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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* MARK BARTLETT, KIRK ROY, and  
ASHLEE MOUTON BORCAN

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Appeal 2017-011327  
Application 14/295,908  
Technology Center 3600

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Before JEREMY J. CURCURI, BARBARA A. BENOIT, and  
IRVIN E. BRANCH, *Administrative Patent Judges*.

CURCURI, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants<sup>1</sup> appeal under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1–19 and 21. Final Act. 1. We have jurisdiction under 35 U.S.C. § 6(b).

Claims 1–19 and 21 are rejected under 35 U.S.C. § 101 as directed to a judicial exception without significantly more. Final Act. 4–8.

We affirm.

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<sup>1</sup> The real party in interest is Blue Cross Blue Shield of Michigan. App. Br. 3.

## STATEMENT OF THE CASE

Appellants' invention relates to "[a] decision support tool (decision support tool) [] configured to provide insurance portfolio recommendations that may be optimized based on an individual's unique situation." Spec. ¶

14. Claim 1 is illustrative and reproduced below:

1. A system including:
  - a subscriber device having a user interface;
  - a computing device having at least one processor and a memory; and
  - at least one data source configured to store at least one of subscriber profiles and historical incidence data;wherein the system is configured to:
  - generate on the subscriber device at least one prompt for subscriber input;
  - receive, through the user interface of the subscriber device, the subscriber input;
  - transmit, from the subscriber device to the computing device over a communications network, input data corresponding to the subscriber input;
  - store, in the at least one data source, the input data as at least a portion of a subscriber profile with which the subscriber device is associated;
  - utilize historical incidence data from the at least one data source;
  - generate a baseline recommendation of products using both the input data and the historical incidence data;
  - determine at least one severity load based on at least a subset of the input data by simulating losses for each of the products of the baseline recommendation based on a cumulative probability of an event occurring that would trigger a loss for each product;

impose the at least one severity load on the baseline recommendation;

undertake premium fitting including at least a subset of the input data and the baseline recommendation;

present, on the subscriber device, a recommended portfolio subsequent to premium fitting;

test the viability of the recommended portfolio; and

selectively confirm the recommended portfolio as being a finalized portfolio.

### PRINCIPLES OF LAW

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

### ANALYSIS

The Examiner determines

The claimed invention is directed to non-statutory subject matter because the claim(s) as a whole, considering all claim elements both individually and in combination, do not amount to significantly more than an abstract idea. The claim(s) is/are directed to a method of organizing human activities, fundamental economic practice, and a mathematical relationship or formula. The additional element(s) or combination of elements in the claim(s) other than the abstract idea per se amount(s) to no more than: mere instructions to implement the idea on a computer and recitation of generic computer structure that serves to perform generic computer functions that are well-understood, routine, and conventional activities previously known to the pertinent industry. Viewed as a whole, these additional claim element(s) do not provide meaningful limitation(s) to transform the abstract idea into a patent eligible application of the abstract idea such

that the claim(s) amounts to significantly more than the abstract idea itself. Therefore, the claim(s) are rejected under 35 U.S.C. 101 as being directed to non-statutory subject matter.

Final Act. 4–5; *see also* Final Act. 5–7, Ans. 3–5.

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. *E.g.*, *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014) (quotation marks and citation omitted).

In determining whether a claim falls within an excluded category, we are guided by the 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 USPTO 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) (“Memorandum”). Under that 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) (9th ed. 2018)).

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* Memorandum, 84 Fed. Reg. at 56.

*Step One: Do the Claims Fall Within the Statutory Categories?*

Claim 1 is a system claim, which falls within the “manufacture” category of 35 U.S.C. § 101. Claim 13 is a device claim, which also falls within the “manufacture” category of 35 U.S.C. § 101. Claim 21 is a product claim. For purposes of our analysis, we assume claim 21 also falls within the “manufacture” category of 35 U.S.C. § 101.

Although these claims fall within the statutory categories, we still must determine whether the claim is directed to a judicial exception, namely an abstract idea. *See Alice*, 573 U.S. at 217–18. Thus, we must determine whether the claim recites a judicial exception, and fails to integrate the exception into a practical application. *See Memorandum*, 84 Fed. Reg. at 54–55. If both elements are satisfied, the claim is directed to a judicial exception under the first step of the *Alice/Mayo* test. *See id.*

*Step 2A, Prong One: Do the Claims Recite a Patent-Ineligible Concept?*

Independent claim 1 is a method claim, and recites the following limitations:

[i] generate on the subscriber device at least one prompt for subscriber input;

[ii] receive, through the user interface of the subscriber device, the subscriber input;

[iii] transmit, from the subscriber device to the computing device over a communications network, input data corresponding to the subscriber input;

[iv] store, in the at least one data source, the input data as at least a portion of a subscriber profile with which the subscriber device is associated;

Appellants' Specification discloses

[A] subscriber using a subscriber device 108 may be asked a set of questions. The compiled answers of that set of questions comprise the customer profile 130, which is created within the network service 103 and may be done by the application 118 [a]s shown at block 504 and then recorded within database 106 as shown at block 506.

Spec. ¶ 54.

Thus, steps [i], [ii], [iii], [iv] cover a set of questions (“at least one prompt”) and answers (“the subscriber input”), and remembering (“transmit... input

data,” “store... the input data”) the answers. *See* Spec. ¶ 54. Questions, answers, and remembering the answers is the same as a conversation between two people, with the first person asking questions, the second person providing answers, and the first person remembering the answers. Accordingly, steps [i], [ii], [iii], [iv] together describe a conversation between two people. A conversation between two people includes a combination of “observation, evaluation, judgment, opinion,” which are examples of “concepts performed in the human mind.” Memorandum, 84 Fed. Reg. at 52. Thus, the recited steps [i], [ii], [iii], [iv] recite the abstract concepts of “[m]ental processes.” *Id.*

Independent claim 1 further recites “[v] utilize historical incidence data from the at least one data source.” As recited, this step recites an intellectual concept covering the idea of utilizing. *See* Spec. ¶ 32 (“the tool 102 may rely on initial system dataset comprising existing actuarial and historical incidence data 134”). Utilizing is thus one or more of “observation, evaluation, judgment, opinion,” which are examples of “concepts performed in the human mind.” Memorandum, 84 Fed. Reg. at 52. This recitation is thus the abstract concept of “[m]ental processes.” *Id.*

Independent claim 1 further recites “[vi] generate a baseline recommendation of products using both the input data and the historical incidence data”; “[vii] determine at least one severity load based on at least a subset of the input data by simulating losses for each of the products of the baseline recommendation based on a cumulative probability of an event occurring that would trigger a loss for each product”; [viii] impose the at least one severity load on the baseline recommendation”; and “[ix] undertake premium fitting including at least a subset of the input data and

the baseline recommendation.” As described in the Specification, these steps cover various mathematical determinations. *See* Spec. ¶¶ 59 (“In block 508 using answers to questions . . . a subscriber is *assigned to a baseline category* and a starting baseline recommendation 509 of products is identified.”) (emphasis added), 66 (“The health related questions (i.e., use inputs) are *translated into loads that are then applied* to the underlying data set (e.g., adjustable parameters) to reflect the health responses of the subscriber.”) (emphasis added), 83 (“In one exemplary approach related to premium fitting only *the benefit amount is altered to converge premiums* with other product options other than benefit amount not being altered.”) (emphasis added). These steps are thus a combination of “mathematical relationships, mathematical formulas or equations, mathematical calculations.” Memorandum, 84 Fed. Reg. at 52. These recitations are thus the abstract concept of “[m]athematical concepts.” *Id.* These steps also cover “insurance, mitigating risk,” and are thus “fundamental economic principles or practices.” Memorandum, 84 Fed. Reg. at 52. These recitations also are thus the abstract concept of “[c]ertain methods of organizing human activity.” *Id.*

Independent claim 1 further recites “[x] present . . . a recommended portfolio subsequent to premium fitting.” This step covers presenting a recommendation, and is thus one or more of an “observation, evaluation, judgment, opinion,” each of which is an example of “concepts performed in the human mind.” Memorandum, 84 Fed. Reg. at 52. This recitation is thus the abstract concept of “[m]ental processes.” *Id.*

Independent claim 1 further recites “[xi] test the viability of the recommended portfolio.” As recited, this step recites an intellectual concept

covering the idea of testing viability by making a comparison. *See* Spec. ¶ 89 (“the tool 102 may compare the risk reduction provided by the portfolio 122 to the risk of having no insurance at all”). Testing the viability is thus one or more of “observation, evaluation, judgment, opinion,” which are examples of “concepts performed in the human mind.” Memorandum, 84 Fed. Reg. at 52. This recitation is thus the abstract concept of “[m]ental processes.” *Id.*

Independent claim 1 further recites “[xii] selectively confirm the recommended portfolio as being a finalized portfolio.” As recited, this step recites an intellectual concept covering the idea of decision making. *See* Spec. ¶ 109 (“a subscriber using the subscriber device 108 may accept or otherwise confirm the recommended portfolio 122 at decision point 521 resulting in a finalized portfolio at block 522 or not”). Selectively confirming is thus one or more of “observation, evaluation, judgment, opinion,” which are examples of “concepts performed in the human mind.” Memorandum, 84 Fed. Reg. at 52. This recitation is thus the abstract concept of “[m]ental processes.” *Id.*

Independent claim 13 recites limitations similar to those discussed with respect to claim 1. Thus, claim 13 also recites an abstract idea.

Independent claim 21 is a product claim and recites the following limitations:

[i] a set of baseline products determined based on at least one of subscriber demographic information and health information;

[ii] at least one severity load based on a cumulative probability of an event occurring that would trigger a loss for each of the baseline products, the at least one severity load being applied to each of the baseline products; and

[iii] a finalized portfolio of products, wherein the finalized portfolio of products includes at least a subset of the baseline products that meet at least one subscriber parameter after application of the at least one severity load.

As described in the Specification, determining a set of baseline products and applying at least one severity load cover various mathematical determinations. *See* Spec. ¶¶ 59 (“In block 508 using answers to questions . . . a subscriber is *assigned to a baseline category* and a starting baseline recommendation 509 of products is identified.”) (emphasis added), 66 (“The health related questions (i.e., use inputs) are *translated into loads that are then applied* to the underlying data set (e.g., adjustable parameters) to reflect the health responses of the subscriber.”) (emphasis added).

These steps are thus a combination of “mathematical relationships, mathematical formulas or equations, mathematical calculations.”

Memorandum, 84 Fed. Reg. at 52. These recitations are thus the abstract concept of “[m]athematical concepts.” *Id.* These steps also cover “insurance, mitigating risk,” and are thus “fundamental economic principles or practices.” Memorandum, 84 Fed. Reg. at 52. These recitations also are thus the abstract concept of “[c]ertain methods of organizing human activity.” *Id.*

As described in the Specification, finalizing a portfolio of products covers the idea of decision making. *See* Spec. ¶ 109 (“a subscriber using the subscriber device 108 may accept or otherwise confirm the recommended portfolio 122 at decision point 521 resulting in a finalized portfolio at block 522 or not”). A *finalized* portfolio is thus one or more of “observation, evaluation, judgment, opinion,” which are examples of “concepts performed in the human mind.” Memorandum, 84 Fed. Reg. at 52. This recitation is thus the abstract concept of “[m]ental processes.” *Id.*

*Step 2A, Prong Two: Do the Claims Recite Additional Elements that Integrate the Patent-Ineligible Concept into a Practical Application?*

Because claims 1, 13, and 21 recite a judicial exception, we next determine if the claims recite additional elements that integrate the judicial exception into a practical application.

In addition to the limitations of claim 1 discussed above that recite abstract concepts, claim 1 further recites “a subscriber device having a user interface”; “a computing device having at least one processor and a memory”; “at least one data source configured to store at least one of subscriber profiles and historical incidence data”; and “a communications network.” The Specification does not provide additional details about the subscriber device, computing device, data source, and communications network that would distinguish their implementation from a generic implementation. *See Spec.* ¶¶ 19–27.

We do not find the recited computer-related limitations are sufficient to integrate the judicial exception into a practical application. Specifically, the subscriber device, computing device, data source, and communications network are not improved in their functioning, but, instead, merely perform the abstract idea. In this case, we do not see any particular machine or manufacture that is integral to the claim; nor do we see any transformation. We do not see any recited elements applying or using the judicial exception in any meaningful way beyond generally linking the judicial exception to the recited elements.

Accordingly, we determine that claim 1 is directed to a judicial exception because it does not recite additional elements that integrate the recited judicial exception into a practical application. Claims 13 recites

similar limitations to those discussed with respect to claim 1, and therefore also is directed to a judicial exception. Claim 21 does not recite additional limitations than those discussed above that recite abstract concepts. To the extent claim 21 requires computer-related limitations, any such limitations are not sufficient to integrate the judicial exception into a practical application for the reasons discussed above.

*Step 2B: Do the Claims Provide an Inventive Concept?*

Because claims 1, 13, and 21 are directed to a judicial exception, we next determine, according to *Alice*, whether these claims recite an element, or combination of elements, that is enough to ensure that the claim is directed to significantly more than a judicial exception.

The various hardware components recited by claims 1 and 13 include “a subscriber device having a user interface”; “a computing device having at least one processor and a memory”; “at least one data source configured to store at least one of subscriber profiles and historical incidence data”; and “a communications network.” Product claim 21 does not recite hardware components that require any further analysis under Step 2B.

The Specification does not provide additional details about the subscriber device, computing device, data source, and communications network that would distinguish their implementation from a generic implementation. *See Spec.* ¶¶ 19–27.

The conventional or generalized functional terms by which the computer components are described reasonably indicate that Appellants’ Specification discloses conventional components. *See Spec.* ¶¶ 19–27.

In view of Appellants’ Specification, the claimed hardware components, including “a subscriber device having a user interface”; “a

computing device having at least one processor and a memory”; “at least one data source configured to store at least one of subscriber profiles and historical incidence data”; and “a communications network” reasonably may be determined to be generic, purely conventional computer elements. Thus, the claims do no more than require generic computer elements to perform generic computer functions, rather than improve computer capabilities.

Accordingly, we determine that claims 1, 13, and 21 are not directed to significantly more than a patent ineligible concept.

#### *Appellants’ Arguments*

Appellants argue claim 21 is not directed to a judicial exception because “Claim 21 has no elements that allegedly fall within any of the categories recognized as abstract ideas, i.e., fundamental economic practices, certain methods of organizing human activity, an idea ‘of itself’, or mathematical relationships/formulas.” App. Br. 13; *see also* Reply Br. 5.

This argument does not show any error because, as we explain above, the elements of claim 21 recite the abstract concepts of “[m]athematical concepts,” “[c]ertain methods of organizing human activity,” and “[m]ental processes.” Memorandum, 84 Fed. Reg. at 52.

Appellants further argue claim 1 is not directed to a judicial exception because the Office “fail[s] to provide an explanation as to how the subject matter of the claims relate[s] to the different categories of certain organizing human activity listed in the Final Office Action, as required by the USPTO guidelines.” App. Br. 15; *see also* Reply Br. 2–3. Appellants make similar arguments with respect to mathematical relationships/formulas, fundamental economic process. *See* App. Br. 15–17; *see also* Reply Br. 3–5.

These further arguments do not show any error because, as we explain above, the elements of claim 1 recite the abstract concepts of “[m]athematical concepts,” “[c]ertain methods of organizing human activity,” and “[m]ental processes.” Memorandum, 84 Fed. Reg. at 52.

Appellants further argue claim 13 is not directed to a judicial exception, presenting arguments similar to those presented for claim 1. *See* App. Br. 17–18; *see also* Reply Br. 2–5.

These further arguments do not show any error for the same reasons that the arguments for claim 1 do not show any error.

In addition to the arguments relating to whether the claims are directed to a judicial exception, Appellants further present arguments relating to whether the claims recite “significantly more” than any judicial exception. *See* App. Br. 18–22; *see also* Reply Br. 5–6.

For example, Appellants argue “using rules as was similarly done in *McRo*, claim 1 provides a patentable, technological improvement over the existing techniques for determining and recommending a portfolio, which was a task previously performed by humans.” App. Br. 21. Appellants make a similar argument for claim 13. *See* App. Br. 21.

We disagree. Although we do not dispute that the various hardware components include specific logic for performing the recited steps, Appellants do not persuasively explain why the claimed steps improve *technology* as a whole. *See* MPEP § 2106.05(a). Rather, the claims merely adapt the method of recommending a portfolio to an execution of steps performed by generic computing devices linked together in a network. *See Credit Acceptance Corp. v. Westlake Services*, 859 F.3d 1044, 1055 (Fed. Cir. 2017) (“Our prior cases have made clear that mere automation of

manual processes using generic computers does not constitute a patentable improvement in computer technology.”); *see also Bancorp Services, L.L.C. v. Sun Life Assurance Co. of Canada (U.S.)*, 687 F.3d 1266, 1278 (Fed. Cir. 2012) (A computer “employed only for its most basic function . . . does not impose meaningful limits on the scope of those claims.”). Further, Appellants’ identified improvements are improvements to the abstract idea, not improvements to a technology or computer functionality. Thus, on the record before us, the cited claim limitations do not improve the functionality of the various hardware components, nor do they achieve an improved technological result in conventional industry practice. *McRO, Inc. v. Bandai Namco Games Am., Inc.*, 837 F.3d 1299, 1316 (Fed. Cir. 2016).

Regarding claim 21, Appellants argue “[t]he Final Office Action did not address claim 21 separately, and instead improperly grouped it with the analysis of claims 1 and 13 despite the clear differences in claim elements.” App. Br. 22.

This argument does not show any error because, as we explain above, the elements of claim 21 do not recite hardware components that require any further analysis under Step 2B.

#### ORDER

The Examiner’s decision rejecting claims 1–19 and 21 is affirmed.

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).

AFFIRMED