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katelyn.mulroy@philips.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte TEUN VAN DEN HEUVEL and
STEVEN ANTONIE WILLEM FOKKENROOD

Appeal 2018-000405
Application 14/359,381
Technology Center 2800

Before KAREN M. HASTINGS, JAMES C. HOUSEL, and
JEFFREY R. SNAY, *Administrative Patent Judges*.

SNAY, *Administrative Patent Judge*.

DECISION ON APPEAL¹

Appellant² appeals under 35 U.S.C. § 134(a) from the Examiner's decision rejecting claims 1–20 under 35 U.S.C. § 101 as claiming ineligible subject matter.³ We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

¹ We cite to the Specification (“Spec.”) filed May 20, 2014; the Final Office Action (“Final Act.”) dated March 7, 2017; Appellant’s Appeal Brief (“App. Br.”) filed July 6, 2017; the Examiner’s Answer (“Ans.”) dated August 15, 2017, and Appellant’s Reply Brief (“Reply Br.”) filed October 13, 2017.

² Appellant is Applicant, Koninklijke Philips N.V., which is identified in the Appeal Brief as the real party in interest (App. Br. 2).

³ The Examiner withdrew the rejection under 35 U.S.C. § 103(a). Ans. 2.

BACKGROUND

The subject matter on appeal relates to processing data obtained from an accelerometer to determine the elevation of a person or object in an elevator. Spec. 1:2–5, 2:1–2. Claim 1 is illustrative:

1. A method for detecting a motion of a user or an object in an elevator with an apparatus, the method comprising:
 - measuring, with an accelerometer of the apparatus, the acceleration experienced by the user or the object to obtain a series of acceleration measurements;
 - processing, with a processor of the apparatus, the series of acceleration measurements to identify a peak and a trough therein that are associated with a start and an end of an elevator motion;
 - identifying, with the processor, a section of the acceleration measurements corresponding to the elevator motion from the identified peak and trough;
 - determining, with the processor, an indication of a change in an elevation of the user or the object during the elevator motion from the identified section of the acceleration measurements; and
 - determining, with the processor, a current floor of a building on which the user or the object is physically present from the determined indication of the change in the elevation.

App. Br. 9 (Claims Appendix). Claim 9 recites an apparatus comprising a processor configured to perform the steps generally as recited in claim 1. Each remaining claim on appeal depends from claim 1 or 9.

DISCUSSION

The Examiner rejects claims 1–20 under 35 U.S.C. § 101 as being directed to a judicial exception—namely, an abstract idea without significantly more. Final Act. 3. Appellant argues the claims as a group. *See* App. Br. 3–4; Reply Br. 2–3. In accordance with 37 C.F.R.

§ 41.37(c)(1)(iv), we select independent claim 1 as representative, and decide the appeal based on the representative claim alone. Having considered the Examiner’s findings and Appellant’s arguments, we are not persuaded the Examiner reversibly erred in rejecting claim 1 under 35 U.S.C. § 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. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014).

In determining whether a claim falls within an excluded category, we are guided by the 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, 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 (1853))); 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 (quotation marks 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 PTO recently published revised guidance on the application of § 101. *See Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50 (Jan. 7, 2019) (“Guidance”). Under Step 1 of the Guidance, we determine whether the claimed subject matter falls within the four statutory categories: process, machine, manufacture, or composition of matter. Step 2A of the Guidance is two-pronged, under which we look to whether the claim recites:

- (1) any judicial exception, 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)).

Only if a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, do we then, under Step 2B, look to whether the claim:

adds a specific limitation beyond the judicial exception that is not “well-understood, routine, conventional” in the field (*see* MPEP § 2106.05(d)); or 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.

We have considered the Examiner’s findings and the Appellant’s arguments in light of the controlling case-law and Guidance, and are not persuaded the Examiner erred in rejecting the claims under 35 U.S.C. § 101.

Guidance Step 1

There is no dispute that claim 1 is within a statutory category. Claim 1 recites a method.

Guidance Step 2A, Prong 1

Under Step 2A of the Guidance, we first consider whether the Examiner erred in determining that the claim recites a judicial exception. The Examiner determined that claim 1 recites an abstract idea. Final Act. 3. For the reasons explained below, we see no error in that determination.

The Guidance identifies mental processes as one of the enumerated groupings of abstract ideas. A claim recites a mental process when it encompasses acts people can perform using their minds or pen and paper. *See, e.g., CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1372–3 (Fed. Cir. 2011) (determining that a claim whose “steps can be performed in the human mind, or by a human using a pen and paper” is directed to an unpatentable mental process). This is true even if the claim recites use of a generic computer component to perform the process steps. *See, e.g., Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1335 (Fed. Cir. 2015) (“Courts have examined claims that required the use of a computer and still found that the underlying, patent-ineligible invention could be performed via pen and paper or in a person’s mind.”); *see also* 2019 Eligibility Guidance 84 Fed. Reg. at 52 n. 14 (“If a claim, under its broadest reasonable

interpretation, covers performance in the mind but for the recitation of generic computer components, then it is still in the mental process category unless the claim cannot practically be performed in the mind.”).

In this case, claim 1 recites “identifying, with the processor, a section of the acceleration measurements corresponding to the elevator motion.” The claim does not require any particular machine or device in connection with the identifying step, other than a generic processor. Apart from the recited processor, a person could perform the step entirely in the mind by looking at acceleration measurement data and observing whether a given section of data corresponds to elevator motion. Thus, in the context of claim 1, the step of “identifying” can reside solely within a human thought process. Accordingly, we conclude that claim 1 recites a mental process, which is identified in the Guidance as an abstract idea.

Guidance Step 2A, Prong 2

Having determined that the claims recite a judicial exception, our analysis under the Guidance turns to determining whether there are additional elements that integrate the exception into a practical application. *See* MPEP § 2106.05(a)–(c), (e)–(h). The additional elements in claim 1 are: (1) “measuring . . . acceleration . . . to obtain a series of acceleration measurements;” (2) “processing . . . the series of acceleration measurements to identify a peak and a trough therein;” (3) “determining . . . an indication of a change in an elevation . . . from the identified section of the acceleration measurements;” and (4) “determining . . . a current floor of a building on which the user or the object is physically present from the determined indication of the change in the elevation.”

We determine that claim 1 does not recite additional elements that integrate the judicial exception into a practical application. The recited “measuring” and “processing” steps are data gathering and data manipulation recited at a high level of generality. *See Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1354 (Fed. Cir. 2016) (characterizing certain steps of collecting information, analyzing information by steps people go through in their minds, or by mathematical algorithms, and presenting the results of collecting and analyzing information, without more, as matters within the realm of abstract ideas); *see also SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1168 (Fed. Cir. 2018) (“As many cases make clear, even if a process of collecting and analyzing information is ‘limited to particular content’ or a particular ‘source,’ that limitation does not make the collection and analysis other than abstract.” (quoting *Elec. Power Grp.*, 830 F.3d at 1353, 1355 (citing cases))). “Determining” a change in elevation and a current building floor from the collected data can be performed in a person’s mind or with pen and paper using mathematical techniques. *See Spec. 14:7–9* (“[A] double integration with respect to time is performed on each accelerometer signal section to determine the vertical distance travelled during that particular motion.”); *id.* at 14:15–18 (“Then, optionally, the determined vertical distance can be converted into a measure of the number of floors traversed up or down during the motion by dividing the determined vertical distance by the or an average floor height (step 1053), and rounding the result to the nearest integer.”). As such, these determination steps also do not “transform the nature of the claim into a patent-eligible application.” *See Alice*, 573 U.S. at 217; *see also* Guidance 84 Fed. Reg. at 55 n. 24 (“USPTO guidance uses the term ‘additional

elements' to refer to claim features, limitations, and/or steps that are recited in the claim *beyond the identified judicial exception.*”).

Appellant argues that “there are no reliable solutions for determining which floor of a building a user is on using accelerometer measurements,” and, for that reason, the claimed invention is a patent-eligible improvement in computer-related technology. App. Br. 4 (citing *McRO, Inc. v. Bandai Namco Games Am., Inc.*, 837 F.3d 1299 (Fed. Cir. 2016)). See also Reply Br. 3. We find Appellant’s argument unpersuasive.

In *McRO*, the Court found the claim was directed to a “technological improvement over the existing, manual 3-D animation techniques” and “uses the limited rules in a process specifically designed to achieve an improved technological result in conventional industry practice.” *McRO*, 837 F.3d at 1316. The Court found that the claimed rules allowed computers to produce accurate and realistic lip synchronization and facial expressions in animated characters that previously could only be produced by human animators. *Id.* at 1313. In this case, Appellant has not identified any analogous technological improvement attributable to the claimed invention. Moreover, novelty of the claimed abstract idea, alone, neither demonstrates a technological improvement nor otherwise transforms the claimed abstract idea into eligible subject matter. See, e.g., *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1151 (Fed. Cir. 2016) (citing *Mayo*, 566 U.S. at 90) (“[A] claim for a *new* abstract idea is still an abstract idea.”)).

Viewed as a whole, the claim merely applies mental processes to the environment of determining the floor location of an elevator. “[M]erely limiting the field of use of the abstract idea to a particular existing technological environment does not render the claims any less abstract.”

Affinity Labs of Texas, LLC v. DIRECTV, LLC, 838 F.3d 1253, 1259 (Fed. Cir. 2016). We are not persuaded that the claimed method effects an improvement in computer-technology or any other technology or technical field. *See* MPEP § 2106.05(a).

Nor does the claimed method apply the judicial exception using any particular machine. *See* MPEP § 2106.05(b). Claim 1 recites a generic processor and accelerometer. Appellant does not purport that the claim adds any other meaningful (technological) limitation, i.e., limitations beyond linking the use of the abstract idea to generic technology. *See* MPEP § 2106.05(c), (e); *see also id.* at (f)–(h) (mere instruction to apply a judicial exception (f), insignificant extra-solution activity (g), and generally indicating a field of use or technological environment in which to apply a judicial exception (h), are insufficient to integrate an abstract idea into a practical application).

For the foregoing reasons, we determine that claim 1 does not integrate the judicial exception into a practical application.

Guidance Step 2B

In *Alice* step two, we consider the elements of the claim, both individually and as an ordered combination, to assess whether the additional elements transform the nature of the claim into patent-eligible subject matter. *Content Extraction & Transmission LLC v. Wells Fargo Bank*, 776 F.3d 1343, 1347 (Fed. Cir. 2014). “To save a patent at step two, an inventive concept must be evident in the claims.” *RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d 1322, 1327 (Fed. Cir. 2017). “An inventive concept that transforms the abstract idea into a patent-eligible invention must be

significantly more than the abstract idea itself, and cannot simply be an instruction to implement or apply the abstract idea on a computer.” *Bascom Global Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1349 (Fed. Cir. 2016).

In this context, we also look to see if the additional elements are more than “well-understood, routine, and conventional” so as to amount to an inventive concept. Conversely, we consider whether these additional elements simply append “well-understood, routine, and conventional” elements, particularly at a high level of generality, to the judicial exception.

Appellant does not point to any evidence of record that would tend to show that the “measuring” and “processing” of acceleration data recited in claim 1 are more than well-understood, routine, and conventional. The remaining steps in claim 1, as noted, can be formed as a mental process and, therefore, also are abstract ideas. When considered as an ordered combination, the steps recited in claim 1 essentially apply a known mathematical relationship between acceleration, time, and distance traveled to determine relative movement of an elevator.

For the foregoing reasons, we determine that the additional elements recited in claim 1 do not amount to significantly more than the abstract idea itself.

For the reasons discussed above and by the Examiner, we are not persuaded of reversible error in the Examiner’s rejection of representative claim 1. Accordingly, the rejection of claims 1–20 is sustained.

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DECISION

The Examiner's decision rejecting claims 1–20 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).

AFFIRMED