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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte KEVIN FOLEY

Appeal 2018-006700
Application 14/701,524
Technology Center 3600

Before MAHSHID D. SAADAT, NORMAN H. BEAMER, and
STEVEN M. AMUNDSON, *Administrative Patent Judges*.

SAADAT, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant¹ appeals under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 1–8 and 11–22, which constitute all the claims pending in this application. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ According to Appellant, the real party in interest is CFPH LLC. Appeal Br. 3.

STATEMENT OF CASE

Introduction

Appellant's Specification describes "systems and methods for managing orders to buy or sell trading products, e.g., in an electronic trading environment." *See* Spec. ¶ 2.

Exemplary Claim

Exemplary claim 1 under appeal reads as follows;

1. An apparatus comprising:

at least one processor of at least one computer in electronic communication with at least one other computer via an electronic communications network; and

at least one memory having instructions stored thereon which are configured to, when executed by the at least one processor, direct the at least one processor to:

receive from a first computer associated with a first trader a first order to buy or sell a trading product having a first price and a first size;

receive from a second computer associated with a second trader a second order to buy or sell the trading product that is contra to the first order, the second order defining a second quantity and a price range of possible prices at which the second order can be executed, the price range comprising at least a second price, in which the second quantity of the trading product is reserved in an OMS of the second trader such that the second quantity of the second order is permitted by the OMS to be executed at any price within the price range, the OMS of the second trader comprising at least one electronic database;

determine whether the first price of the first order is within the price range of the second order, in which the act of determining whether the first price of the first order is within the price range of the second order comprises determining that the first price of the first order is within the price range of the second order, in which the act of determining whether the first

price of the first order is within the price range of the second order is performed by a first module of a first computer system of the second user that is separated by a firewall from a second module of the first computer system that interfaces with the second computer such that information received by the first module is protected from disclosure to the second user, and wherein the first module communicates with corresponding modules of other computer systems of other traders that are similarly screened off from the respective other traders by a respective other firewall;

responsive to determining that the first price of the first order is within the price range of the second order, automatically cause to be output to the second trader at a graphical user interface of a display device electronically coupled to the second computer (1) the price of the first order and (2) an execution indicia selectable by the second trader to cause at least a portion of the second order to be executed against at least a portion of the first order,

in which the first price of the first order and the execution indicia are not output or otherwise disclosed to the second trader prior to the act of determining that the first price of the first order is within the price range of the second order;

receive from the second computer electronic data indicating a selection of the execution indicia; and

responsive to receiving the electronic data indicating a selection of the execution indicia, cause the second order and the first order to be at least partially matched and executed at the price of the first order.

Rejection on Appeal

Claims 1–8 and 11–22 stand rejected under 35 U.S.C. § 101 for being directed to patent-ineligible subject matter. *See* Final Act. 4–6.

ANALYSIS

We have reviewed the Examiner’s rejection in light of Appellant’s arguments. Arguments Appellant could have made but chose not to make are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(iv). Appellant does not separately argue the claims. *See* Appeal Br. 7–12. We select claim 1 as representative. *See* 37 C.F.R. §41.37(c)(1)(iv).

Arguments

The Examiner determines that the claims are directed to the abstract idea of a method of buying and selling trading products, “which, when viewed individually and in combination, constitute an abstract idea of certain methods of organizing human activity” such as “‘interpersonal activities’ of ‘managing relationships or transactions between people, social activities, or behaviors,’ ‘satisfying or avoiding a legal obligation,’ and ‘advertising, marketing, and sales activities or behaviors,’ which are subcategories of activities that the precedential courts have found to be abstract idea[s] under ‘certain methods of organizing human activity.’” Final Act. 4.

The Examiner further finds:

[D]ata processing involved in the claims (e.g. . . . determine whether the first price of the first order is within the price range of the second order. . . , and responsive to determining that the first price of the first order is within the price range of the second order, cause to be output to the second trader . . .) is an “idea of itself (abstract idea)” because it involves “collecting and comparing known information” (*Classen*)², “obtaining and comparing intangible data” (*Cybersource*)³, and “collecting

² *Classen Immunotherapies, Inc. v. Biogen IDEC*, 659 F.3d 1057 (Fed. Cir. 2011).

³ *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1372 (Fed. Cir. 2011).

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information, analyzing it, and displaying certain results of the collection and analysis” (*Electric Power Group*).

Final Act. 5. The Examiner also finds the additional elements do not amount to significantly more than the judicial exception and merely are involved in performing activities according to their generic functionalities, which are well-understood and routine. Final Act. 6. Based on these determinations, the Examiner concludes that the claims are ineligible under § 101. Final Act. 7.

Appellant argues that the claims are not directed to an abstract idea and, similar to the claims in *Enfish*, “are directed to an improvement in networked trading systems” and “improve the usability, speed and efficiency of conventional trading systems.” Appeal Br. 9. According to Appellant, the Examiner has not shown that “every limitation of each and every claim taken both together and separately do not add significantly more than the alleged abstract idea.” Appeal Br. 10. Appellant further argues that the Examiner has provided no evidence to show that “the arrangement of elements is conventional or generic.” Appeal Br. 11. Lastly, Appellant asserts the claims are similar to those in *DDR* and “recite improvements to technology and electronic trading that are rooted in networking and computers.” *Id.*

Principles of Law

An invention is patent eligible if it claims a “new and useful process, machine, manufacture, or composition of matter.” *See* 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. *See, e.g., Alice*, 573 U.S. at 216 (citation 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* and *Alice*. *Id.* at 217–18 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 75–77 (2012)). 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).

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; *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, 67 (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” (*Diehr*, 450 U.S. at 182 n.7 (quoting *Corning v. Burden*, 56 U.S. (15 How.) 252, 267–68 (1854))); 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, 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.”). That said, the Supreme Court also indicated that a claim “seeking patent

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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*), and 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.*

In January 2019, the USPTO published revised guidance on the application of § 101. *See* 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) (“Guidance, 84 Fed. Reg.”).

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)).

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, and conventional in the field (*see* MPEP § 2106.05(d)); or

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

See Guidance, 84 Fed. Reg. at 56.

Revised Guidance Step 2A — Prong 1

Turning to claim 1, we first note that the claim recites a method and, therefore, falls within the process category of § 101. But despite falling within this statutory category, we must still determine whether the claim is directed to a judicial exception, namely an abstract idea. *See Alice*, 573 U.S. at 217. To this end, we determine (1) whether claim 1 recites a judicial exception (Revised Guidance Step 2A — Prong 1) and, if so, (2) whether the identified judicial exception is integrated into a practical application (Revised Guidance Step 2A — Prong 2). *See* Guidance, 84 Fed. Reg. at 52–55.

We agree with the Examiner that claim 1 recites a judicial exception. The recited judicial exception can be categorized as certain methods of organizing human activity. Appeal Br. 13–14 (Claims App.). The recited receiving and determining steps, under their broadest reasonable interpretation, relate to receiving first and second orders to buy or sell a trading product having a certain price relationship — i.e., certain methods of organizing human activity directed to the fundamental economic practice of

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ordering a trading product, and, therefore, an abstract idea. *See* Guidance, 84 Fed. Reg. at 52.

Additionally, Appellant explains that “[t]he specification explains problems found in prior art trading systems that lack speed, efficiency and usability” and points out that “[n]umerous paragraphs throughout the specification make reference to the various problems and solutions offered by the claims. These paragraphs identify problems and solutions that are unique and acute in the modern world of computers and networking applied to computerized trading.” Appeal Br. 10 (citing no specific paragraphs in the Specification). However, the Specification describes access to other trading interests in specific products as one of the goals of the claimed invention. *See* Spec. pp.1 –2, ¶¶ 4–6; pp. 22–23, ¶¶ 108–110. Using investors’ trading information about a first order to define the quantity and a price range for a second order falls under “a fundamental economic practice,” i.e., an abstract idea. For the above reasons, we determine claim 1 recites a fundamental economic practice, identified as an abstract idea in the Guidance.

Revised Guidance Step 2A — Prong 2

Because claim 1 recites an abstract idea, we must determine whether the abstract idea is integrated into a practical application, namely whether the claim applies, relies on, or uses the abstract idea in a manner that imposes a meaningful limit on the abstract idea, such that the claim is more than a drafting effort designed to monopolize the abstract idea. *See* Guidance, 84 Fed. Reg. at 53. To this end, we (1) identify whether there are any additional, recited elements beyond the judicial exception, and (2) evaluate those elements individually and collectively to determine whether they integrate the exception into a practical application. *See id.* at 54–55.

The additional elements beyond the above-identified judicial exceptions recited in claim 1 are: (1) “[a]n apparatus comprising: at least one processor of at least one computer in electronic communication with at least one other computer via an electronic communications network;” (2) “at least one memory having instructions stored thereon which are configured to, when executed by the at least one processor, direct the at least one processor to;” and (3) first and second computers.⁴ Appeal Br. 13–14 (Claims App.). When considering these elements individually or in combination, we determine they do not integrate the above-identified judicial exceptions into a practical application.

First, we are not persuaded that the claimed invention improves the computers or their components’ functionality or efficiency, or otherwise changes the way those devices function, at least in the sense contemplated by the Federal Circuit in *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016), and *McRO, Inc. v. Bandai Namco Games America Inc.*, 837 F.3d 1299 (Fed. Cir. 2016), despite Appellant’s arguments to the contrary (Appeal Br. 9–10; *see also* Ans. 3). Specifically, the claimed invention is said to “improve the usability, speed and efficiency of conventional trading systems” and prevent “delays such as those caused by inefficient display or order entry” which “cause[s] capital markets to operate ineffectively and can lead to huge sums of financial losses and inefficient distributions of global resources” by increasing “speed, efficiency and usability of these systems.” Appeal Br. 9. However, merely “[u]sing a computer to accelerate an ineligible mental process does not make that

⁴ *See* Spec. pp. 29–31, ¶¶ 6–15 (Appellant identifies these components as generic computer and software elements).

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process patent-eligible.” *Bancorp Servs., L.L.C. v. Sun Life Assurance Co. of Can. (U.S.)*, 687 F.3d 1266, 1279 (Fed. Cir. 2012); *see also CLS Bank Int’l v. Alice Corp. Pty. Ltd.*, 717 F.3d 1269, 1286 (Fed. Cir. 2013) (en banc) (“[S]imply appending generic computer functionality to lend speed or efficiency to the performance of an otherwise abstract concept does not meaningfully limit claim scope for purposes of patent eligibility.”), *aff’d*, 573 U.S. 208 (2014).

Further, the receiving and determining steps of claim 1 are not used to improve the performance or any capability of a computer. Instead, these steps merely enable the collection of the same types of data in a different, albeit improved, manner to improve a trader’s ability to obtain and compare order data for a number of trading products. Although the claimed functions permit the first order information to be used in determining the size and price range of a second order, Appellant does not explain how this added information improves the functioning of a computer. Indeed, any “speed, efficiency and usability of these systems” would be not because a computer has been improved, but because the data regarding the first order is available for determining the second order.

In fact, Appellant has not shown the claim includes additional elements that improve the underlying computer, or other technology, nor has provided support for the argument that the claimed invention represents an improvement to the functioning of a computer. *See Intellectual Ventures ILLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1370 (Fed. Cir. 2015) (“[Merely adding computer functionality to increase the speed or efficiency of the process does not confer patent eligibility on an otherwise abstract idea.”); *cf. Trading Techs. Int’l, Inc. v. IBG LLC*, 921 F.3d 1084, 1090 (Fed. Cir. 2019) (“This invention makes the trader faster and more efficient, not

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the computer. This is not a technical solution to a technical problem.”). Moreover, Appellant’s purportedly improved abstract concept is still an abstract concept under the Guidance. *See Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1151 (Fed. Cir. 2016) (“a claim for a new abstract idea is still an abstract idea.”) (emphasis omitted). That is, identifying and denying orders is part of the recited abstract idea as discussed above. *See* Ans. 6–7. As the argued elements are part of the abstract idea, they are not additional elements that integrate the identified abstract idea into a practical application. *See* Memorandum, 84 Fed. Reg. at 54–55 (“evaluate integration into a practical application by: (a) Identifying whether there are any additional elements recited in the claim beyond the judicial exception(s”).

Accordingly, we determine the claim does not integrate the judicial exception into a practical application. *See* Memorandum, 84 Fed. Reg. at 54. We determine the “claim recites a judicial exception and fails to integrate the exception into a practical application,” and therefore we proceed with “further analysis pursuant to the second step of the *Alice/Mayo* test (USPTO Step 2B).” Guidance, 84 Fed. Reg. at 51.

Revised Guidance Step 2B

Under the Revised Guidance, if a claim: (1) recites a judicial exception; and (2) does not integrate that exception into a practical application, we then look to whether the claim adds a specific limitation beyond the judicial exception that is not “well-understood, routine, conventional” in the field (*see* MPEP § 2106.05(d)); or, simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception. *See* Revised Guidance, 84 Fed. Reg. at 56.

We find Appellant’s argument that “[h]ere, like in DDR holdings, the claims clearly recite improvements to technology and electronic trading that are rooted in networking and computers,” citing *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257 (Fed. Cir. 2014), unavailing. Appeal Br. 11–12. In *DDR*, the court determined that the claims at issue were necessarily rooted in computer technology in order to address the Internet-centric problem of how to provide user access to computer-implemented applications over the Internet. *DDR*, 773 F.3d at 1257. In contrast, the receiving and determining steps related to the first and second order to buy or sell a trading product, as recited in claim 1, are not necessarily rooted in computer technology, as the recited receiving the first order and the second order, as well as the evaluation of the price of the order, could also occur outside the context of computer technology (e.g., if the receiving orders and determining their price are implemented using pen and paper).

On the record before us, we are unpersuaded of error in the Examiner’s determination that additional elements, such as a processor, a graphical user interface, and first and second computers, are nothing more than generic elements using conventional concepts. *See* Final Act. 5–6. In fact, the Specification supports the Examiner’s finding that additionally recited elements are merely generic computer elements performing generic computer functions, by providing non-limiting and exemplary descriptions of generic computer components that are used to aggregate data to facilitate buying or selling trading products. *See, e.g.*, Spec. pp. 29–31, ¶¶ 6–15.

Other Considerations

We have reviewed all the arguments Appellant has submitted concerning the patent eligibility of the claims before us that stand rejected under 35 U.S.C. § 101. Appeal Br. 7–12. We find that our analysis above

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substantially covers the substance of all the arguments, which have been made. But, for purposes of completeness, we will add the following.

To the extent Appellant argues that the Examiner erred in adequately supporting this determination by not providing evidence, or considering the claims in their entirety, to justify identifying the specific limitations as reciting an abstract idea (*see* Appeal Br. 10–11), we are unpersuaded. In this regard, there is no requirement that Examiners must provide evidentiary support in every case before a conclusion can be made that a claim is directed to an abstract idea. *See, e.g.*, MPEP § 2106.07(a)(III) (2018) (“The courts consider the determination of whether a claim is eligible (which involves identifying whether an exception such as an abstract idea is being claimed) to be a question of law. Thus, the court does not require ‘evidence’ that a claimed concept is a judicial exception, and generally decides the legal conclusion of eligibility without resolving any factual issues.” (Citations omitted.)) Moreover, the Federal Circuit made clear in *Berkheimer* that “not every § 101 determination contains genuine disputes over the underlying facts material to the § 101 inquiry.” *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1368 (Fed. Cir. 2018). In fact, the Federal Circuit in *Berkheimer* did not require evidentiary support for independent claim 1 because “[t]he limitations [of claim 1] amount to no more than performing the abstract idea of parsing and comparing data with conventional computer components.” *Id.* at 1370.

All that is required of the USPTO to meet its prima facie burden of production is that the Examiner set forth the statutory basis of the rejection and the reference or references relied upon in a sufficiently articulated and informative manner as to meet the notice requirement of 35 U.S.C. § 132. As the statute itself instructs, the Examiner must “notify the applicant,”

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“stating the reasons for such rejection,” “together with such information and references as may be useful in judging the propriety of continuing the prosecution of his application.” 35 U.S.C. § 132; *see also In re Jung*, 637 F.3d 1356, 1363 (Fed. Cir. 2011) (declining “to impose a heightened burden on examiners beyond the notice requirement of § 132”). Here, as we found above, the Examiner has made these findings as required by the statute. *See* Final Act. 11–19. Specifically, in rejecting the pending claims under § 101, the Examiner notified Appellant that the claims recite steps that describe the concepts of buying and selling trading products that is a fundamental economic practice (Final Act. 4) and that the claims do not include additional elements that “would amount to significantly more than the abstract idea.” Final Act. 5. Thus, we find that a prima facie case was established by the Examiner.

Summary

For at least the above reasons, we agree with the Examiner that claim 1 is “directed to” an abstract idea and does not recite an “inventive concept.” Accordingly, we sustain the Examiner’s rejection of claim 1 and the remaining claims which fall therewith, under 35 U.S.C. § 101.

CONCLUSION

We affirm the Examiner’s rejection of claims 1–8 and 11–22 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).

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In summary:

Claims Rejected	Basis	Affirmed	Reversed
1-8 and 11-22	§ 101	1-8 and 11-22	
Overall Outcome		1-8 and 11-22	

AFFIRMED