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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ANDREW MILNE and ALEKSANDR SEDLINE

Appeal 2017-009116
Application 14/041,421
Technology Center 3600

Before ELENI MANTIS MERCADER, BETH Z. SHAW, and
JOYCE CRAIG, *Administrative Patent Judges*.

CRAIG, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants¹ appeal under 35 U.S.C. § 134(a) from the Examiner's final rejection of claims 1–25, which are all of the claims pending in this application. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

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

INVENTION

Appellants' invention relates to a transformation of a multi-leg security definition for calculation of implied orders in an electronic trading system. Abstract. Claim 1 is illustrative and reads as follows:

1. A computer implemented method of identifying, for an order for a strategy comprising a combination of interrelated orders for one or more outright contracts, a plurality of individual orders which, in combination, is counter to the order for the strategy, the method comprising:

receiving, by a processor, the order for the strategy, the strategy comprising at least one order to buy and at least one order to sell, each of the at least one order to buy and at least one order to sell being for an associated quantity of at least one item of a plurality of items tradeable on an exchange, wherein the associated quantities of any of the at least one order to buy and the at least one order to sell may be different from another of the at least one order to buy and the at least one order to sell;

converting, by the processor, the at least one order to buy and the at least one order to sell into a set of unit orders comprising a separate buy order for each of the associated quantity of each of the at least one order to buy and a separate sell order for each of the associated quantity of each of the at least one order to sell, and further identifying, within the set of unit orders, one or more unique sets of unique spread orders, each unique spread order comprising a unique combination of one of the separate buy orders and one of the separate sell orders, each unique set of unique spread orders further comprising a synthetic spread order for each of the separate buy order or separate sell orders not otherwise included in a unique spread order of that unique set of unique spread orders;

determining, by the processor, the relationships between each of the interrelated orders of the combination of the strategy; and

computing, by the processor, the plurality of individual orders which, if placed in combination, are counter to the order

for the strategy based on the determined relationships and each of the unique sets of unique spread orders and synthetic orders.

REJECTION

Claims 1–25 stand rejected under 35 U.S.C. § 101 because the claimed invention is directed to a judicial exception without significantly more. Final Act. 2.

ANALYSIS

We have reviewed the rejections of claims 1–25 in light of Appellants’ arguments that the Examiner erred. We have considered in this decision only those arguments Appellants actually raised in the Briefs. Any other arguments Appellants could have made, but chose not to make, in the Briefs are waived. *See* 37 C.F.R. § 41.37(c)(1)(iv). Appellants’ arguments are not persuasive of error. We agree with and adopt as our own the Examiner’s findings of facts and conclusions as set forth in the Answer (Ans. 2–11) and in the Action (Final Act. 2–8) from which this appeal was taken. We provide the following explanation for emphasis.

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 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, 77–80 (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 the analysis is to “determine whether the claims at issue are directed to one of those patent-ineligible concepts” (*id.*), e.g., to an abstract idea. For example, abstract ideas include, but are not limited to, fundamental economic practices, methods of organizing human activities, an idea of itself, and mathematical formulas or relationships. *Id.* at 2355–57. 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.” *Id.* at 2355 (quoting *Mayo*, 566 U.S. at 78–79).

This second step is described as “a search for an ‘inventive concept’—*i.e.*, an element or combination of elements that is . . . ‘significantly more than . . . the [ineligible concept] itself.’” *Id.* (alteration in original) (quoting *Mayo*, 566 U.S. at 72–73). We, therefore, decide under step two whether the claims: (a) set forth an inventive concept that provides a specific means or method that improves the relevant technology, or (b) are directed to a result or effect that itself is the abstract idea, in which the claims merely invoke generic processes and machinery. *See Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1336 (Fed. Cir. 2016).

The Examiner rejected claims 1–25 as directed to patent-ineligible subject matter because the claimed invention is directed to the abstract idea of electronic trading in a commodities exchange, derivatives exchange, or trading exchange and the implementation of trading strategies, which correspond to fundamental economic practices. Final Act. 2–3. Further, the

Examiner determined that the claims do not include additional elements sufficient to amount to significantly more than the judicial exception because the additional computer elements, which are recited at a high level of generality, provide conventional computer functions that do not add meaningful limits to practicing the abstract idea. *Id.* at 3.

Alice Step 1 Analysis

Appellants contend “the claims are not directed to ‘electronic trading in a commodities exchange, derivatives exchange, or trading exchange and the implementation of trading strategies’” and “do not relate to nor do they entirely preempt or tie up, for example, mere trading of financial instruments.” App. Br. 5. Appellants argue that, rather than preempting the entire idea of “electronic trading in a commodities exchange, derivatives exchange, or trading exchange and the implementation of trading strategies,” the claims are instead directed to a specific, novel and patentable system or application that can be used by an electronic trading system to offer improved transactional capacity, thereby improving market participation. *Id.* at 7.

Appellants’ arguments are not persuasive because, “[w]hile preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility.” *FairWarning IP, LLC, v. Iatric Sys., Inc.*, 839 F.3d 1089, 1098 (Fed. Cir. 2016) (quoting *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015)). Further, “[w]here a patent’s claims are deemed only to disclose patent ineligible subject matter under the *Mayo* framework, as they are in this case, preemption concerns are fully addressed and made moot.” *Ariosa*, 788 F.3d at 1379.

In arguing the claims recite novel and nonobvious steps, Appellants misapprehend the controlling precedent. *See* App. Br. 7. Although the second step in the *Alice* 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 Corp.*, 134 S. Ct. at 2355 (alteration in original) (quoting *Mayo*, 566 U.S. at 77). A novel and nonobvious claim directed to a purely abstract idea is, nonetheless, patent-ineligible. *See Mayo*, 566 U.S. at 79.

Appellants also argue that the claimed invention improves upon the technical field of transaction processing by providing a specific application for reducing transactional load on the system with respect to the computation of implied orders, which is not a long-standing business practice. *Id.* at 10.

We are not persuaded that the Examiner erred. We agree with the Examiner that the Specification describes and the claims are directed to analysis of trading strategies and the trading of orders. *See* Ans. 3 (citing Spec. ¶ 6). We also agree that claims 1–25 are directed to the abstract idea of trading in a commodities exchange, derivative exchange, or trading exchange and the implementation of trading strategies. The abstract idea is similar to other concepts found abstract, such as risk hedging in *Bilski v. Kappos*, 561 U.S. 593 (2010), intermediate settlement in *Alice*, and offer-based price optimization in *OIP Technologies v. Amazon.com, Inc.*, 788 F.3d 1359 (Fed. Cir. 2015). *See* Ans. 2.

In *OIP Technologies*, for example, the Federal Circuit summarized claim 1 as “(1) testing a plurality of prices; (2) gathering statistics generated

about how customers reacted to the offers testing the prices; (3) using that data to estimate outcomes (i.e. mapping the demand curve over time for a given product); and (4) automatically selecting and offering a new price based on the estimated outcome.” 788 F.3d at 1361. We agree with the Examiner that this is akin to the present application, which processes and matches orders from buyers with orders from sellers. *In OIP Technologies*, the Federal Circuit determined “the claims merely recite . . . conventional computer activities or routine data-gathering steps,” including “storing test results in a ‘machine-readable medium’” and “‘using a computerized system . . . to automatically determine’ an estimated outcome and setting a price.” *Id.* at 1363. “At best, the claims describe the automation of the fundamental economic concept of offer-based price optimization through the use of generic-computer functions.” *Id.*

We are not persuaded by Appellants’ argument that the claims are directed to an improvement in transaction processing, because the Federal Circuit has found this line of argument unavailing. *See id.* (“[R]elying on a computer to perform routine tasks more quickly or more accurately is insufficient to render a claim patent eligible.”). Claim 1 does not recite specific computer components or processes, let alone frame the method in terms of an improvement to such components or processes. Rather, claim 1 merely recites the augmentation of a fundamental economic practice by computer automation, which shows only the use of a computer as a tool, not an improvement to computer capabilities. *See App. Br. 7*. In other words, “the focus of the claims is not on such an improvement in computers as tools, but on certain independently abstract ideas that use computers as tools.” *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1354 (Fed.

Cir. 2016). As the Federal Circuit has explained, “[a]n abstract idea . . . on a generic computer is still an abstract idea.” *BASCOM Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1348 (Fed. Cir. 2016).

Thus, we are not persuaded of error in the Examiner’s conclusion that the claims are directed to the abstract idea of trading in a commodities exchange, derivative exchange, or trading exchange and the implementation of trading strategies.

Alice Step 2 Analysis

Having concluded that Appellants’ claims are directed to an abstract idea, we next address whether the claims add significantly more to the alleged abstract idea. We search for an “‘inventive concept’ sufficient to ‘transform the nature of the claim into a patent-eligible application.’” *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1312 (Fed. Cir. 2016) (quoting *Alice*, 134 S. Ct. at 2355). The “inventive concept” “must be significantly more than the abstract idea itself, and cannot simply be an instruction to implement or apply the abstract idea on a computer.” *BASCOM*, 827 F.3d at 1349 (citation omitted).

Appellants argue the Examiner erred because “the claimed receiving of an order strategy, converting into a set of unit orders, determination of the relationships between interrelated orders and computing of counter-individual orders, as claimed, is a specific implementation which has NOT been used before and therefore is not well understood, routine or conventional in the art.” App. Br. 8.

We are not persuaded. Appellants do not address the additional elements identified by the Examiner or explain how those elements (individually and in combination) are not conventional, well-known, or

routine. *See id.* Appellants simply reiterate the limitations of claim 1 and conclude that the limitations are not routine or conventional. *See Reply Br. 5.* The Examiner identified “receiving an order for a strategy; converting the at least one order to buy and at least one order to sell into a set or unit orders; determining relationships between interrelated orders; [and] computing a plurality of individual orders which are counter to the order for the strategy” as part of the abstract idea. Final Act. 2–3. Thus, these claim elements are not “additional elements” for purposes of step two of the *Alice* analysis. Rather, the Examiner identified the additional elements of:

receiving by a processor, the order strategy; converting, by the processor, the at least one order to buy and one to sell; determining by a processor, the relationships between each of the interrelated orders; computing by the processor, the plurality of individual orders which are counter to the strategy; a memory storing an order receiver computer program; and a system.

Id. at 3. We agree with the Examiner that the processor, memory and system are recited at a high level of generality and are recited as performing generic computer functions routinely used in computer applications. *See id.*

Appellants rely on *DDR Holdings, LLC v. Hotels.com L.P.*, 773 F.3d 1245 (Fed. Cir. 2014), in which the Federal Circuit found claims were “necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks” because they addressed a technical issue unique to Internet website problems. 773 F.3d at 1257. Appellants argue that, like the claims in *DDR Holdings*, “at least some of the problems solved by Appellants’ invention are specifically rooted in technology, specifically in electronic transaction processing systems which must efficiently compute transactional combination.” App. Br. 11.

Appellants further argue that, like the claims in *Enfish*, the claims are directed to a specific improvement to the way computers operate. *Id.* at 13; *see also Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016). Appellants argue that the claimed invention solves the technical problem of simplifying complex computations.

We are not persuaded. We agree with the Examiner that the claims recite a generic computer—including a memory, processor, and interface—that performs generic computing functions such as, receiving, converting, determining, and computing when conditions are met. *See* Ans. 8–9. We further agree that the additional limitations are not improvements to the functioning of a computer or some other technology, and that any problems being solved are commercial, not technological. *See id.*

Appellants next argue that “the specifically disclosed and claimed storing or replacing of stored data awaiting transmission and causing transmission thereof only upon determining that the recipient is ready to receive the stored data are additional elements that provide ‘something more’ than mere data communications.” App. Br. 9–10; *see McRO, Inc. v. Bandai Namco Games Am.*, 837 F.3d 1299 (Fed. Cir. 2016). In Appellants’ view, the combination of recited steps impose meaningful limits “that allow for congestion reduction by conditioning the delivery of the most current data based on the recipients ability to process it.” *Id.* at 10.

We are not persuaded of Examiner error. In *McRO*, the claimed process used a combined order of specific rules that rendered information in a specific format that was applied to create a sequence of synchronized, animated characters. *McRO*, 837 F.3d at 1315. Notably, the recited process automatically animated characters using particular information and

techniques—an improvement over manual three-dimensional animation techniques that was not directed to an abstract idea. *Id.* at 1316.

Unlike in *McRO*, the recited “computer implemented method” is not a rule-based improvement of a technological process. The *McRO* court determined that *McRO*’s claim was not directed to an abstract idea because it “uses the limited rules in a process specifically designed to achieve an improved technological result” over “existing, manual 3-D animation techniques.” *Id.* In contrast, Appellants’ claims address identifying a financial opportunity based on individual orders. Additionally, the claims in *McRO* were drawn to improvements in the operation of a computer at a task, rather than applying a computer system to perform generic data manipulation steps, as in Appellants’ claim 1. *See id.* at 1314.

Indeed, we find nothing in Appellants’ claims that adds anything “significantly more” to transform the abstract concept of “creating a licensing agreement including assigning and enforcing rights to content with temporal terms.” Because Appellants’ claims 1–25 are directed to a patent-ineligible abstract concept, and do not recite something “significantly more” under the second prong of the *Alice* analysis, we sustain the Examiner’s rejection of these claims under 35 U.S.C. § 101.

DECISION

We affirm the Examiner’s decision rejecting claims 1–25.

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). *See* 37 C.F.R. § 41.50(f).

AFFIRMED