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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 DEAN P. ALDERUCCI, CHARLES PLOTT,
MARK MILLER, HOWARD W. LUTNICK,
ANDREW FISHKIND, BRIAN GAY, and KEVIN FOLEY

———————

Appeal 2019-003804
Application 12/358,768
Technology Center 3600

———————

Before DANIEL J. GALLIGAN, JESSICA C. KAISER, and
DAVID J. CUTITTA II, *Administrative Patent Judges*.

KAISER, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant[1] appeals from the
Examiner's decision to reject claims 14–24, 29–39, and 44. Claims 1, 3–13,
28, 40–43, and 45 have been cancelled. Claims 2 and 25–27 have been
withdrawn. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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[1] We use the word Appellant to refer to "applicant" as defined in 37 C.F.R.
§ 1.42(a). Appellant identifies the real party in interest as CFPH, LLC.
Appeal Br. 3.

CLAIMED SUBJECT MATTER

Claims 14 and 44 are independent claims. Claim 14 is reproduced below with bracketed lettering added for discussion purposes:

14. An apparatus comprising:

[a] a memory;

[b] a network interface;

[c] at least one processor to:

[d] determine that a set of remote devices are configured to automatically accept at least some trades involving a financial instrument;

[e] receive first electronic data comprising an indication of an order from a remote device, in which the order defines a side of a trade for a quantity of the financial instrument;

[f] in response to receiving the indication of the order and determining that the set of are configured for automatic acceptance, filter the set of remote devices to identify devices therein with an order response rate below a threshold;

[g] transmit respective indications of respective portions of the order to each device whose order response rate is equal to or above the threshold;

[h] receive second electronic data comprising an indication of an acceptance of a first respective portion from a first remote device of the set of remote devices that meets the order response rate threshold;

[i] in response to receiving the indication of the acceptance, transmit third electronic data comprising an

indication of a remainder of the order to the first remote
device; and

[j] facilitate an execution of at least one of a trade
for the first respective portion and a trade for the remainder
of the order.

REJECTIONS

The Examiner rejects claims 14 and 44 under 35 U.S.C. § 112, first
paragraph, as failing to comply with the written description requirement.
Final Act. 2–3.

The Examiner rejects claims 14–24, 29–39, and 44[2] under 35 U.S.C.
§ 101 as being directed to patent-ineligible subject matter. *Id.* at 3–9.

Our review in this appeal is limited only to the above rejections and
the issues raised by Appellant. Arguments not made by Appellant are
waived. *See* MPEP § 1205.02; 37 C.F.R. §§ 41.37(c)(1)(iv) and 41.39(a)(1).

OPINION

Written Description

The Examiner finds that the Specification does not provide adequate
written description support for

filter[ing] the set of remote devices to identify devices therein
with an order response rate below a threshold;

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[2] The Examiner includes claims 40–43 in the rejection under 35 U.S.C.
§ 101. Final Act. 3. Claims 40–43, however, have been cancelled. Appeal
Br. 20. Accordingly, we understand that the Examiner's rejection does not
include claims 40–43.

transmit[ting] respective indications of respective portions of the order to each device whose order response rate is equal to or above the threshold; [and]

receiv[ing] second electronic data comprising an indication of an acceptance of a first respective portion from a first remote device of the set of remote devices that meets the order response rate threshold,

as recited in claim 14 and similarly recited in claim 44. Final Act. 2–3. In particular, the Examiner states that the Specification discloses that "the submitter [of a trade] may desire to filter participants [of a trade] not remote devices" and that the "response rate is specific to the characteristics of the participant and not to a device." Ans. 8 (brackets and emphasis in original); Final Act. 3. That is, the Examiner argues that the Specification discloses filtering, transmitting, and receiving for participants, rather than for the claimed "remote devices."

Appellant notes that the Specification discloses that

[i]n some embodiments, a firm order submitter may desire to filter the participants that receive queries regarding their firm orders. . . . In one implementations, firm order submitters may choose from one or more ranges of response rates (i.e., number of queries accepted/ number of queries received), which may be referred to as risk pools, with which participants must be associated to receive a query (e.g.,, choose from among participants with positive response rates of 1–50%, 51–70%, 71–90%, and/or 91–100%),

and Appellant argues this provides written description support for the contested limitations. Appeal Br. 8–9 (citing Spec. 40:34–41:19, 92:11–16) (emphasis omitted).

We agree with the Appellant that the Examiner fails to show the claims lack adequate written description support. The Examiner is correct

that the Specification uses the term "participant" rather than "remote devices" when discussing the filtering, transmitting, and receiving functions recited in the claim. Ans. 8 (citing Spec. 40:34–41:19). The Specification, however, also states a "participant may include an [order management system (OMS)], a computer that interfaces with an OMS, and/or any other type of computer or trading-related apparatus," and further, that those systems may be mobile, i.e., remote, devices. Spec. 21:23–33; *see* Spec. 26:34–36. Thus, the Specification discloses "participants" broadly to include "remote devices." For the reasons discussed above, we determine the Specification provides adequate written description support for

> filter[ing] the set of remote devices to identify devices therein with an order response rate below a threshold;

> transmit[ting] respective indications of respective portions of the order to each device whose order response rate is equal to or above the threshold;

> receiv[ing] second electronic data comprising an indication of an acceptance of a first respective portion from a first remote device of the set of remote devices that meets the order response rate threshold,

as recited in claim 14 and similarly recited in claim 44. Accordingly, we do not sustain the Examiner's rejection of claims 14 and 44 for failing to comply with the written description requirement.

Patent Eligible Subject Matter

Principles of Law

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 U.S. 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 Corp. Pty. Ltd. 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 Court's two-step framework, described in *Alice* and *Mayo*. *Alice*, 573 U.S. 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 recites. *See id.* 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.").

If the claim recites an abstract idea, we turn to the second step of the *Alice* and *Mayo* framework, in which "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 (internal quotation marks and 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.* (alterations in original) (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 Office published revised guidance on the application of § 101.
2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50
(Jan. 7, 2019) (hereinafter "Guidance"). Recently, the USPTO published an
update to that guidance. *October 2019 Patent Eligibility Guidance Update*,
84 Fed. Reg. 55,942 (Oct. 18, 2019) (hereinafter "Guidance Update").
Under the Guidance and the Guidance Update, in determining whether a
claim falls within an excluded category, we first look to whether the claim
recites:

> (1) Step 2A — Prong One: 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) Step 2A — Prong Two: additional elements that integrate
> the judicial exception into a practical application (*see* MPEP[3]
> §§ 2106.05(a)–(c), (e)–(h)).

See Guidance, 84 Fed. Reg. 54–55 ("Revised Step 2A"). 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 (Step 2B):

> (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.

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[3] All Manual of Patent Examining Procedure ("MPEP") citations herein are
to MPEP, Rev. 08.2017, January 2018.

See id. at 56 ("*Step 2B: If the Claim Is Directed to a Judicial Exception, Evaluate Whether the Claim Provides an Inventive Concept.*").

Analysis

We analyze the claims and the Examiner's rejection in view of the Guidance and the Guidance Update, and we adopt the nomenclature for the steps used in the Guidance. Appellant's arguments address features recited in independent claim 14, namely, "a filtering tool." Appeal Br. 11 (emphasis omitted). Although Appellant argues independent claim 44 is "different from claim 14" (*id.* at 13), Appellant does not point out which particular limitations recited in independent claim 44 are different and how they are different. Further, Appellant does not provide any argument specific to any of the dependent claims. *Id.* We, thus, select claim 14 as representative of all claims. *See* 37 C.F.R. § 41.37(c)(1)(iv).

Step 1

As an initial matter, the claims must recite at least one of four recognized statutory categories, namely, machine, process, article of manufacture, or composition of matter. MPEP § 2106(I); *see* 35 U.S.C. § 101. Independent claim 14 recites an apparatus, and independent claim 44 recites a method. Thus, the pending claims recite recognized statutory categories under § 101, i.e., machines and processes, and we turn to the two-step *Alice/Mayo* analysis applied in accordance with the Guidance and the Guidance Update.

Step 2A, Prong One in the Guidance

Next, we determine whether claim 14, being directed to a statutory class of invention, nonetheless recite a judicial exception. Guidance, 84 Fed. Reg. 51.

The Examiner determines that claim 14 recites a judicial exception: an abstract idea. Ans. 9. In particular, the Examiner states that the claim recites "a business solution to a business problem" and is "a fundamental economic practice[]." Ans. 9; Final Act. 11; *see* Final Act. 8. The Examiner explains that "the filtering in the present set of claims is performed based on the desires of a firm order submitter to use the response rate to limit exposure of that [order] information" and "is done to meet [a] business objective." Ans. 10. According to the Guidance, commercial interactions or fundamental economic practices are certain methods of organizing human activity, one of the groupings of an abstract idea. Guidance, 84 Fed. Reg. 52.

Appellant argues that claim 14 is, instead, "directed to a filtering tool" and "is necessarily rooted in computer technology because" the claim addresses the "problem of protecting online users from third parties with malicious intent[, which] specifically arises in the realm of computer networks." Appeal Br. 11 (citing Spec. 42:17–20) (emphasis omitted).

We find Appellant's arguments unpersuasive because the Examiner's position is supported by the record. Rather than a filtering tool for a computer network, the Specification overwhelmingly describes the invention as "an order management system (OMS)," and in particular an "order management system[s] used in securities trading," e.g., "stocks, bonds, futures, options, derivatives, etc." Spec. 18:17–23; *see generally* Spec. The

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Specification states that "[i]t is recognized that one problem that may be associated with using such orders in a market includes a potential that information associated with the existence of otherwise secret orders may be used to influence a market and/or to diminish an advantage attributable to the originator of the information." *Id.* at 19:34–20:7. For example, "a trader may end a negotiation" and then "subsequently use the knowledge [from the failed negotiation] in a transaction related to the security to increase or decrease the price of the security by entering one or more other orders at higher or lower prices and/or use the knowledge [from the failed negotiation] to . . . otherwise adjust a trading strategy." *Id.* at 20:8–20. That is, the Specification describes a problem with traders entering negotiations in bad faith in order to gain trading information. The Specification's solution to that problem is to "prevent information about the firm order from being sent to participants that are unlikely to respond positively to the order" (*id.* at 41:12–14) by "filtering . . . participants based on the participants' prior actions," e.g., grouping participants into "risk pools" that are "based on the [historic] frequency of positive responses to [order] queries" (*id.* at 41:14–19, 80:10–23). After filtering, orders are only offered to certain groups, i.e., risk pools. *Id.* at 41:14–19, 80:21–23. The Specification explains that "[b]ecause sending a query to a participant reveals information about an order, the submitter of the order may use the response rate to limit exposure of that information to participants that are historically likely to respond positively." *Id.* at 80:23–26. That is, the Specification's solution to the problem (of participants that enter into trading negotiations only in order to gain trading information) is to only offer transactions to participants who are most likely to accept trade offers. Accordingly, the Specification supports

the Examiner's determination that the invention focuses on a business solution to a business problem.

The claim reflects the business solution described by the Specification. Saving the limitations reciting computer hardware for analysis at a later step, i.e., "[a] a memory; [b] a network interface; [c] at least one processor," we turn to limitations [d]–[j], which describe a commercial interaction. Limitation [d] describes identifying remote devices that automatically accept offers for financial instruments. Identifying trading participants that will accept a trade offer is an economic practice common in many commercial transactions. Limitation [e] describes receiving an order defining a trade for a financial instrument. An offer for purchase is a fundamental economic practice used in any commercial transaction. Limitations [f]–[g] describe the process of grouping participants into risk pools and only offering trades to participants that usually accept the trades, as discussed above. In particular, limitation [f] recites filtering participants into risk pools based on a response rate, e.g., an offer acceptance rate; limitation [g] recites transmitting offers only to participants with a threshold acceptance rate; and limitation [h] recites acceptance of the offer. Further, limitation [i] describes providing an additional offer for acceptance; as above, an offer for purchase is a fundamental economic practice used in any commercial transaction. Limitation [j] completes the trade; completing a financial transaction is a fundamental economic practice present in any commercial transaction. Accordingly, limitations [d]–[j] recite a

commercial interaction that addresses a business problem, and certain features in that commercial interaction are fundamental economic practices.

Although Appellant argues that the claim "protect[s] online users from third parties with malicious intent [to snoop computer network traffic]" and that the claim is "directed to a filtering tool" (Appeal Br. 11), both the language of the claim and corresponding portions of the Specification confirm that the claim recites a business solution to a business problem. Indeed, a portion of the Specification Appellant relies on for written description support for the filtering and ordering transmitting/receiving limitations (Appeal Br. 8–9) states "filtering may prevent information about the firm order from being sent to participants that are unlikely to respond positively to the order" (Spec. 41:7–19). Accordingly, rather than some type of computer network snooping protection system or filtering tool, the claim recites the use of a filter to select which participants receive trading information.

Accordingly, as the Examiner determines, the claim recites a commercial interaction solving a business problem or fundamental economic practice, which, as the Guidance explains, are categorized as certain methods of organizing human activity. Guidance, 84 Fed. Reg. at 52.

Step 2A, Prong Two in the Guidance

Next, we determine whether claim 14 is directed to the abstract concept itself or whether the claim is instead directed to some technological implementation or application of, or improvement to, this concept, i.e., integrated into a practical application. *See, e.g.*, *Alice*, 573 U.S. at 223 (discussing *Diamond v. Diehr*, 450 U.S. 175, 177 (1981)).

The Examiner determines that "there is no improvement in the computer or a technology" recited in claim 14. Ans. 10.

To the extent Appellant argues that the claim recites a technical improvement to a filtering tool (*see* Appeal Br. 11), we disagree. Appellant's reliance on *BASCOM Global Internet Services, Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016) is misplaced. Appeal Br. 11. Unlike *BASCOM*, in which "the patent describes how its particular arrangement of elements is a technical improvement over prior art ways of filtering such content," there is no improvement to filtering recited by the claim. *BASCOM*, 827 F.3d at 1350. As discussed above, the claim merely uses a filter to filter out participants based on a threshold. The claim here does not recite *how* filtering is accomplished or improved, and Appellant has not provided any persuasive argument as to how a filtering tool is improved.

Nor has Appellant persuaded us that filtering out trading offer transmissions over a computer network is an improvement to computing technology. *See* Appeal Br. 11. While the Specification states that "[f]iltering before transmitting queries may decrease an amount of traffic (e.g., TCP/IP packets) transmitted which may be snooped to reveal trading information," the Specification further states, "however, a malicious user may snoop such queries in an attempt to determine a filter setting." Spec. 42:17–20. As such, the Specification admits that the filtering may not solve snooping problems. Moreover, the "advantage" that there are fewer trade offer packets to snoop is not the result of some improved computing technology. There are fewer trade offer packets because participants are filtered out through the execution of the business solution; naturally, because of the business solution, there are fewer trade offer packets, not because

computing technology has been improved. Accordingly, we are not persuaded there has been an improvement to computing technology.

None of the other indicia of integration in the Guidance are present in the claim. Guidance, 84 Fed. Reg. at 55; *see* MPEP § 2106.05(a)–(c), (e). For example, the claim does not recite a particular machine and, instead, generically recites an "apparatus comprising: a memory; a network interface; at least one processor" or a "method" performed by "at least one processor." Nor has Appellant presented any arguments regarding any of the other indicia. *See* Appeal Br. 10–12; *see generally* Reply Br. Therefore, we determine that the claim is not directed to a specific asserted technological improvement or otherwise integrated into a practical application. Consequently, we conclude the claim is "directed to" a judicial exception. Guidance, 84 Fed. Reg. at 54.

Step 2B

Next, we determine whether claim 14 includes additional elements that provide significantly more than the recited judicial exception, thereby providing an inventive concept. *Alice*, 573 U.S. at 221 (quoting *Mayo*, 566 U.S. at 72–73).

The Examiner determines the "claim(s) does/do not include additional elements that are sufficient to amount to significantly more than the judicial exception because the additional elements when considered both individually and as an ordered combination do not amount to significantly more that the abstract idea(s)." Final Act. 9. The Examiner points out that the claimed "additional limitations of a computer with a processor and a tangible, non-transitory memory," i.e., additional claim elements "[a] a

memory; [b] a network interface; [c] at least one processor," are "generic computer components . . . claimed to perform their basic functions, which amount to no more than implementing the abstract idea with a computerized programmed system." *Id.*

Appellant argues that the Examiner's "Step 2B analysis . . . fails to meet the [USPTO] guidelines" regarding *Berkheimer v. HP Inc.*, 881 F.3d 1360 (Fed. Cir. 2018). Appeal Br. 12 (citing USPTO Memorandum, Changes in Examination Procedure Pertaining to Subject Matter Eligibility, Recent Subject Matter Eligibility Decision (*Berkheimer v. HP, Inc.*) (Apr. 19, 2018), *available at* https://www.uspto.gov/sites/default/files/documents/memo-berkheimer-20180419.PDF).

We are not persuaded the Examiner erred in determining that the additional elements recited in the claim are not sufficient to amount to significantly more than the judicial exception. As Appellant points out, the Examiner may support a determination that additional elements are well-understood, routine, and conventional with a "citation to an express statement in the specification . . . that demonstrates the well-understood, routine, conventional nature of the additional element(s)." Appeal Br. 12 (citation omitted). The Examiner points out that the Specification "expressly states the use of [a] general purpose computer when describing the additional elements of the claims involving the computer." Ans. 11 (citing Spec. 12:5–15:24). Indeed, the Specification states that "[i]t will be readily apparent to one of ordinary skill in the art that the various processes described [by the Specification] may be implemented by, e.g., appropriately programmed general purpose computers." Spec. 12:6–9. The Specification

goes on to describe memory and processors generically implementing instructions in an expected manner. *Id.* at 12:12–16 ("Typically a processor 105 . . . will receive instructions (e.g., from a memory 107 or like device), and execute those instructions, thereby performing one or more processes defined by those instructions."). Accordingly, the Examiner has fairly supported the determination with a citation to the Specification.

We thus conclude that claim 14 does not provide an inventive concept because any additional elements recited in the claim, considered individually and as an ordered combination, do not provide significantly more than the recited judicial exception. Accordingly, we are not persuaded that the claim recites patent-eligible subject matter. Further, Appellant has not proffered sufficient evidence or argument to persuade us that any of the limitations in remaining claims 15–24, 29–39, and 44 provide a meaningful limitation that transforms those claims into a patent-eligible application. *See* Appeal Br. 11–13. Therefore, we sustain the rejection of claims 14–24, 29–39, and 44 under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
14, 44	112	Written Description		14, 44
14–24, 29–39, 44	101	Eligibility	14–24, 29–39, 44	
Overall Outcome			14–24, 29–39, 44	

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

<u>AFFIRMED</u>