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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ROBERT J. WOODMANSEY, PHILIP M. GINSBERG,
and GLENN D. KIRWIN¹

Appeal 2017-005427
Application 12/948,119
Technology Center 3600

Before HUBERT C. LORIN, JOSEPH A. FISCHETTI, and
BIBHU R. MOHANTY, *Administrative Patent Judges*.

MOHANTY, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

The Appellants seek our review under 35 U.S.C. § 134 of the final rejection of claims 48–105 which are all the claims pending in the application. We have jurisdiction under 35 U.S.C. § 6(b). Oral arguments were presented March 14, 2019.

SUMMARY OF THE DECISION

We AFFIRM.

¹ The real party in interest is BGC Partners, Inc. App. Br. 2.

THE INVENTION

The Appellants' claimed invention is related to systems and methods for linking orders in trading systems (Spec., page 1, lines 9, 10). Claim 48, reproduced below with the italics added, is representative of the subject matter on appeal.

48. A method, comprising:
- receiving*, by a computing device, from a trader, *a selection of a first financial instrument*, wherein the first financial instrument is transacted in a first market; wherein the computing device comprises at least one of:
 - a workstation used by the trader;
 - an electronic trading system configured to rank and store bid and offers for instruments in a queue; and
 - a device that facilitates communication between the trader and an external trading system;
 - receiving*, by the computing device, from the trader, *a selection of a second financial instrument*, wherein the second financial instrument is transacted in a second market, and wherein the first financial instrument is different from the second financial instrument;
 - receiving*, by the computing device, from the trader, *a linking relationship between the first financial instrument and the second financial instrument*;
 - monitoring*, by the computing device, *bids and offers* from at least one external trading system, wherein the bids and offers comprise bids and offers for at least the first financial instrument;
 - controlling*, by the computing device, *a submission of orders* for the second financial instrument based at least in part on the linking relationship, wherein controlling the submission of orders for the second financial instrument comprises:
 - generating*, by the computing device, *a price of an order for the second financial instrument based at least in part on applying a conversion factor to a price of a monitored bid or offer for the first financial instrument*;

generating, by the computing device, a size of the order for the second financial instrument based at least in part on applying a hedge ratio to a size of the monitored bid or offer for the first financial instrument; and
submitting, by the computing device, the order for the second financial instrument to a second trading system.

THE REJECTION

The following rejection is before us for review:

Claims 48–105 are rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

FINDINGS OF FACT

We have determined that the findings of fact in the Analysis section below are supported at least by a preponderance of the evidence.²

ANALYSIS

Rejection under 35 U.S.C. § 101

The Appellants argue that the rejection of claim 48 is improper because an abstract idea has not been properly identified (App. Br. 6–9; Reply Br. 3). The Appellants also argue that the claim adds “significantly more” to transform the alleged abstract idea into patentable subject matter (App. Br. 9–11; Reply Br. 3–5, 8, 9).

In contrast, the Examiner has determined that the rejection of record is proper (Final Rej. 2–8; Ans. 2–9).

² See *Ethicon, Inc. v. Quigg*, 849 F.2d 1422, 1427 (Fed. Cir. 1988) (explaining the general evidentiary standard for proceedings before the Patent Office).

We agree with the Examiner. 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. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014).

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) (“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; *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 182 n.7 (quoting *Corning v. 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.* (internal citation omitted) (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.*

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) (“Guidance”). Under the 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* MPEP § 2106.05(a)–(c), (e)–(h)).

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 Guidance.

The Examiner has presented an analysis of the exemplary claim 48 in the Answer at page 3. Here, the Examiner has determined that the claim is directed to the concept of trading financial instruments by linking orders, which is a fundamental economic practice and therefore an abstract idea (Ans. 3, 4). We substantially agree with the Examiner’s analysis in this regard. Claim 48 is reproduced above with the italics used to highlight the abstract concept that the claim is directed to. For example, the claim includes limitations for: “receiving . . . a selection of a first financial instrument,” “receiving . . . a selection of a second financial instrument,” “receiving . . . a linking relationship between the first financial instrument and the second financial instrument,” “monitoring . . . bids and offers,” “controlling . . . submission of orders,” “generating . . . a price of an order,”

“generating . . . a size of the order,” and “submitting . . . the order.” Here, these claim limitations are representative of the claim being directed to the concept of trading financial instruments by linking orders which is a method of organizing human activities and fundamental economic practice and an abstract idea. Further, the Specification at page 1 states that the invention relates to “linking orders in electronic trading systems.” Thus, we consider the claim to be directed to an abstract idea as identified above.

Turning to the next step of the *Alice* and *Mayo* framework, we determine that the claims do not improve computer functionality, improve another field or technology, utilize a particular machine, or effect a physical transformation. Rather, we determine that nothing in the claims imposes a meaningful limit on the judicial exception, such that the claims are more than a drafting effort to monopolize the judicial exception.

For example, in claim 48 the steps of [1] “receiving” the selection of the first financial instrument; [2] “receiving” the selection of the second financial instrument; [3] “receiving” a linking relationship between the financial instrument; [4] “monitoring” the bids and offers; [5] “controlling” the submission of orders; [6] “generating” a price of an order; [7] “generating” the size of an order; and [8] “submitting” the order for the second financial instrument are merely conventional steps performed by a generic computer that do not improve computer functionality. That is, these recited steps [1]-[8] “do not purport to improve the functioning of the computer itself” but are merely generic functions performed by a conventional processor. Likewise, these same steps [1]-[8] listed above do not improve the technology of the technical field and merely use generic computer components and functions to perform the steps. Also, the recited

method steps [1]-[8] above do not require a “particular machine” and can be utilized with a general purpose computer, and the steps performed are purely conventional. In this case the general purpose computer is merely an object on which the method operates in a conventional manner and does not provide “significantly more” to the claim beyond a nominal or insignificant execution of the method. Further, the claim as a whole fails to effect any particular transformation of an article to a different state in a manner that would render the claim “significantly more” than the abstract idea. The recited steps [1]-[8] fail to provide meaningful limitations to limit the judicial exception and rather are mere instructions to apply the method to a generic computer. Considering the elements of the claim both individually and as “an ordered combination” the functions performed by the computer system at each step of the process are purely conventional. Each step of the claimed method does no more than require a generic computer to perform a generic computer function.

The Appellants have also cited to *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016) to show that the claim is not abstract but the claims in that case were not similar in scope to those here in contrast and were in contrast directed to a self-referential data table.

The Appellants cite to *DDR Holdings, LLC v. Hotels, L.P.*, 773 F.3d 1245, 1257 (Fed. Cir. 2014) and argue that the claim is “rooted in computer technology” (App. Br. 13, 14). We disagree as the Appellants have not shown how the claimed subject matter is rooted in technology given that the Specification describes only the use of generic computer equipment used in routine, conventional, and generic manner.

Further the claim fails to add a specific limitation beyond the judicial exception that is not well-understood, routine, and conventional in the field. Rather the claim uses well-understood, routine, and conventional activities previously known in the art at a high level of generality to the judicial exception. The Specification at pages 5-7 for example describes using conventional computer components such as personal computers, wireless terminals, microprocessors, and Internet browsers in a conventional manner. The claim specifically includes recitations for a “computing device”, “workstation”, “electronic trading system”, and a “device” to implement communications to carry out the method but these computer components are all used in a manner that is well-understood, routine, and conventional in the field. The Appellant has not shown these claimed generic computer components which are used to implement the claimed method are not well understood, routine, or conventional in the field. The Appellants have not demonstrated that the computer described in the Specification at page 5 or the claimed “computing device” for instance are not a general purpose computer components beyond those known to be routine and conventional known to perform similar functions in a well-understood manner.

We note the point about pre-emption (App. Br. 12, 13). While pre-emption “‘might tend to impede innovation more than it would tend to promote it,’ thereby thwarting the primary object of the patent law” (*Alice*, 573 U.S. at 216 (quoting *Mayo*, 566 U.S. at 71), “the absence of complete preemption does not demonstrate patent eligibility” (*Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015)). See also *OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362–63 (Fed. Cir. 2015), cert. denied, 136 S. Ct. 701, 193 (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.”).

For these reasons the rejection of claim 48 is sustained. Similar arguments have been presented for the remaining claims. The rejection of these claims is sustained as the remaining claims are directed to similar subject matter as claim 48.

CONCLUSIONS OF LAW

We conclude that Appellants have not shown that the Examiner erred in rejecting claims 48–105 under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

DECISION

The Examiner’s rejection of claims 48–105 is sustained.

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