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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 JOHAN BERGENUDD and HENRIK ROSÉN

_____

Appeal 2019-003398
Application 15/238,746
Technology Center 3600

_____

Before CAROLYN D. THOMAS, ADAM J. PYONIN, and
IFTIKHAR AHMED, *Administrative Patent Judges*.

THOMAS, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant[1] appeals from the
Examiner's decision to reject claims 1, 3–7, and 9–12. Claims 2 and 8 are
canceled. *See* Claim Appendix. We have jurisdiction over the appeal 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. Appellant identifies the real party in interest as Nasdaq
Technology AB. Appeal Br. 3.

The present invention relates generally to processing electronic data transaction messages. *See* Spec. ¶ 2.

Independent claim 7, reproduced below, is representative of the appealed claims:

> 7.   A method for processing electronic data transaction messages, comprising:
>
>> determining by a backend computer server a first limit parameter associated with a user and a second limit parameter associated with the user;
>>
>> receiving by a frontend server from user devices electronic data transaction request messages and from the backend computer server the first limit parameter associated with the user and the second limit parameter associated with the user;
>>
>> storing in a non-transitory storage medium electronic data transaction request message information associated with the user, the first limit parameter associated with the user, and the second limit parameter associated with the user;
>>
>> calculating by the frontend server at a first time a net data transaction request parameter based on a combination of multiple different data transaction requests associated with the user;
>>
>> calculating by the frontend server at the first time a transactional rate parameter associated with the user that is based on the second limit amount parameter divided by the net data transaction request parameter;
>>
>> between the first time and a second later time, the frontend server monitoring data transaction request messages received from one or more client computers associated with the user;
>>
>> adjusting by the frontend server the transactional rate parameter based on data transaction requests associated with the user that are received between the first time and a second later time;
>>
>> calculating by the frontend server a transactional limit parameter using the net data transaction request parameter, the transactional rate parameter, and the first limit parameter;
>>
>> determining by the frontend server that the transactional limit parameter is exceeded; and
>>
>> the frontend server suspending execution of further data transactions of a first type requested by the user between the first time

and the second later time when the transactional limit parameter is exceeded including removing from a portion of the memory one or more data transaction messages of the first type received from the one or more client computers associated with the user while still permitting storage in that portion of the memory and execution of further data transaction requests of a second different type received from the one or more client computers associated with the user between the first time and a later time when the transactional limit parameter is exceeded.

Appellant appeals the following rejection:

Claims 1, 3–7, and 9–12 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to patent-ineligible subject matter. Final Act. 2–4.

We review the appealed rejections for error based upon the issues identified by Appellant, and in light of the arguments and evidence produced thereon. *Ex parte Frye*, 94 USPQ2d 1072, 1075 (BPAI 2010) (precedential).

ANALYSIS

Rejection under § 101

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 the 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."). For example, 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)).

The USPTO published revised guidance on the application of
35 U.S.C. § 101. USPTO's 2019 Revised Patent Subject Matter Eligibility
Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) ("Revised Guidance"), *updated by*
USPTO, *October 2019 Update: Subject Matter Eligibility* (available at
https://www.uspto.gov/sites/default/files/documents/
peg_oct_2019_update.pdf) (jointly referred to as "Revised Guidance"); *see
also* October 2019 Patent Eligibility Guidance Update, 84 Fed. Reg. 55942
(Oct. 18, 2019) (notifying the public of the availability of the October
update).

Under the Revised Guidance "Step 2A," the office first looks 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)). 84 Fed. Reg. at 51–52, 55.

Only if a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, does the Office then (pursuant to the Revised Guidance "Step 2B") 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. 84 Fed. Reg. at 56.

<u>Step 2A, Prong 1 (Does the Claim Recite a Judicial Exception?)</u>

With respect to independent method claim 7, and similarly, system claim 1, the Examiner determines that the claims are directed to "calculating and adjusting parameters based on received data . . . such as receiving and processing transaction request (BuySAFE), mitigating settlement risk (ALICE)[,] and collecting and analyzing transaction information and storing data (FairWarning)" (Final Act. 3), which the Examiner further concludes, and we agree, are fundamental economic principles including mitigating risk, i.e., certain methods of organizing human activity (*see* Ans. 4), which is a type of abstract idea.

We also determine that because claim 7 broadly recites various "calculating" steps, claim 7 also recites mathematical concepts, another type of abstract idea. As drafted, these calculating limitations, under the broadest reasonable interpretation, and according to the Guidance, recites

mathematical concepts because calculating "a net data transaction request parameter . . . a transactional rate parameter . . . [and] a transactional limit parameter" are illustrated in the Specification as mathematical calculations. *See* Spec. ¶¶ 35, 52, 54; Fig. 8. *See also October 2019 Update: Subject Matter Eligibility*, 4 (Oct. 17, 2019) ("A claim that recites a numerical formula or equation will be considered as falling within the 'mathematical concepts' grouping. In addition, there are instances where a formula or equation is written in text format that should also be considered as falling within this grouping. For example, the phrase 'determining a ratio of A to B' is merely a textual replacement for the particular equation (ratio = A/B)."); *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1165, 1167 (Fed. Cir. 2018) (A claim reciting "performing a resampled statistical analysis" was directed to a mathematical concept.).

Accordingly, we conclude claim 7 recites plural abstract ideas.

For example, claim 7 recites at least the following limitations: (1) "determining . . . a first[/second] limit parameter," (2) "receiving . . . request messages . . . [and] the first[/second] limit parameter," (3) "storing . . . request message information . . . [and] first[/second] limit parameter," (4) "calculating . . . a net data transaction request parameter," (5) "calculating . . . a transactional rate parameter," (6) "monitoring data transaction request messages," (7) "adjusting . . . the transactional rate parameter," (8) "calculating . . . a transactional limit parameter," (9) "determining . . . that the transactional limit parameter is exceeded," and (10) "suspending execution of further data transactions." *See* claim 7.

These limitations, under their broadest reasonable interpretation, recite fundamental economic practice akin to hedging and mitigating risk

because the limitations all recite operations that would ordinarily take place in a commercial environment. *Alice*, 573 U.S. at 219–20 (concluding that use of a third party to mediate settlement risk is a "fundamental economic practice" and thus an abstract idea); *id.* (describing the concept of risk hedging identified as an abstract idea in *Bilski* as "a method of organizing human activity"); *Bilski*, 561 U.S. at 611–612 (concluding that hedging is a "fundamental economic practice" and therefore an abstract idea); *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350 (Fed. Cir. 2014) (transaction guaranty).

Appellant challenges the Examiner's determinations on the ground that the Examiner "fails to make a prima facie case that the claims are directed to an abstract idea" and "the conclusory assessment . . . runs afoul of the USPTO memo . . . dated May 4, 2016 . . . [because] [t]he FOA does not compare any claim language" from the cited cases to claims presented here. Appeal Br. 9.

We disagree with Appellant. Here, in rejecting the claims under 35 U.S.C. § 101, the Examiner analyzed the claims using the *Mayo/Alice* two-step framework. Thus, the Examiner notified Appellant of the reasons for the rejection "together with such information and references as may be useful in judging of the propriety of continuing the prosecution of [the] application." 35 U.S.C. § 132. Therefore, contrary to Appellant's assertions, in doing so, the Examiner set forth a prima facie case of unpatentability such that the burden shifted to Appellant to demonstrate that the claims are patent-eligible.

Under the Revised Guidance, the office must first look to whether the claim recites 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 here, the Examiner properly equated the claim language to "certain methods of organizing human activity (fundamental economic principles or practices; mitigating risk)." *See* Ans. 4, 6. Moreover, "[e]ligibility-related guidance issued prior to the Ninth Edition, R–08.2017, of the MPEP (published Jan. 2018) should not be relied upon." 2019 Revised Guidance, 84 Fed. Reg. at 51. As such, we find unavailing Appellant's contention that the Examiner "fails to make a prima facie case that the claims are directed to an abstract idea" given the Examiner's aforementioned determinations.

Therefore, for at least the aforementioned reasons, we agree with the Examiner that claim 7 recites an abstract idea, which we conclude is a fundamental economic practice, i.e., certain methods of organizing human activity.

<u>Step 2A—Prong 2 (integration into Practical Application)</u> [2]

Under the Revised Guidance, we now must determine if additional elements in the claims integrate the judicial exception into a practical application (*see* MPEP § 2106.05(a)–(c), (e)–(h)).

Here, we consider the claim as a whole, i.e., "the limitations containing the judicial exception as well as the additional elements in the claim besides the judicial exception . . . evaluated together to determine whether the claim integrates the judicial exception into a practical

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[2] We acknowledge that some of the considerations at Step 2A, Prong 2, properly may be evaluated under Step 2 of *Alice* (Step 2B of the Office revised guidance). For purposes of maintaining consistent treatment within the Office, we evaluate them under Step 1 of *Alice* (Step 2A of the Office revised guidance). *See* Revised Guidance, 84 Fed. Reg. at 55 n.25, 27–32.

application." October 2019 Patent Eligibility Guidance Update, at 12, available at http://www.uspto.gov/PatentEligibility.

We discern no additional element (or combination of elements) recited in Appellant's representative claim 1 that integrates the judicial exception into a practical application. *See* Revised Guidance, 84 Fed. Reg. at 54–55 ("Prong 2"). For example, Appellant's claimed additional elements (e.g., "backend computer server," "frontend server," "user devices," "non-transitory storage medium," "client computers," "memory," "processing system," and "a processor") do not: (1) improve the functioning of a computer or other technology; (2) are not applied with any particular machine (except for a generic computer); (3) do not effect a transformation of a particular article to a different state; and (4) are not applied in any meaningful way beyond generally linking the use of the judicial exception to a particular technological environment, such that the claim as a whole is more than a drafting effort designed to monopolize the exception. *See* MPEP §§ 2106.05(a)–(c), (e)–(h).

Appellant contends that "Claim 1 does not simply recite a generic server or processor" (Appeal Br. 12) and "[t]he specific configuration . . . is considerably more than a generic processor and a generic memory." *Id.* at 13.

However, Appellant's Specification states:

In other instances, detailed descriptions of well-known methods, devices, techniques, etc. are omitted so as not to obscure the description with unnecessary detail. Individual function blocks are shown in the figures. Those skilled in the art will appreciate that the functions of those blocks may be implemented using individual hardware circuits, using software programs and data in conjunction with a suitably programmed microprocessor or general purpose

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> computer, using applications specific integrated circuitry (ASIC),
> and/or using one or more digital signal processors (DSPs).

Spec. ¶ 28. In other words, Appellant's Specification suggests that the claimed invention can be implemented using well-known methods, devices, and techniques, and explicitly states that functions are performed using a general purpose computer.

Furthermore, Appellant fails to direct our attention to anything in the Specification to indicate that the invention provides an improvement in any computer technical functionality. Instead, the claimed process appears to merely improve economic tasks, i.e., manage risks. That is, here the arguably innovative technique of the appealed claims is inextricably a part of the abstract idea of "calculating and adjusting parameters based on received data." Moreover, nothing in the claims, understood in light of the Specification, requires anything other than an off-the-shelf, conventional computer used for processing information/data. Therefore, the claims are directed not to improvement in computer capabilities, but to the results of applying an abstract idea.

For at least the reason noted *supra*, we determine that claim 7 (1) recites a judicial exception and (2) does not integrate that exception into a practical application. Thus, representative claim 7 is directed to the aforementioned abstract idea.

Alice/Mayo—Step 2 (Inventive Concept)
Step 2B identified in the Revised Guidance

Turning to the second step of the *Alice* inquiry, we now look to whether claim 7 contains any "inventive concept" or adds anything "significantly more" to transform the abstract concept into a patent-eligible application. *Alice*, 573 U.S. at 216. As recognized by the Revised

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Guidance, an "inventive concept" under *Alice* step 2 can be evaluated based on whether an additional element or combination of elements:

(1) adds a specific limitation or combination of limitations that are not well-understood, routine, conventional activity in the field, which is indicative that an inventive concept may be present; or

(2) simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception, which is indicative that an inventive concept may not be present.

See Revised Guidance, 84 Fed. Reg. at 56; *see* MPEP § 2106.05(d).

Appellant contends that "no 102/103 rejections is provided[,] [and] [t]his is also a clear recognition that claim [7] recites computer functions that are not well-understood, routine, or conventional." Appeal Br. 13. However, a finding of novelty or non-obviousness does not require the conclusion that the claimed subject matter is patent-eligible. Although the second step in the *Mayo/Alice* framework is termed a search for an "inventive concept," the analysis is not an evaluation of novelty or nonobviousness, but, rather, is 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*, 573 U.S. at 216. "[G]roundbreaking, innovative, or even brilliant discovery does not by itself satisfy the § 101 inquiry." *Ass'n. for Molecular Pathology v. Myriad Genetics, Inc.,* 569 U.S. 576, 591 (2013). A novel and non-obvious claim directed to a purely abstract idea is, nonetheless, patent-ineligible. *See Mayo,* 566 U.S. at 90. *See also Diamond v. Diehr,* 450 U.S. 175, 188–89 (1981) ("The 'novelty' of any element or steps in a process, or even of the process itself, is of no relevance in determining whether the

subject matter of a claim falls within the § 101 categories of possibly patentable subject matter.").

Appellant also contends that the claimed memory and processing system are "not just [] generic" but instead are configured to perform specific functions "that are **not** generic or well known" (Appeal Br. 14) and "[t]he FOA fails to provide evidence that each feature of claim [7] . . . is well-known and conventional." *Id.* at 15. Appellant further notes that "[t]he problem with the Examiner's citation to *Versata*, *Alice*, and several other [court] cases is that the few words attributed to each case of a computer's 'normal, basic functions' fail to address the complete recitation of computer operations recited in claim [7]." *Id.* (*citing* USPTO, Memorandum on Changes in Examination Procedure Pertaining to Subject Matter Eligibility, Recent Subject Matter Eligibility Decision (*Berkheimer v. HP, Inc.*) (Apr. 19, 2018)).

In essence, Appellant contends that although the Examiner does cite to various court decisions for illustrating normal basic functions of computers, the Examiner has not addressed *all* the operations recited in the claims.

However, "the relevant inquiry is not whether the claimed invention as a whole is unconventional or non-routine." *BSG Tech LLC v. Buyseasons, Inc.*, 899 F.3d 1281, 1290 (Fed. Cir. 2018). Instead, the question under step two of the *Mayo/Alice* framework is whether the claim includes additional elements, i.e., elements other than the abstract idea itself, that "'transform the nature of the claim' into a patent-eligible application." *Alice*, 573 U.S. at 217 (quoting *Mayo*, 566 U.S. at 79, 78).

Alice is clear that under step two of the *Mayo/Alice* framework, the elements of each claim are considered both individually and "as an ordered combination" to determine whether the additional elements, i.e., the elements other than the abstract idea itself, "transform the nature of the claim" into a patent-eligible application. *Alice*, 573 U.S. at 217; *see also Mayo*, 566 U.S. at 72–73 (requiring that "a process that focuses upon the use of a natural law also contain other elements or a combination of elements, sometimes referred to as an 'inventive concept,' sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the natural law itself").

In other words, the inventive concept under step two of the *Mayo/Alice* framework cannot be the abstract idea itself: "It is clear from *Mayo* that the 'inventive concept' cannot be the abstract idea itself, and *Berkheimer* . . . leave[s] untouched the numerous cases from this court which have held claims ineligible because the only alleged 'inventive concept' is the abstract idea." *Berkheimer v. HP Inc.*, 890 F.3d 1369, 1374 (Fed. Cir. 2018) (Moore J., concurring) (discussing *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1370 (Fed. Cir. 2018)); *see also BSG Tech*, 899 F.3d at 1290 ("It has been clear since *Alice* that a claimed invention's use of the ineligible concept to which it is directed cannot supply the inventive concept that renders the invention 'significantly more' than that ineligible concept.") (citation omitted).

Here, as discussed above, the elements other than the abstract idea, i.e., "backend computer server," "frontend server," "user devices," "non-transitory storage medium," "client computers," "memory," "processing system," and "a processor," which are recited at a high level of generality,

are used in their ordinary and conventional capacities to receive,
communicate, and analyze data, and perform an action based on the
analyses. *See* Spec. ¶ 28. *See also Elec. Power Grp., LLC v. Alstom S.A.*,
830 F.3d 1350, 1355 (Fed. Cir. 2016) (gathering, sending, monitoring,
analyzing, selecting, and presenting information does not transform the
abstract process into a patent-eligible invention); *FairWarning*, 839 F.3d at
1095 (generating a rule related to accessing information, applying the rule,
and storing and announcing the result did not transform the abstract idea into
a patent-eligible invention); *Alice*, 573 U.S. at 226 ("Nearly every computer
will include a 'communications controller' and 'data storage unit' capable of
performing the basic calculation, storage, and transmission functions
required by the method claims."). Still further, the MPEP instructs
Examiners that courts recognize that using a computer for performing
repetitive calculations may be well-understood, routine, and conventional
when claimed generically. MPEP § 2106.05(d)(II)(ii) (citing *Parker v.
Flook*, 437 U.S. 584, 594 (1978); *Bancorp*, 687 F.3d at 1278).

As such, we find no element or combination of elements recited in
Appellant's claim 7 that contains any "inventive concept" or adds anything
"significantly more" to transform the abstract concept into a patent-eligible
application.

Because Appellant's independent claim 7 is directed to a patent-
ineligible abstract concept, does not include additional elements that
integrate the judicial exception into a practical application, and does not add
a specific limitation beyond the judicial exception that is not "well-
understood, routine, and conventional," we sustain the Examiner's rejection

of the claims under 35 U.S.C. § 101 as being directed to non-statutory subject matter in light of *Alice*, its' progeny, and the Revised Guidance.

CONCLUSION

The Examiner's rejection of claims 1, 3–7, and 9–12 under 35 U.S.C. § 101 is affirmed.

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1, 3–7, 9–12	101	Eligibility	1, 3–7, 9–12	

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

AFFIRMED