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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/817,121	09/05/2008	Peter Middelkamp	340642US28 PCT	7656

22850 7590 02/26/2020

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PUTTAIAH, ASHA

ART UNIT	PAPER NUMBER
3695	

NOTIFICATION DATE	DELIVERY MODE
02/26/2020	ELECTRONIC

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte PETER MIDDELKAMP and LUTZ WILHELMY

Appeal 2018-008647
Application 11/817,121
Technology Center 3600

Before MURRIEL E. CRAWFORD, JOSEPH A. FISCHETTI, and BIBHU R. MOHANTY, *Administrative Patent Judges*.

MOHANTY, *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 1–17 and 19–22. We have jurisdiction under 35 U.S.C. § 6(b).

SUMMARY OF THE DECISION

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 Swiss Reinsurance Company Ltd. (Appeal Br. 2).

CLAIMED SUBJECT MATTER

The Appellant's claimed invention relates to a risk monitoring system for automated credit monitoring of a portfolio (Spec., para. 2). Claim 1, reproduced below with the italics added, is representative of the subject matter on appeal.

> 1. A method for a monitoring apparatus comprising:
>
> *receiving*, at regular intervals or in real-time by a receiving device of the monitoring apparatus, entity-specific data from respective entities of a plurality of entities via a communication network, the *entity-specific data including information indicating a size of a respective entity, a time period since foundation of the respective entity, branch activities, a number of employees, or internal data of the respective entity including balance sheet data, cash flow data, or credit liabilities*;
>
> *extracting one or more asset parameters on an entity-specific basis* from the received entity-specific data;
>
> *evaluating the one or more asset parameters stochastically* such that at least one entity-specific asset distribution is determined and stored;
>
> *storing*, in a storage device of the monitoring apparatus, *a determined threshold value* based on the at least one entity-specific asset distribution, the stored threshold value being stored with an association, indicating a comparison between the threshold value and an expected value of the one or more asset parameters in association with an occurrence of insolvency of the individual entity, where default by an entity occurs when an asset parameter of the entity falls below the threshold value;
>
> *determining expected recovery rate factors by generating, by a computer processor of the monitoring apparatus, MonteCarlo asset parameters for individual entities in the plurality of entities*, where an expected recovery rate factor is an expected percentage share of a loan which will be recovered from the entity in an event of default on the loan by the entity;
>
> *standardizing*, by the computer processor, *the determined entity-specific recovery rate factors* in a manner which is

> associated with the at least one entity-specific asset distribution or the stored threshold value; and
>
> *displaying the individual entities with the expected recovery rate factors* by an output element of the monitoring apparatus *and dynamically adjusting a portfolio in real time based on the expected recovery rate factors*, corresponding transactions being performed dynamically in real-time using the output element comprising physical interfaces without human supervision or interaction.

THE REJECTION

The following rejection is before us for review:

Claims 1–17 and 19–22 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 Appellant argues that the rejection of claim 1 is improper because the claim is not directed to an abstract idea (Appeal Br. 11–13). The Appellant further argues that the claim is "significantly more" than the alleged abstract idea (Appeal Br. 13–16; Reply Br. 3–6).

In contrast, the Examiner has determined that the rejection of record is proper (Final Act. 2–5; Ans. 3–7).

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[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, 192 (1981)); "tanning, dyeing, making waterproof 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.* (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.").

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, i.e., evaluate whether the claim "appl[ies], rel[ies] on, or use[s] the judicial exception in a manner that imposes a meaningful limit on the judicial exception, such that the claim is more than a drafting effort designed to

> monopolize the judicial exception." (*See* Guidance, 84 Fed. Reg. at 54; *see also* 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.

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.* (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 Specification at paragraph 2 states that the invention relates to a risk monitoring system for automated credit monitoring of a portfolio. Here, the Examiner has determined that claim 1 recites the monitoring of credit risk and financial instrument portfolio allocation adjustment using a mathematical formula and sets forth an abstract idea (Final Act. 12, Ans. 4, 5). We agree with the Examiner. We determine that the claim sets forth the subject matter in italics above which describes the concept risk monitoring

for automated credit monitoring of a portfolio and dynamic adjustment of the portfolio which is a certain method of organizing human activity and fundamental economic practice, i.e. a judicial exception.

A system, like the claimed system, "a process that employs mathematical algorithms to manipulate existing information to generate additional information is not patent eligible." *See Digitech Image Techs., LLC v. Elecs. for Imaging, Inc.*, 758 F.3d 1344, 1351 (Fed. Cir. 2014). In *Intellectual Ventures I LLC v. Capital One Financial Corp.*, 850 F.3d 1332, 1340 (Fed. Cir. 2017) it was held that collecting, displaying, and manipulating data was directed to an abstract idea. In *OIP Technologies, Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, (Fed. Cir. 2015) at 1363 it was held that offer-based price optimization was directed to an abstract idea. *See Electric Power Group, LLC v. Alstom S.A.*, 830 F.3d 1350 (Fed. Cir. 2016) where collecting information, analyzing it, and displaying results from certain results of the collection and analysis was held to be an abstract idea.

We next determine whether the claim recites additional elements in the claim to integrate the judicial exception into a practical application. *See* Guidance, 84 Fed. Reg. at 54–55. The Revised Guidance references the MANUAL OF PATENT EXAMINING PROCEDURE ("MPEP") § 2106.05(a)–(c) and (e)–(h).

Here, the claims do not improve computer functionality, improve another field of technology, utilize a particular machine, or effect a particular 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 1 the steps of [1] "receiving . . . entity-specific data including information indicating a size of a respective entity, a time period since foundation of the respective entity, branch activities, a number of employees, or internal data of the respective entity including balance sheet data, cash flow data, or credit liabilities"; [2] "extracting one or more asset parameters on an entity-specific basis"; [3] "evaluating the one or more asset parameters stochastically"; [4] "storing, . . . a determined threshold value"; [5] "determining expected recovery rate factors by generating, by a computer processor of the monitoring apparatus, MonteCarlo asset parameters for individual entities in the plurality of entities"; [6] "standardizing . . . the determined entity-specific recovery rate factors"; [7] "displaying the individual entities with the expected recovery rate factors"; and [8] "dynamically adjusting a portfolio in real time based on the expected recovery rate factors" are merely 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. Further, the claim as a whole fails to effect any particular transformation of an article to a different state. 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. Thus, the claimed elements have not been shown to integrate the judicial exception into a practical application as set forth in the Revised Guidance which references the MANUAL OF PATENT EXAMINING PROCEDURE ("MPEP") § 2106.05(a)–(c) and (e)–(h).

Turning to the second step of the *Alice* and *Mayo* framework, we determine that the claim does not contain an inventive concept sufficient to "transform" the abstract nature of the claim into a patent-eligible application. Considering the claim both individually and as an ordered combination fails to add subject matter 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 and they are recited at a high level of generality. The Specification at paragraph 57 for example describes using conventional computer components such as networks and the Internet in a conventional manner. Here, the claimed steps technically are well understood, routine, or conventional in the field. Here, the claim has not been shown to be "significantly more" than the abstract idea.

For these above reasons the rejection of claim 1 is sustained. The Appellant has not provided separate arguments for the remaining claims

which are drawn to similar subject matter and the rejection of these claims is affirmed for the same reasons given above.

CONCLUSIONS OF LAW

We conclude that Appellant has not shown that the Examiner erred in rejecting claims 1–17 and 19–22 under 35 U.S.C. § 101.

DECISION SUMMARY

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–17, 19–22	101	Eligibility	1–17, 19–22	

TIME PERIOD FOR RESPONSE

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).

AFFIRMED