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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte BRUCE HOWARD KUSENS

Appeal 2020-002430
Application 14/984,921
Technology Center 3600

Before CATHERINE SHIANG, JASON J. CHUNG, and
MATTHEW J. McNEILL, *Administrative Patent Judges*.

CHUNG, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals the Non-Final Rejection of claims 1–12 and 14–20.² We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

INVENTION

The invention relates to healthcare assurance. Abstract. Claim 1 is illustrative of the invention and is reproduced below:

¹ We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. According to Appellant, Cerner Innovation, Inc. is the real party in interest. Appeal Br. 3.

² Claim 13 is cancelled. Appeal Br. 28.

1. A computerized method for generating healthcare recommendations, the method comprising:

identifying, by a central healthcare server, *that a first set of confidential medical information* located on a first healthcare information server *has information relevant to an identified patient*, the first healthcare information server remote from the central healthcare server;

retrieving the first set of confidential medical information for the identified patient by crawling one or more data stores at the first healthcare information server;

updating, by the central healthcare server, *a consolidated set of confidential medical information with the first set of confidential medical information*;

storing the consolidated set of confidential medical information on the central healthcare server, *wherein the consolidated set of confidential medical information is accessible* by each of the first healthcare information server and a second healthcare information server;

identifying, by the central healthcare server, *that a second set of confidential medical information* located on the second healthcare information server *has information relevant to the identified patient*, the second healthcare information server being remote from each of the first healthcare information server and the central healthcare server;

receiving, at the central healthcare server, *an indication* from the second healthcare information server *that the second set of confidential medical information has been updated*;

in response to the indication, retrieving, by the central healthcare server a crawling one or more data stores of the second healthcare information server, *a second set of confidential medical information for the identified patient*;

updating the consolidated set of confidential medical information with the second set of confidential medical information to form an updated consolidated set of confidential medical information;

determining, by the central healthcare server, *whether one or more information gaps or discrepancies exist in the updated consolidated set of confidential medical information*;

generating a prompt on a user interface for a user to enter additional information to resolve the one or more information gaps or discrepancies in the updated consolidated set of confidential medical information;

generating a message comprising one or more care recommendations for the identified patient based on the updated consolidated set of confidential medical information and the additional information, wherein the one or more care recommendations for the identified patient require medical judgment or additional information and are weighted based on a reliability of one or more pieces of information underlying a particular care recommendation; and

transmitting the message from the central healthcare server to at least one of the first healthcare information server and the second healthcare information server.

Appeal Br. 24–25³ (Claims Appendix) (emphases added).

REJECTION

The Examiner rejects claims 1–12 and 14–20 under 35 U.S.C. § 101 as being directed to patent ineligible subject matter. Non-Final Act. 2–6.

ANALYSIS

A. 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 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).

³ Appellant does not provide page numbers in the Appeal Brief. We, therefore, provide our own numbering.

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*. *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 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.* (citation omitted) (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”).⁴ “All USPTO personnel are, as a matter of

⁴ 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 “Update”)

internal agency management, expected to follow the guidance.” *Id.* at 51; *see also* Update at 1.

Under the 2019 Revised Guidance and the 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”).⁵

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

(available at https://www.uspto.gov/sites/default/files/documents/peg_oct_2019_update.pdf).

⁵ 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. 54–55.

(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.

C. The Examiner’s Rejection and Appellant’s Arguments

The Examiner concludes that the present claims recite certain methods of organizing human activity and mental processes. Ans. 4; Non-Final Act. 4. The Examiner concludes that the present claims are not integrated into a practical application. Ans. 4–5; Non-Final Act. 2–3, 5. The Examiner determines that the present claims recite an abstract idea using additional elements that are well-understood, routine, and conventional. Non-Final Act. 5–6 (citing Spec. ¶ 65⁶; MPEP § 2106.05); Ans. 7 (citing Spec. ¶ 65; MPEP § 2106.05).

Appellant argues that the present claims do not recite mental processes because the present claims are similar to patent eligible claims 1 and 2 of Example 37 in the 2019 Revised Guidance. Appeal Br. 14–17 (citing Example 37 in the 2019 Revised Guidance). Appellant argues the present claims are an improvement over prior art systems because they are similar to patent eligible claim 1 of Example 42 in the 2019 Revised Guidance. Appeal Br. 17–21 (citing Example 42 in the 2019 Revised Guidance). Appellant argues the present claims are novel and non-obvious and are, therefore, an unconventional claimed solution. Appeal Br. 21.

⁶ The Examiner cites to paragraph 65 of US 2016/0110506 A1; published Apr. 21, 2016, which is the published application of the present case. Paragraph 65 of the published application corresponds to paragraph 65 of the Specification. We refer to citations of the Specification in this Decision.

Appellant argues that the Examiner fails to provide sufficient evidence to support the finding that the additional elements implementing the abstract idea are well-understood, routine, and conventional. *Id.* (citing *Berkheimer v. HP Inc.*, 881 F.3d 1360 (Fed. Cir. 2018)). We disagree with Appellant.

D. Step 2A, Prong 1

Patent eligibility under 35 U.S.C. § 101 is a question that we resolve pursuant to the 2019 Revised Guidance. The emphasized portions of claim 1,⁷ reproduced above (*see supra* at 2–3), recite managing personal behavior or relationships or interactions between people (including following rules or instructions) because these portions recite updating confidential medical information from two sets of confidential medical information to form a consolidated set of confidential medical information and generating a message comprising one or more care recommendations for an identified patient based on the consolidated set of confidential medical information. *See* 2019 Revised Guidance, 84 Fed. Reg. at 52 n.14. Managing personal behavior or relationships or interactions between people (including following rules or instructions) fall into the category of certain methods of organizing human activity, which are a type of abstract idea. *Id.*

We also agree with the Examiner’s conclusion that the present claims recite mental processes. Ans. 4; Non-Final Act. 4. In particular, the limitations “identifying,” “updating,” “storing,” “identifying,” “updating,” and “determining” recite concepts performed in the human mind because these limitations can be performed in the human mind (including an

⁷ Appellant does not argue claims 1–12 and 14–20 separately with particularity. Appeal Br. 13–22. We, therefore, group these claims together and refer to them as the present claims.

observation, evaluation, judgment, opinion) while using pencil and paper. *See* 2019 Revised Guidance, 84 Fed. Reg. at 52 n.14. Concepts performed in the human mind (including an observation, evaluation, judgment, opinion) fall into the category of mental processes, which are a type of abstract idea. *Id.*

We, therefore, disagree with Appellant's argument that the present claims do not recite mental processes. Appeal Br. 14–17 (citing Example 37 in the 2019 Revised Guidance). In addition, the present claims recite updating confidential medical information from two sets of confidential medical information to form a consolidated set of confidential medical information and generating a message comprising one or more care recommendations for an identified patient based on the consolidated set of confidential medical information; whereas the claims in Example 37 are unlike the present claims because the claims in Example 37 pertain to a relocation of icons on a graphical user interface.

We must still determine whether the abstract idea is integrated into a practical application, namely whether the claim applies, relies on, or uses the abstract idea in a manner that imposes a meaningful limit on the abstract idea, such that the claim is more than a drafting effort designed to monopolize the abstract idea. *See* 2019 Revised Guidance, 84 Fed. Reg. at 54–55. We therefore (1) identify whether there are any additional recited elements beyond the abstract idea, and (2) evaluate those elements both individually and collectively to determine whether they integrate the exception into a practical application. *See id.*

Accordingly, we proceed to Prong 2.

E. Step 2A, Prong 2

Here, the additional elements in the claims beyond the abstract idea are “central healthcare server,”⁸ “first healthcare information server,”⁹ “data stores,” “second healthcare information server,”¹⁰ “user interface,” “health information handling system,”¹¹ “one or more processors,”¹² “network,”¹³ “at least two healthcare information servers,”¹⁴ “consolidation engine,”¹⁵ “memory,”¹⁶ “data integrity engine,”¹⁷ “recommendation engine,”¹⁸ and “processor.”¹⁹ *See* 2019 Revised Guidance, 84 Fed. Reg. at 52. The additional elements of the present claims do not integrate the abstract idea

⁸ This limitation is recited only in claims 1 and 18 and their respective dependent claims.

⁹ This limitation is recited only in claims 1 and 18 and their respective dependent claims.

¹⁰ This limitation is recited only in claims 1 and 18 and their respective dependent claims.

¹¹ This limitation is recited only in claim 11 and its respective dependent claims.

¹² This limitation is recited only in claim 11 and its respective dependent claims.

¹³ This limitation is recited only in claim 11 and its respective dependent claims.

¹⁴ This limitation is recited only in claim 11 and its respective dependent claims.

¹⁵ This limitation is recited only in claim 11 and its respective dependent claims.

¹⁶ This limitation is recited only in claim 11 and its respective dependent claims.

¹⁷ This limitation is recited only in claim 11 and its respective dependent claims.

¹⁸ This limitation is recited only in claim 11 and its respective dependent claims.

¹⁹ This limitation is recited only in claim 18 and its respective dependent claims.

into a practical application because they do not impose any meaningful limits on practicing the abstract idea for the following reasons.

Appellant does not identify persuasively how the Specification sets forth an improvement in technology. The Update addresses how we consider evidence of improvement that is presented to us. The Update states:

the evaluation of Prong Two requires the use of the considerations (e.g. improving technology, effecting a particular change treatment or prophylaxis, implementing with a particular machine, etc.) identified by the Supreme Court and the Federal Circuit, to ensure that the claim as a whole “integrates [the] judicial exception into a practical application [that] will apply, rely on, or use the judicial exception in a manner that imposes a meaningful limit on the judicial exception, such that the claim is more than a drafting effort designed to monopolize the judicial exception.”

Update, 11 (emphases added). The Update further states:

[d]uring examination, the examiner should analyze the “improvements” consideration by evaluating the specification and the claims to ensure that a technical explanation of the asserted improvement is present in the specification, and that the claim reflects the asserted improvement. Generally, examiners are not expected to make a qualitative judgment on the merits of the asserted improvement. *If the examiner concludes the disclosed invention does not improve technology, the burden shifts to applicant to provide persuasive arguments supported by any necessary evidence to demonstrate that one of ordinary skill in the art would understand that the disclosed invention improves technology.* Any such evidence submitted under 37 C.F.R. § 1.132 must establish what the specification would convey to one of ordinary skill in the art and cannot be used to supplement the specification. For example, in response to a rejection under 35 U.S.C. § 101, an applicant could submit a declaration under § 1.132 providing testimony on how one of ordinary skill in the

art would interpret the disclosed invention as improving technology and the underlying factual basis for that conclusion.

Id. at 13 (emphasis added).

Here, the Examiner concludes the present claims are not integrated into a practical application. Ans. 4–5; Non-Final Act. 2–3, 5. Appellant does not present evidence in the form of a declaration or citation to the Specification. Therefore, the argument in the Appeal Brief citing to Example 42 of the 2019 Revised Guidance is merely attorney argument unsupported by evidence. Appeal Br. 17–21 (citing Example 42 in the 2019 Revised Guidance).

Moreover, unlike the present claims, claim 1 in Example 42 does not recite updating confidential medical information from two sets of confidential medical information to form a consolidated set of confidential medical information and generating a message comprising one or more care recommendations for an identified patient based on the consolidated set of confidential medical information. And unlike the present claims, one of the limitations in claim 1 of Example 42 recites format conversion that improved the prior art by allowing remote users to share information in real time in a standardized format regardless of the format in which the information was input by the user (i.e., “converting . . . the non-standardized updated information into the standardized format”).

Further, the additional elements in the present claims, namely “central healthcare server,” “first healthcare information server,” “data stores,” “second healthcare information server,” “user interface,” “health information handling system,” “one or more processors,” “network,” “at least two healthcare information servers,” “consolidation engine,” “memory,” “data

integrity engine,” “recommendation engine,” and “processor” do not, either individually or in combination, integrate the abstract idea into a practical application. Appellant’s Specification discloses that these elements encompass generic computer components. Spec. ¶¶ 61–65, 83, 93–98, 197. Merely adding generic computer components to perform abstract ideas does not integrate those ideas into a practical application. *See* 2019 Revised Guidance, 84 Fed. Reg. at 55 (identifying “merely includ[ing] instructions to implement an abstract idea on a computer” as an example of when an abstract idea has not been integrated into a practical application).

In addition, “a claim for a *new* abstract idea is still an abstract idea.” *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1151 (Fed. Cir. 2016). We disagree with Appellant’s argument that the present claims are novel and non-obvious and are, therefore, an unconventional claimed solution. Appeal Br. 21. Appellant improperly conflates the requirements for patent-eligible subject matter (§ 101) with the independent requirements of novelty (§ 102) and non-obviousness (§ 103). “The ‘novelty’ of any element or steps in a process, or even of the process itself, is of no relevance in determining whether the subject matter of a claim falls within the § 101 categories of possibly patentable subject matter.” *Diehr*, 450 U.S. at 188–89; *see also Genetic Techs. Ltd. v. Merial L.L.C.*, 818 F.3d 1369, 1376 (Fed. Cir. 2016) (stating that, “under the *Mayo/Alice* framework, a claim directed to a newly discovered law of nature (or natural phenomenon or abstract idea) cannot rely on the novelty of that discovery for the inventive concept necessary for patent eligibility”).

Appellant does not make any other arguments pertaining to Step 2A, Prong 2. Because the present claims recite an abstract idea that is not

integrated into a practical application, we proceed to Step 2B.

F. Step 2B

The additional elements, either individually or in combination, do not amount to an inventive concept. An inventive concept “cannot be furnished by the unpatentable law of nature (or natural phenomenon or abstract idea) itself.” *Genetic*, 818 F.3d at 1376; *see also* 2019 Revised Guidance; *Alice*, 573 U.S. at 217 (explaining that, after determining a claim is directed to a judicial exception, “we then ask, ‘[w]hat else is there in the claims before us?’” (alteration in original) (quoting *Mayo*, 566 U.S. at 78)). Instead, an “inventive concept” is furnished by an element or combination of elements that is recited in the claim in addition to the judicial exception and sufficient to ensure the claim as a whole amounts to significantly more than the judicial exception itself. *Alice*, 573 U.S. at 218–19 (citing *Mayo*, 566 U.S. at 72–73); *see BSG Tech LLC v. BuySeasons, Inc.*, 899 F.3d 1281, 1290 (Fed. Cir. 2018) (explaining that the Supreme Court in *Alice* “only assessed whether the claim limitations other than the invention’s use of the ineligible concept to which it was directed were well-understood, routine and conventional” (emphasis added)).

We agree with the Examiner’s determination that the present claims recite an abstract idea using additional elements that are well-understood, routine, and conventional. Non-Final Act. 5–6 (citing Spec. ¶ 65; MPEP § 2106.05); Ans. 7 (citing Spec. ¶ 65; MPEP § 2106.05). The Specification supports the Examiner’s determination in this regard, because it explains that “central healthcare server,” “first healthcare information server,” “data stores,” “second healthcare information server,” “user interface,” “health information handling system,” “one or more processors,” “network,” “at

least two healthcare information servers,” “consolidation engine,” “memory,” “data integrity engine,” “recommendation engine,” and “processor” are generic computer components. Spec. ¶¶ 61–65, 83, 93–98, 197. Appellant’s Specification indicates these additional elements were well-understood, routine, and conventional components because it describes them at a high level of generality and in a manner that indicates that they are sufficiently well-known. *Id.*

We, therefore, disagree with Appellant’s argument that the Examiner fails to provide sufficient evidence to support the finding that the additional elements implementing the abstract idea are well-understood, routine, and conventional. Appeal Br. 21 (citing *Berkheimer v. HP Inc.*, 881 F.3d 1360 (Fed. Cir. 2018)).

Appellant does not argue claims 1–12 and 14–20 separately with particularity. Appeal Br. 13–22. For at least the above reasons, we conclude, under the 2019 Revised Guidance, that each of the present claims, considered as a whole, is directed to a patent-ineligible abstract idea that is not integrated into a practical application, and does not include an inventive concept. We therefore sustain the Examiner’s rejection of: (1) independent claims 1, 11, and 18; and (2) dependent claims 2–10, 12, 14–17, 19, and 20 under 35 U.S.C. § 101.

We have only considered those arguments that Appellant actually raised in the Briefs. Arguments Appellant could have made, but chose not to make, in the Briefs have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(iv).

CONCLUSION

| Claim(s) Rejected | 35 U.S.C. § | Reference(s)/Basis | Affirmed | Reversed |
|------------------------------|------------------------|---------------------------|-----------------|-----------------|
| 1-12, 14- 20 | 101 | Eligibility | 1-12, 14- 20 | |

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). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED