding to the Examiner's Answer, Appellant argues in the Reply Brief that the present claims are analogous to the claims at issue in *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016), in that "the instant claims take an electronic trading system and *reconfigure* it by adding a completely novel mechanism, in the form of a risk mitigation (RM) module" (Reply Br. 2), which, according to Appellant, "actually improves the functioning of the conventional computer systems in this art" (*id.* at 3). Appellant notes that by tracking breaches associated with a particular participant, the claimed invention provides selective disablement of trade execution, while allowing trades from other participants to continue to be executed (*id.*). And Appellant maintains that this "improves the overall operational efficiency and resource consumption of the electronic trading system"; "reduces memory requirements"; "reduces the burden on the processing components"; and "improves system stability" (*id.*).

Appellant cites paragraphs 2, 21, 23, 26, 31–33, 35–36, 41, and 47–49 of the Specification as supporting this position (*id.*). But, we find nothing from our review of the Specification, including the cited paragraphs, which ascribes any particular technical improvement in computerized systems to the claimed invention. For example, we find no discussion in the Specification of improved efficiency or reduced memory requirements.

Appellant's attempt to analogize the present claims to those in *Bascom Global Internet Services, Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016) also fails (*see* Reply Br. 5). In *Bascom*, the court determined that "an inventive concept can be found in the non-conventional and non-generic arrangement of known, conventional pieces." *Bascom*, 827 F.3d at 1350. Specifically, *Bascom's* content filter could be "installed remotely in a single location" and "[this] particular arrangement of elements is a technical improvement over the prior art ways of filtering." *Id.*

Appellant does not identify any similar non-conventional, non-generic arrangement of elements that is recited in claim 1. Nor does Appellant otherwise explain how the court's ruling in *Bascom* impacts the patent-eligibility of the present claims.

We are not persuaded, on the present record, that the Examiner erred in rejecting claim 1 under 35 U.S.C. § 101. Therefore, we sustain the Examiner's rejection of claim 1, and claims 2, 4–8, and 10–14, which fall with claim 1.

DECISION

The Examiner's rejection of claims 1, 2, 4–8, and 10–14 under 35 U.S.C. § 101 is affirmed.

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).

<u>AFFIRMED</u>