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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JASON M. BUSH, CHRISTOPHER R. HALVORSON,
TROY L. KING, JAMES R. LONG, DAVID B. MARKISOHN,
LEON R. ORGAN III, ADAM R. SCROGGIN, KAITLIN R. STINSON,
and KRISTIN M. WESTERFIELD

Appeal 2018-005583
Application 13/792,995
Technology Center 3600

Before ROBERT E. NAPPI, KRISTEN L. DROESCH, and
JASON M. REPKO, *Administrative Patent Judges*.

NAPPI, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant¹ appeals under 35 U.S.C. § 134(a) from the Examiner's final rejection of claims 1, 3 through 9, and 11 through 14. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM IN PART.

¹ We use the word Appellant to refer to “applicant” as defined in 37 C.F.R. § 1.42(a). According to Appellant, Roche Diabetes Care, Inc. is the real party in interest. Appeal Br. 3.

INVENTION

The invention is directed to insulin pump configuration software and, more particularly, to customizing names of insulin delivery profiles using the pump configuration software. Spec. Abstract ¶¶ 1, 2, 7. Claim 1 is illustrative of the invention and is reproduced below.

1. A computer-implemented method for customizing names of insulin delivery profiles for improved patient safety, comprising:

receiving, by a configuration device, a string of characters to serve as a name for a given insulin delivery profile, where the insulin delivery profile includes at least one parameter pertaining to insulin delivery by an insulin pump and is one of a plurality of insulin delivery profiles associated with a given patient;

normalizing, by the configuration device, the string of characters by changing one or more of the characters in the string of characters in accordance with a rule set;

comparing, by the configuration device, the normalized string of characters with names for each of the plurality of insulin delivery profiles;

prompting, by the configuration device, a user to change the normalized string of characters by displaying a message on the display of the configuration device, the prompting being performed in response to a match between the normalized string of characters and at least one of the names of the plurality of insulin delivery profiles;

updating, by the configuration device, the name of the given insulin delivery profile in a pump configuration file residing on the configuration device with the normalized string of characters, wherein the name of the given insulin delivery profile differs from name of the pump configuration file and updating occurs when the normalized string of characters is unique in relation to the names of the plurality of insulin delivery profiles and in response to the comparison step, the steps of normalizing, comparing, prompting and updating being

performed solely by computer executable instructions being executed by a computer processor in the configuration device;
downloading the pump configuration file from the configuration device to an insulin pump; and
delivering insulin, by the insulin pump, to the given patient in accordance with a parameter from a selected one of the plurality of insulin delivery profiles in the pump configuration file.

EXAMINER’S REJECTION²

The Examiner rejected claims 1, 3 through 9, and 11 through 14 under 35 U.S.C. § 101 for being directed to patent-ineligible subject matter. Final Act. 3–6.

PRINCIPLES OF LAW

A. Section 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 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. 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 Court’s two-part framework, described in *Mayo* and *Alice*. *Alice*, 573 U.S. at 217–18 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 75–77 (2012)). In accordance with that framework,

² Throughout this Decision we refer to the Arguments presented in Appeal Brief filed December 26, 2017 (“Appeal Br.”); the claims Appendix presented on February 7, 2018; Reply Brief (“Reply Br.”) filed May 11, 2018; Final Office Action mailed May 24, 2017 (“Final Act.”); and the Examiner’s Answer mailed March 13, 2018 (“Ans.”).

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 waterproof 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 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 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.* (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.*

B. USPTO Section 101 Guidance

In January 2019, the U.S. Patent and Trademark Office (USPTO) published revised guidance on the application of § 101. 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) (“2019 Revised Guidance”).³ “All USPTO personnel are, as a matter of internal agency management, expected to follow the guidance.” *Id.* at 51; *see also* October 2019 Update at 1.

³ In response to received public comments, the Office issued further guidance on October 17, 2019, clarifying the 2019 Revised Guidance. USPTO, *October 2019 Update: Subject Matter Eligibility* (the “October 2019 Update”) (available at https://www.uspto.gov/sites/default/files/documents/peg_oct_2019_update.pdf).

Under the 2019 Revised Guidance and the October 2019 Update, 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) (“Step 2A, Prong One”); and

(2) additional elements that integrate the judicial exception into a practical application (*see* MPEP §§ 2106.05(a)–(c), (e)–(h) (9th ed. Rev. 08.2017, Jan. 2018)) (“Step 2A, Prong Two”).⁴

2019 Revised Guidance, 84 Fed. Reg. at 52–55.

Only if a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, do we then look, under Step 2B, 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. 2019 Revised Guidance, 84 Fed. Reg. at 52–56.

⁴ This evaluation is performed by (a) identifying whether there are any additional elements recited in the claim beyond the judicial exception, and (b) evaluating those additional elements individually and in combination to determine whether the claim as a whole integrates the exception into a practical application. *See* 2019 Revised Guidance - Section III(A)(2), 84 Fed. Reg. at 54–55.

DISCUSSION

The Examiner determined claims 8, 9, and 11 through 13 are not patent eligible because they do not fall within one of the four categories of patent-eligible subject matter. Final Act. 2–3. Specifically, the Examiner finds that the broadest reasonable interpretation of a claim drawn to computer readable media includes a transitory propagating signal. *Id.*

The Examiner determined the claims 1, 3 through 7, and 14 are not patent eligible because they are directed to a judicial exception without reciting significantly more. Final Act. 3–6. Specifically, the Examiner finds the claims are directed to the abstract idea of collecting, analyzing, and displaying the results of the collection and analysis. Final Act. 3–4 (citing *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350 (Fed. Cir. 2016)). The Examiner finds that the claims do not include additional elements that amount to significantly more. Final Act. 4–6.

Appellant argues with respect to claim 1, that the Examiner has overgeneralized the claim and that it recites particular steps that go beyond, collecting, analyzing, and displaying and that it does not recite a concept similar to those held abstract by the courts. Appeal Br. 13. Further, Appellant argues the claims recite an improvement to diabetes care and as such are an improvement in technology. Appeal Br. 13–14 (citing *Trading Techs. Int'l Inc. v. CQG, Inc.*, 675 F. App'x 1001 (Fed. Cir. 2017) (nonprecedential) (holding that a user interface with a prescribed functionality directly related the interface's structure that is addressed to and resolves a problem in the art is patent eligible) and *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299 (Fed. Cir. 2016)). Specifically Appellant argues the “claims improve diabetes care by ensuring that

confusingly similar profile names are not assigned to two different insulin delivery profiles contained on a pump configuration file.” Appeal Br. 16 (emphasis omitted). Similarly, Appellant argues that the recitation of an insulin pump when considered with the other elements of the claim is significantly more than the abstract concept. Appeal Br. 16–17 (citing *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016)).

Appellant argues that the rejection of claims 8 and 14 is similarly in error and that the claims are directed to patent-eligible subject matter for the same reasons as claim 1. Appeal Br. 18.

-Independent claim 8 and the claims which depend thereupon

At the outset, we note that the Examiner’s rationale for rejecting independent claim 8 and the claims which depend upon claim 8 is different that used in the rejection of claim 1. Specifically, as discussed above the Examiner has rejected claim 8 as being directed to a computer readable medium, which broadly recites a signal and as such is not one of the four categories of patent-eligible subject matter (i.e., the Examiner finds that the claims do not recite a process, machine, manufacture, or composition of matter). Final Act. 2–3. We concur with the Examiner’s claim interpretation. Appellant’s Specification provides several examples of a computer readable medium but does not preclude a propagation medium (i.e., a signal) as broadly interpreted by the Examiner. *See Spec.*, para. 37. Further, Appellant has not presented arguments or otherwise shown that the Examiner’s interpretation is unreasonable. Thus, we do not construe the claim term “computer readable storage medium” to be limited to only non-transitory media, and we consider the claim broad enough to encompass a

transitory signal. A signal is not within one of the four categories of patentable subject matter as defined under 35 U.S.C. § 101. *In re Nuijten*, 500 F.3d 1346, 1357 (Fed. Cir. 2007); *see also Ex parte Mewherter*, 107 USPQ2d 1857 (PTAB 2013) (precedential). As such we sustain the Examiner's rejection of claims 8, 9, and 11 through 13 under 35 U.S.C. § 101.

-Independent claims 1, 14 and the claims which depend thereupon
Appellant's arguments have persuaded us of error in the Examiner's rejection of independent claims 1, 3 through 7, and 14 under 35 U.S.C. § 101, because the record does not support the Examiner's determination that the claims do not recite practical application of the abstract idea.

Each of the independent claims recite limitations directed to receiving a string of characters and prompting a user to enter a change to a string of characters (data gathering or observation steps), and comparing normalize characters with names of profiles (data analysis or evaluation steps). Thus, the claims include limitations which recite an abstract process which could be a mental process.

However, independent claims 1 and 14 each recite limitations directed to downloading a pump configuration file to the insulin pump and delivering insulin by the insulin pump in accordance with a parameter selected from the downloaded pump configuration file. With respect to these limitations, the Examiner states:

The "Insulin Pump" merely serves to receive the medication administration information and administer medication. These functions represent insignificant data receiving steps, medication administration steps and insignificant post-solution

activities. Applicants' feature of the "Insulin Pump" does not disclose an attempt to try to advance the technology, and rather implement the disclosed "profiles" on said "Insulin Pump", wherein such implementations for profiles instructing an "Insulin Pump" to perform steps "... which are known to persons skilled in the art.

Answer 7 (citing Specification ¶ 48) (emphasis omitted). We disagree with the Examiner that this recitation of downloading the pump configuration files and using them to deliver insulin is an insignificant post-solution activity. Rather, we consider these limitations to recite the operation of the insulin pump. As such, the claims are directed to an improvement to the operation of the insulin pump (an improvement to a technology) and claims recite a practical application of the abstract concept. Thus, we consider independent claims 1, 14 and the claims which depend thereupon, recite patent-eligible subject matter. Accordingly, we do not sustain the Examiner's rejection of claims 1, 3 through 7, and 14 under 35 U.S.C. § 101 for being directed to patent-ineligible subject matter.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1, 3-9, 11-14	101	Eligibility	8, 9, 11-13	1, 3-7, 14

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 IN PART