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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte WILLIAM B. GAIL, WILLIAM LORING MYERS, and
TED W. POST

Appeal 2017-008600
Application 13/951,608
Technology Center 2800

Before MARK NAGUMO, JEFFREY R. SNAY, and
MICHAEL G. MCMANUS, *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 judicially excepted ineligible subject matter. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

¹ We cite to the Specification (“Spec.”) filed July 26, 2013; the Final Office Action (“Final Act.”) dated June 23, 2016; Appellant’s Appeal Brief (“Br.”) filed November 3, 2016; and the Examiner’s Answer (“Ans.”) dated March 3, 2017.

² Appellant is Applicant, Global Weather Corporation, which is identified in the Appeal Brief as the real party in interest (Br. at 3).

BACKGROUND

The subject matter on appeal relates to weather forecasting. Spec. 1:4–6. According to the Specification, “[w]eather forecasts are often provided with relatively coarse (*sic*) geospatial and temporal resolution.” *Id.* 1:9–10. Although forecasts may be updated periodically for a user’s nearest major metropolitan area, they “generally do not update instantly or correspond to a user’s specific location.” *Id.* 1:10–12, 19–21. The described invention involves providing, in response to a user’s request, updated weather information for a particular location. *Id.* 1:4–9. Claim 1 is illustrative:

1. A method for providing weather information to a user, comprising steps of:
 - receiving a gridded forecast;
 - receiving a user request for weather information for a location of interest within the gridded forecast;
 - determining if updated sensor data is available for local grid points located proximate the location of interest;
 - if updated sensor data is available, updating latest observation-based conditions at the local grid points; and
 - updating the weather information based on the updated sensor data and the gridded forecast.

Br. 31 (Claims Appendix). Claim 11 recites a forecasting system which includes a processing system configured to perform the steps recited in claim 1. Each remaining claim on appeal depends from claim 1 or 11.

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. 5–6.

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. Kappas*, 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 (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 (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.

Independent Claims 1 and 11

Guidance Step 1

There is no dispute that each claim on appeal is within a statutory category. Claim 1 recites a process. Claim 11 recites a system.

Guidance Step 2A, Prong 1

Under Step 2A of the Guidance, we first consider whether the Examiner erred in determining that the claims recite a judicial exception. The Examiner determined that claims 1 and 11 recite abstract ideas. Final Act. 6; Ans. 3–4. 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. “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.” 2019 Eligibility Guidance 84 Fed. Reg. at 52 n. 14. *See also 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.”).

In this case, claim 1 recites two receiving steps, a determining step, and a conditional updating step. The determining step involves “determining if updated sensor data is available for local grid points located proximate the location of interest.” The claim does not require any particular machine or device in connection with the determining step. Rather, a person could perform the recited step entirely in the mind by looking at sensor data and observing whether that data has been updated. Thus, in the context of claim 1, the step of “determining if updated sensor data is available” 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.

Claim 11 recites “a processing system (108) configured to . . . determine if updated sensor data is available for local grid points located proximate the location of interest.” Thus, claim 11 recites the same step discussed above in connection with claim 1, albeit implemented by a generic computer processor. “[T]he mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention.” *Alice*, 573 U.S. at 223. Accordingly, we conclude that claim 11 also recites a mental process, listed 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) receiving a gridded forecast; (2) receiving a user request for weather

information for a location of interest within the gridded forecast; (3) updating latest observation-based conditions at the local grid points; and (4) updating the weather information based on the updated sensor data and the gridded forecast. Claim 11 includes these same additional elements implemented by a generic computer processor.

Viewed as a whole, claims 1 and 11 recite the concept of updating weather data for a user-designated location. The claims do not purport to improve the functioning of a computer. Nor do they effect an improvement in any other technology or technical field. *See* MPEP § 2106.05(a). Moreover, each of the above-noted steps also can be performed in a person’s mind. “Receiving a gridded forecast” and “receiving a user request for weather information” encompass perceiving (e.g., hearing, reading) the information. “Updating” can be met by incorporating new weather data either in the mind or by looking at new information and writing or remembering the updated forecast. As such, these recited steps are not “additional steps” that “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.*”).

We are unpersuaded by Appellant’s argument, Br. 12, that updating weather information as claimed is a specific improvement to the technical field of providing weather information to a user. The claims recite generic data collection and updating steps using generically identified technological means. The Specification states, “[a]lthough some systems may update more often or include finer geospatial resolution, the forecasts generally do

not update instantly or correspond to a user’s specific location.” Spec. 1:19–21. Thus, the purported technological improvement achieved by the claims is that the geospatial weather update is performed with regard to a user-designated location. “[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).

Nor do the claims change the way in which the recited sensors or processing system perform their tasks; those components are used for their ordinary purposes to carry out the process of updating weather information. In other words, neither claim 1 nor claim 11 applies the judicial exception with any particular machine. *See* MPEP § 2106.05(b). Appellant’s arguments similarly do not persuade us that the process of claim 1 or system of claim 11 adds any other meaningful (technological) limitation, i.e., limitations beyond simply “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). Neither claim 1 nor 11 integrates 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-known, routine, and conventional” so as to amount to an inventive concept. Conversely, we consider whether these additional elements simply append “well-known, routine, and conventional” elements, particularly at a high level of generality, to the judicial exception.

The additional elements are: (1) receiving a gridded forecast; (2) receiving a user request for weather information for a location of interest within the gridded forecast; (3) updating latest observation-based conditions at the local grid points; and (4) updating the weather information based on the updated sensor data and the gridded forecast.

As noted, each of these additional recitations also encompasses a mental process. Moreover, according to the Specification, updating weather information based on user’s geographic location of interest was conventional. Spec. 1:10–12 (“For example, users are often provided weather forecasts for the nearest major metropolitan area to their location of interest. Although the rate at which the forecasts are updated may vary,

often, the forecasts are only updated hourly.”); *id.* 5:32–6:1 (“Gridded forecasts are well known in the art.”).

Accordingly, we determine that the additional elements involve further abstract ideas generally applied in a conventional manner to a particular field of use. These additional elements do not amount to significantly more than the abstract idea itself.

Dependent Claims 2–10, 12–20

Appellant presents separate arguments directed toward each of the dependent claims. Particularly, Appellant argues that the additional features recited in each of claims 2–10 and 12–20 provide a technological improvement because the resulting updated forecast is more accurate and more up to date. Br. 13–19. Appellant additionally argues that each of the dependent claims 6–8 and 16–18 is patent eligible because it is “tied to a mobile device.” *Id.* at 21, 22. However, Appellant does not provide persuasive reasoning to support the contention that the additionally recited features are sufficient to transform the claims into eligible subject matter. Claims 2–5 and 12–15 recite interpolation of data. Like the “receiving” and “determining” steps of claim 1, data interpolation can be performed entirely within the mind or through use of pen and paper. Claims 6–8 and 16–18 recite limitations on the source of the user’s request for weather information, particularly, that the user’s request originates from a mobile device. However, recitation of a mobile device is virtually as generic as a computer processor and, in this case, refers to a device used solely for data collection rather than performing the claimed process. Claims 9 and 19 specify that the designated location of interest is user-selected. Claims 10 and 20 recite that

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gridded forecast data is received at a preset time interval. These recitations similarly regard the step of data collection and are recited at a relatively high level of generality. Appellant does not present persuasive reasoning as to why these dependent claims add features sufficient to transform the abstract idea into eligible subject matter.

CONCLUSION

On the record before us and for the reasons discussed above, we sustain the rejection of claims 1–20 under 35 U.S.C. § 101.

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