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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte IAN DOMOWITZ, SABITHA ARPUTHAM, BRIAN KIERNAN, and KEVIN O'CONNOR

Appeal 2018-006908
Application 14/286,496[1]
Technology Center 3600

Before JENNIFER L. McKEOWN, CATHERINE SHIANG, and LINZY T. McCARTNEY, *Administrative Patent Judges*.

SHIANG, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1–17, which are all the claims pending and rejected in the application. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

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[1] We use "Appellant" to refer to "applicant" as defined in 37 C.F.R. § 1.42. Appellant identifies ITG Software Solutions, Inc. as the real party in interest. Appeal Br. 2.

STATEMENT OF THE CASE

Introduction

The present invention relates "generally to electronic trading systems. More particularly, the present invention relates to systems and methods for providing, within an electronic trading process, real-time pre- and post-trade analytics that assist traders make the decision of how to trade a particular tradeable asset." Spec. ¶ 2. Claim 1 is exemplary:

> 1. A system for providing near real-time analytics that can be used to make trading decisions to an electronic trading platform configured to store electronic trading orders and to send and receive electronic order data coupled with a messaging bus, said system comprising:
>
> a display and delivery mechanism in electronic communication with said electronic trading platform, configured to:
>
> receive order data from said electronic trading platform for a proposed electronic trade order identifying a tradeable asset and order size,
>
> display, on an electronic interface of the electronic trading platform, a classification of the electronic trade order, wherein the displayed classification indicates volume class of the asset, based on a current trading volume of the asset, a volatility class of the asset, and iii)[2] a market cap class for the asset,
>
> display, on the electronic interface, a listing of potential trading destinations for the asset,
>
> display, on the electronic interface, for each of the listed potential trading destinations, a trading cost which indicates trading performance results at the potential trading destination for executed orders having the same or similar classification as the tradeable asset of the electronic trade order,
>
> receive user selection of one of the displayed potential trading destinations, and electronically transmit the electronic trade order to the selected trading destination,

[2] The inclusion of "iii)" appears to be a typographical error.

> wherein the listing of potential trading destinations is displayed as a graphical ranking of the potential trade destinations,
>
> wherein said ranking is the result of:
>
> generating the classification of the electronic trade order based on trading criteria, the trading criteria including the order size, market cap, current trading volume, and volatility conditions of the tradeable asset of the order, and volatility of a market in which the tradeable asset is traded, and of
>
> determining, in real-time or near real-time, based on information from a historical trading database, the trading performance results of the executed orders having the same or similar trading criteria over a predetermined historical time period, aggregated by destination, and ranked by destination or broker.

Rejection[3]

Claims 1–17 are rejected under 35 U.S.C. § 101 because they are directed to patent-ineligible subject matter. Final Act. 3–6.

ANALYSIS

We have reviewed the Examiner's rejection in light of Appellant's contentions and the evidence of record. We concur with Appellant's contentions that the Examiner erred in this case.

Section 101 of the Patent Act provides "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this

[3] Throughout this opinion, we refer to the (1) Final Office Action dated June 2, 2017 ("Final Act."); (2) Appeal Brief dated March 30, 2018 ("Appeal Br."); (3) Examiner's Answer dated April 25, 2018 ("Ans."); and (4) Reply Brief dated June 22, 2018 ("Reply Br.").

title." 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. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014) (internal quotation marks and 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) ("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, 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" (*id.* at 182 n.7 (quoting *Corning v. Burden*, 56 U.S. 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 187; *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.* (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. USPTO's 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) (Step 2A, Prong 1); 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) (Step 2A, Prong 2).

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. (Step 2B.)

See Guidance, 84 Fed. Reg. at 54–56.

Turning to Step 2B of the Guidance, "[t]he second step of the *Alice* test is satisfied when the claim limitations 'involve more than performance of []well-understood, routine, [and] conventional activities previously known to the industry.'" *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1367 (Fed. Cir. 2018) (quoting *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat'l Ass'n*, 776 F.3d 1343, 1347–48 (Fed. Cir. 2014) and *Alice*, 573 U.S. at 225). "Whether something is well-understood, routine, and conventional to a skilled artisan at the time of the patent is a factual determination." *Berkheimer*, 881 F.3d at 1369.

In this case, the Examiner finds:

> the claims as an ordered combination are analyzed to determine whether any element, or combination of elements, is sufficient to ensure that the claim amounts to significantly more than a judicial exception. Although a computer acts as the intermediary in the claimed method, the claims do no more than implement the abstract idea s recited *supra*. *All of these computer functions are "well understood, routine, conventional activities" previously known to the industry.*

Final Act. 6 (emphasis added); *see also* Ans. 5.

Appellant cites *Berkheimer* (Appeal Br. 12–13), and further cites the USPTO Memorandum, dated April 19, 2018, of Changes in Examination Procedure Pertaining to Subject Matter Eligibility, Recent Subject Matter Eligibility Decision (*Berkheimer v. HP, Inc.*) ("*Berkheimer* Memorandum") in the Reply Brief (Reply Br. 2–4).[4] In particular, Appellant argues the Examiner has not provided evidence to support the findings that the recited display limitations are well understood, routine, and conventional. *See* Reply Br. 2–4.

We agree with Appellant, because the Examiner has not provided sufficient evidence required by *Berkheimer* to support the findings about the display limitations ("display, on an electronic interface of the electronic trading platform, a classification of the electronic trade order, wherein the displayed classification indicates volume class of the asset, based on a current trading volume of the asset, a volatility class of the asset, and [] a market cap class for the asset," "display, on the electronic interface, a listing of potential trading destinations for the asset," and "display, on the

[4] Because the *Berkheimer* Memorandum was published after the Appeal Brief was filed, Appellant has good cause to cite that memorandum in the Reply Brief.

electronic interface, for each of the listed potential trading destinations, a trading cost which indicates trading performance results at the potential trading destination for executed orders having the same or similar classification as the tradeable asset of the electronic trade order"). *See Berkheimer*, 881 F.3d at 1369. In particular, the Examiner has not provided any of the four categories of information required by the *Berkheimer* Memorandum:

> 1. A citation to an express statement in the specification or to a statement made by an applicant during prosecution that demonstrates the well-understood, routine, conventional nature of the additional element(s). . . .
> 2. A citation to one or more of the court decisions discussed in MPEP § 2106.05(d)(II) as noting the well-understood, routine, conventional nature of the additional element(s).
> 3. A citation to a publication that demonstrates the well-understood, routine, conventional nature of the additional element(s). . . .
> 4. A statement that the examiner is taking official notice of the well-understood, routine, conventional nature of the additional element(s). . . .

Berkheimer Memorandum at 3–4.

Therefore, the Examiner erred with respect to Step 2B of the Guidance, and we are constrained by the record to reverse the Examiner's rejection of claims 1–17 on procedural grounds.

CONCLUSION

We reverse the Examiner's decision rejecting claims 1–17.

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–17	101	Eligibility		1–17

REVERSED