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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JOSEPH CAMPBELL

Appeal 2019-000317
Application 14/286,401
Technology Center 3600

Before ERIC B. CHEN, IRVIN E. BRANCH, and
JOSEPH P. LENTIVECH, *Administrative Patent Judges*.

BRANCH, *Administrative Patent Judge*.

DECISION ON APPEAL¹

Pursuant to 35 U.S.C. § 134(a), Appellant² appeals from the Examiner’s decision to reject claims 1–3, 6–11, 14–19, and 22–30. We have jurisdiction over the pending claims under 35 U.S.C. § 6(b).

We affirm.

¹ We reference, herein, the Final Action mailed November 7, 2017 (“Final”), Appeal Brief filed April 9, 2018 (“Br.”), Examiner’s Answer mailed August 16, 2018 (“Ans.”), Reply Brief filed October 11, 2018 (“Reply”), and Specification filed May 23, 2014 (“Spec.”).

² According to Appellant, the real party in interest is “United Services Automobile Association.” Br. 1.

STATEMENT OF THE CASE

THE INVENTION

Appellant's invention relates to "identify[ing] policyholders within the population of insured that are [at] high-risk of water loss." Spec. 1, 1. 24–2, 1. 1.

Claim 1 is reproduced, below, with emphasis on "additional elements" (explained *infra*).

1. *A computer system comprising:*

a memory configured to store instructions; and

a processor disposed in communication with the memory, wherein the processor upon execution of the instructions is configured to:

receive, *electronically*, insured homeowner data including data for homeowners who have had a water loss and homeowners who have not had a water loss;

identify a first group of insured homeowners, the first group including all insured homeowners having prior water loss experience in the insured homeowner data;

identify a second group of insured homeowners, the second group including all insured homeowners not having prior water loss experience in the insured homeowner data;

construct a logical regression model based on the first group of insured homeowners and a random sampling of homeowners from the second group of insured homeowners;

determine, based on the logical regression model, log-odds of a likelihood that a policyholder will experience water loss within a defined temporal period;

determine an attribute indicative of the likelihood that the policyholder will experience water loss within the defined temporal period;

identify an insured having increased likelihood of water loss using the attribute;

target the insured having increased likelihood of water loss using the attribute with a water loss mitigation strategy; and

provide, *electronically*, the water loss mitigation strategy to the insured.

Br. 18–19 (claims appendix).

REJECTIONS³

Claims 1–3, 6–11, 14–19, and 22–30 stand rejected under 35 U.S.C. § 101 as directed to patent-ineligible subject matter. Final 3–5.

Claims 1–3, 6–11, 14–19, 22–24, 26, 28, and 30 stand rejected under 35 U.S.C. § 103 as obvious over Andrist (US 2010/0063851 A1; pub. Mar. 11, 2010) and Kontos (US 2009/0324049 A1; pub. Dec. 31, 2009). Final 6–9.

Claims 25, 27, and 29 stand rejected under 35 U.S.C. § 103 as obvious over Andrist, Kontos, and Tremiti (US 2004/0260579 A1; pub. Dec. 23, 2004). Final 9.

³ The Final Action presents a rejection under 35 U.S.C. § 112(b). Final 2–3. The Answer does not mention this rejection. An Advisory Action, mailed January 29, 2018, identifies “after-final claim amendments [that] address the . . . [§] 112 rejection [and] have been entered[] so as to place the claims in better position for appeal.” In view of the Answer and Advisory Action, we consider the § 112 rejection to be withdrawn.

35 U.S.C. § 101

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 Supreme Court has long interpreted 35 U.S.C. § 101 to include implicit exceptions: “[I]aws of nature, natural phenomena, and abstract ideas” are not patentable. *E.g.*, *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014) (internal quotation marks and citation omitted).

In determining whether a claim falls within an excluded category, we are guided by the Supreme Court’s two-step framework, described in *Mayo* and *Alice*. *Id.* at 217–18 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 75–77 (2012)). In accordance with that framework, we first determine what concept the claim is “directed to.” *See Alice*, 573 U.S. at 219 (“On their face, the claims before us are drawn to the concept of intermediated settlement, *i.e.*, the use of a third party to mitigate settlement risk.”); *see also Bilski v. Kappos*, 130 S. Ct. 3218 (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*, 130 S. Ct. 3218 (2010)); 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, 191 (1981)); “tanning, dyeing, making water-proof cloth,

vulcanizing India rubber, smelting ores” (*id.* at 184 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 176; *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 (internal 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.*

PTO GUIDANCE

The United States Patent and Trademark Office (USPTO) 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 interactions such as a fundamental economic practice, or mental processes); and
- (2) additional elements that integrate the judicial exception into a practical application (*see* Manual of Patent Examining Procedure (MPEP) § 2106.05(a)–(c), (e)–(h) (9th Ed., Rev. 08.2017, Jan. 2018)).

See Guidance, 84 Fed. Reg. at 52, 54–55. Only if a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, we conclude the claim is directed to a judicial exception (*id.* at 54) and then look to whether the claim:

- (3) adds a specific limitation or combination of limitations beyond the judicial exception that are not “well-understood, routine, conventional” activity 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, 84 Fed. Reg. at 56.

ANALYSIS

Claim 1 is representative of claims 2, 3, 6–11, 14–19, and 22–30. Br. 5; *see also* 37 C.F.R. § 41.37(c)(1)(iv) (representative claims). There is no dispute that claim 1 falls within a category of patentable subject matter. *See* 35 U.S.C. § 101 (“process, machine, manufacture, or composition of matter”); *see also* Guidance, 84 Fed. Reg. at 53–54 (“Step 1”). We accordingly turn to the issues raised by the Guidance and Appellant’s arguments.

STEP 2A, PRONG ONE:⁴ DOES THE CLAIM RECITE ANY JUDICIAL EXCEPTIONS?

Turning to the above first step of the Guidance (*see supra* 6, bullet “(1)”), we determine claim 1 recites judicial exceptions. Specifically, we

⁴ The Guidance separates the enumerated issues (1) to (4) (*see supra* 6–7) into Steps 2A(1), 2A(2), and 2B, as follows:

[T]he revised procedure . . . focuses on two aspects [of whether a claim is “directed to” a judicial exception under the first step of the *Alice/Mayo* test (USPTO Step 2A)]: (1) [w]hether the claim recites a judicial exception; and (2) whether a recited judicial exception is integrated into a practical application. [W]hen a claim recites a judicial exception and fails to integrate the exception into a practical application, . . . further analysis pursuant to the second step of the *Alice/Mayo* test (USPTO Step 2B) . . . is needed . . . in accordance with existing USPTO guidance as modified in April 2018. [footnote omitted]

84 Fed. Reg. at 51.

agree with the Examiner that:

[Claim 1] recite[s] a fundamental economic practice . . . of determining an attribute indicative of increased likelihood of future insurance loss based on sampling and modeling of prior loss experience, identifying an insured having increased likelihood of loss using the attribute, and providing a mitigation strategy to said insured . . . , which all reflect a fundamental and long standing commercial practice. That is to say, insurance companies have long sampled and modeled historical data in order to determine attributes indicative of future loss.

Final 4; *see also id.* at 5 (“[W]ater loss has been a type of insurance loss for as long as insurance has existed”). We also agree the claimed “insurance loss data is organized and transformed through a logical regression model (i.e., a mathematical correlation).” Ans. 4. We further agree that, for “minimal data sets[], the [claimed] invention may be performed manually and via mental steps.” *Id.* at 11.⁵

We add that each of the un-emphasized features of reproduced claim 1 (*supra* 2–3 (claimed operations following “execution of the instructions is

⁵ The Examiner also determines that the following activities are judicial exceptions: “collecting and comparing known information[;] collection, manipulation, and display of data[;] using categories to organize, store and transmit information[;]organizing and transforming information through mathematical correlations[;] data recognition and storage.” Final 4 (citations omitted). The Guidance does not recognize these activities as judicial exceptions. *See* Guidance, 84 Fed. Reg. at 52. Therefore, pursuant to USPTO policy, we do not uphold the above findings. *See* Guidance 84 Fed. Reg. at 51 (“All USPTO personnel are, as a matter of internal agency management, expected to follow the guidance.”). Nor do we, however, hold these findings erred as a matter of law. *See id.* (“Rejections will continue to be based upon the substantive law[.]”). Instead, and because the Guidance was issued after submission of the appeal papers, we apply the Guidance to facilitate prosecution.

configured to”)) falls within the Guidance’s following categories of judicial exceptions: “(a) Mathematical concepts—mathematical relationships, mathematical formulas or equations, mathematical calculations; (b) Certain methods of organizing human activity—fundamental economic principles or practices (including . . . insurance, mitigating risk); . . . (c) Mental processes—concepts performed in the human mind (including an observation, evaluation, judgment, opinion).” Guidance, 84 Fed. Reg. at 52 (footnotes omitted). Moreover, except for twice reciting the word “electronically,” the claimed operations entirely fall within the above judicial exceptions.

For the foregoing reasons, we determine claim 1 recites judicial exceptions.

STEP 2A, PRONG TWO: ARE THE RECITED JUDICIAL EXCEPTIONS INTEGRATED INTO A PRACTICAL APPLICATION?

Turning to the above second step of the Guidance (*see supra* 6, bullet “(2)”), we determine the claimed additional elements do not integrate the recited judicial exceptions into a practical application. Specifically, we determine the additional elements are solely and entirely the claimed “computer system comprising . . . a memory configured to store instructions . . . and a processor disposed in communication with the memory, wherein the processor upon execution of the instructions.” Claim 1 thus *only* recites: the above generic computer system; the claimed operations (which constitute only judicial exceptions); and the unspecified use of the computer system to perform the claimed operations. Accordingly, the combination of additional elements and judicial exceptions does not constitute a “meaningful limit on the [judicial exceptions], such that the claim is more than a drafting effort

designed to monopolize the [exceptions].” Guidance, 84 Fed. Reg. at 53 (defining a “practical application” for Step 2A, Prong Two); *see also id.* at 55 (“exemplary considerations . . . indicative that an additional element (or combination of elements) may have integrated the exception into a practical application”).

For the foregoing reasons, we determine claim 1 is directed to the recited judicial exceptions—not to a practical application thereof.

STEP 2B: DOES THE CLAIM RECITE ANYTHING THAT IS BEYOND THE RECITED JUDICIAL EXCEPTIONS AND NOT A WELL-UNDERSTOOD, ROUTINE, CONVENTIONAL ACTIVITY?

Turning to the above third and fourth steps of the Guidance (*see supra* 6–7, bullets “(3) and (4)”), we determine the claimed invention does not comprise a feature that is neither a judicial exception nor “well understood, routine, conventional.” 84 Fed. Reg. at 56. Specifically, and as discussed above, we determine the additional elements are solely and entirely the claimed “computer system comprising . . . a memory configured to store instructions . . . and a processor disposed in communication with the memory, wherein the processor upon execution of the instructions.” Accordingly, the combination of additional elements and judicial exceptions constitutes a generic computer system performing only a generic function and doing so *merely to apply the judicial exceptions* (i.e., claimed operations). *See id.* (“apply it” bullet corresponding to the Guidance’s footnote 30); *id.* at n. 30 (“mere instructions to apply a judicial exception”); *see also* MPEP § 2106.05(f) (cited by the Guidance’s footnote 30 as instructive for this issue).

For the foregoing reasons, we determine the claimed additional elements do nothing more than append generic computer technology to merely apply judicial exceptions.

APPELLANT’S ARGUMENTS

Appellant’s arguments all bear the same deficiency. Each rests entirely upon the claimed operations and thus “entirely in the realm” of judicial exceptions. *SAP America, Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1163 (Fed. Cir. 2018), *cert. denied* 139 S. Ct. 2747 (2019) (“[An] advance [that] lies entirely in the realm of abstract ideas . . . is ineligible for patenting.”).

For example, Appellant contends “the detailed recitation of the specific restructuring and use [of] policyholder data for particular modeling” renders the claimed use of the logistical regression unconventional. Br. 9. Even assuming this contention is correct, it is unpersuasive because the claimed use of the logical regression model merely combines judicial exceptions by applying mathematical concepts to longstanding insurance practices. *RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d 1322, 1327 (Fed. Cir. 2017) (“Adding one abstract idea (math) to another abstract idea . . . does not render the claim non-abstract.”).

Appellant also contends “the claimed technology addresses *specific* problems that arise in computer-based loss mitigation systems, and improves the functioning such systems.” Br. 9–10 (emphasis added). Appellant is referencing the Federal Circuit’s frequent instruction to assess whether a claim is sufficiently “specific” for patent-eligibility; an instruction perhaps best set forth by *McRO, Inc. v. Bandai Namco Games America Inc.*, 837 F.3d 1299 (Fed. Cir. 2016).

In *McRO*, the claimed invention was held patent-eligible because of “us[ing] a combined order of *specific* rules that renders information into a *specific* format that is then used and applied to create desired results.” 837 F.3d at 1315 (emphasis added). The underlying basis of the holding was as follows:

The preemption concern arises when the claims are not directed to a *specific invention* and instead improperly monopolize the basic tools of scientific and technological work. . . . A patent is not good for an effect . . . because such patents would prohibit all other persons from making the same thing by any means whatsoever. . . . We therefore look to whether the claims in these patents focus on a *specific means* or method that improves the relevant technology or are instead directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery.

Id. at 1314 (emphasis added; citations and quotations omitted). Thus, a claim reciting a judicial exception is nonetheless “directed to a specific invention” (above block quote) and accordingly patent-eligible *if reciting a mechanism that prevents preemption of the exception*. *Id.* The argued features of Appellant’s claim 1 do not constitute a mechanism that prevents preemption of the judicial exceptions, but rather detail the judicial exceptions—namely the claimed operations.

Appellant further contends that claim 1 compels a finding of patent-eligibility under *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014), *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016), and *Bascom Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016). Br. 7, 10–11; Reply 9. These decisions, like *McRO*, emphasize a need for a claimed mechanism that prevents preemption of recited judicial exceptions. *See DDR*, 773 F.3d

at 1259 (The claims “do not attempt to preempt . . . making two web pages look the same,” but “[r]ather . . . recite a specific way to automate the creation of a composite web page.”); *Enfish*, 822 F.3d at 1339 (The claims “recited . . . a specific type of data structure . . . confirm[ing] . . . the § 101 analysis has not been deceived by the ‘draftsman’s art.’” (Quoting *Alice*, 573 U.S. at 226)); *Bascom*, 827 F.3d at 1352 (The claims “do not preempt . . . filtering content,” but rather “carve out a specific location for the filtering system (a remote ISP server).”). As discussed with reference to *McRO*, the argued features of Appellant’s claim 1 do not prevent preemption of the judicial exceptions, but rather detail the judicial exceptions themselves.

For the foregoing reasons, we sustain the 35 U.S.C. § 101 rejection of claims 1–3, 6–11, 14–19, and 22–30.

35 U.S.C. § 103

Each of claims 1–3, 6–11, 14–19, and 22–30 is rejected as obvious over: *Andrist and Kontos*; or *Andrist, Kontos, and Tremiti*. Claim 1 is representative of all claims. Br. 14.

Appellant argues that the Examiner does not address the following claim requirement:

“[C]onstruct a [logistical] regression model” based on a “first group of insured homeowners including all insured homeowners having prior water loss experience in the insured homeowner data” and “a random sampling of homeowners” from a “second group of insured homeowners including all insured homeowners not having prior water loss experience in the insured homeowner data.”

Br. 15. Appellant contends the Examiner fails to address the claim requirement inasmuch:

Andrist does not describe employing a random sampling of homeowners not having prior water loss experience, much less constructing a logistic regression model with such data. In the Final Office Action, the Examiner . . . [presents] merely conclusory statements and are not clearly articulation of the reason(s) why [this claim feature] would have been obvious.
. . .

Furthermore, . . . [t]he Examiner has not articulated . . . how a person having ordinary skill in the art would understand that [Andrist’s cited] grouping of data from various zip codes described . . . “necessarily teaches” the use of a “random sampling of homeowners not having prior water loss experience” to generate “a [logistic] regression model.”

Id. at 16.⁶

We are unpersuaded. The Examiner’s findings are clear and supported. The Examiner finds Andrist, by “predict[ing] the statistical likelihood of future claims or losses based on past data (such as the historical loss data)” (Andrist ¶ 38), indicates a comparison of “insured homeowners having prior water loss” against statistics for “insured homeowners not having prior water loss” (claim 1). Final 7 (“determination of zipcodes with most similar risk of loss indicates receipt of those experiencing loss and those that did not”); *see also* Andrist ¶ 40 (“analysis . . . of historical loss data . . . by peril of loss for property coverage[,], e.g., . . . water”). The Examiner finds that, due to the large population of “homeowners not having prior water loss” (claim 1), it would have been obvious to use a random sample of this group. Ans. 12–13 (citing Horst Stenger, *Regression analysis and random sampling*, Journal of Statistical Planning and Inference, Vol. 102, Issue 1, March 1, 2002, pp. 169–78). The Examiner also finds

⁶ The Reply Brief does not address the 35 U.S.C. § 103 rejections.

Kontos shows it would have been obvious, in performing a statistical analysis of binary “having” and “not having” events (claim 1), to “use [a] logical regression model . . . to reduce costs.” Ans. 8 (citing Kontos ¶ 3).

The above findings address all features of the argued claim requirement. Moreover, even assuming otherwise, Appellant does not show the above findings are incorrect or otherwise insufficient. *See In re Piasecki*, 745 F.2d 1468, 1472 (Fed. Cir. 1984) (“After a *prima facie* case . . . has been established, the burden of . . . [r]ebuttal is . . . a showing of facts supporting the opposite conclusion.” (internal quotation marks and citation omitted)); *SHOW*, Black’s Law Dictionary (10th ed. 2014) (“To make (facts, etc.) apparent or clear by evidence; to prove”).

For the foregoing reasons, we sustain the 35 U.S.C. § 103 rejections of claims 1–3, 6–11, 14–19, and 22–30.

CONCLUSION

Claim(s) Rejected	Basis	Affirmed	Reversed
1–3, 6–11, 14–19, 22–30	§ 101	1–3, 6–11, 14–19, 22–30	
1–3, 6–11, 14–19, 22–30	§ 103	1–3, 6–11, 14–19, 22–30	

DECISION

We affirm the rejections of claims 1–3, 6–11, 14–19, and 22–30.

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)(iv).

AFFIRMED