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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte GONZALO A. GARCIA

Appeal 2018-003816
Application 14/273,964
Technology Center 2800

Before DONNA M. PRAISS, JENNIFER R. GUPTA, and
MERRELL C. CASHION, JR., *Administrative Patent Judges*.

GUPTA, *Administrative Patent Judge*.

DECISION ON APPEAL¹

Appellant² appeals under 35 U.S.C. § 134(a) from the Examiner’s final decision rejecting claims 1–16. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ In this Decision, we refer to the Specification filed May 9, 2014 (“Spec.”), the Final Office Action dated April 24, 2017 (“Final Act.”), the Appeal Brief filed September 18, 2017 (“Appeal Br.”), the Examiner’s Answer dated December 29, 2017 (“Ans.”), and the Reply Brief filed February 27, 2018 (“Reply Br.”).

² Appellant identifies the real party in interest as Baker Hughes Incorporated, whose name changed as of July 3, 2017, to Baker Hughes, a GE company, LLC. Appeal Br. 2.

The subject matter on appeal relates to a non-transitory medium that includes computer executable instructions for presenting dumpflood data to a user by implementing steps on a computer, and a method for presenting dumpflood data to a user. Spec. ¶¶ 3–4.

Dumpflooding is a method used in oil production for flowing a fluid from a first subsurface reservoir (e.g., containing water) to a second subsurface reservoir that is beneath the first reservoir (e.g., containing oil). *Id.* ¶ 13. The addition of water to the oil reservoir provides the reservoir support pressure necessary for oil production. *Id.* ¶ 2. The water is injected either by gravity and/or pump from the upper reservoir into the lower reservoir via a borehole connecting the two reservoirs. *Id.* ¶ 13. There are different types of equipment and technologies to transfer the water. *Id.* The claimed method on appeal, which is implemented by a computer processing system, allows for easily inputting and changing any of several variables that may be used to calculate pressures that are required for flowing the water. *Id.*

Claims 1 and 10, reproduced below from the Claims Appendix of the Appeal Brief, are illustrative of the claims on appeal.

1. A non-transitory computer-readable medium comprising computer-executable instructions for presenting dumpflood data to a user by implementing steps on a computer, the steps comprising:
 - receiving first data describing a first subsurface volume;
 - receiving second data describing a second subsurface volume that is deeper than the first subsurface volume;
 - calculating pressures required for a fluid to flow in a borehole from the first volume to the second volume as a function of vertical height of the first volume (h_1), permeability

of the first volume (k_1), vertical height of the second volume (h_2), permeability of the second volume (k_2), a first damage factor (S_1) representing damage to the first volume, and a second damage factor (S_2) representing damage to the second volume, wherein the calculating uses the first data and the second data;

displaying on a computer display a graphical representation of the calculated pressures and inputs used to calculate the pressures; and

presenting an option comprising installing or operating a dumpflood component in response to the calculated pressures.

10. A method for presenting dumpflood data to a user and installing or operating a dumpflood component, the method comprising:

receiving first data describing a first subsurface volume using a computer processing system;

receiving second data describing a second subsurface volume that is deeper than the first subsurface volume using the computer processing system;

calculating, using the computer processing system, pressures required for a fluid to flow in a borehole from the first volume to the second volume as a function of vertical height of the first volume (h_1), permeability of the first volume (k_1), vertical height of the second volume (h_2), permeability of the second volume (k_2), a first damage factor (S_1) representing damage to the first volume, and a second damage factor (S_2) representing damage to the second volume, wherein the calculating uses the first data and the second data;

displaying on a computer display a graphical representation of the calculated pressures and inputs used to calculate the pressures;

presenting an option comprising installing or operating a dumpflood component using the computer processing system in response to the calculated pressures; and

installing or operating the dumpflood component in response to the option.

Appeal Br. 12–14 (Claims App.).

DISCUSSION

The Examiner maintains the rejection of claims 1–16 under 35 U.S.C. § 101 because the claimed invention is directed to a judicial exception (i.e., an abstract idea) without significantly more. Final Act. 2; Ans. 2.

After review of the cited evidence in light of the Appellant and the Examiner’s opposing positions, we determine that Appellant has not identified reversible error in the Examiner’s rejection. Accordingly, we affirm the rejection for the reasons set forth below, in the Final Office Action, and in the Examiner’s Answer.

Appellant argues the claims in the following groups: 1) claims 1–9, and 2) claims 10–16. We address each group in turn below. We choose independent claim 1 as representative of the first group of claims and independent claim 10 as representative of the second group of claims. 37 C.F.R. § 41.37(c)(1)(iv) (2013). Each of dependent claims 2–9 and 11–16 will stand or fall with the independent claim from which it depends.

A two-step framework for determining whether claimed subject matter is judicially-excepted from patent eligibility under § 101 is set forth in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66, 78–79 (2012), and further explained in *Alice Corp. Pty. Ltd. v. CLS Bank International*, 573 U.S. 208 (2014). The first step requires determining whether the claims at issue are directed to a patent-ineligible concept, such as an abstract idea. *See Alice*, 573 U.S. at 217 (citing *Mayo*, 566 U.S. at 76–

77). The second step requires examining “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 (quoting *Mayo*, 566 U.S. at 72, 79).

The Examiner finds that claim 1 is directed to an abstract idea because “the concept of presenting data, calculating values of parameters and then displaying a graphic representation are identified as abstract by courts, see *Alice*, *Bilski*.” Final Act. 2–3. The Examiner also finds that the additional elements, such as implementing the computation on a “computer” and “displaying on [a] computer display” are “well understood[,] routine, and conventional elements that amount to no more than implementing the idea with a computerized system.” *Id.* at 3. According to the Examiner, “[t]he combination of these computer elements with the abstract idea (calculating pressure, which is considered a human thought process) add nothing more than what is present when the elements are considered individually.” *Id.* And, there is no indication that the combination provides any effect regarding the functioning of the computer or any improvement to another technology. *Id.* As for the last step of claim 1—“presenting an option comprising installing or operating a [dumpflood] component in response to the calculated pressures,” the Examiner finds that this step does not add or change the abstractness of the idea because “it is simply providing information to the end user[, which is] synonymous to the ‘displaying on a computer display.’” *Id.*

The Examiner relies on the same rationale discussed above for claim 1 for rejecting claim 10. *Id.*

Claims 1–9

Appellant argues that claim 1 includes steps that “improve the functionality of hydrocarbon production technology by presenting options for installing or operating specific dumpflood components in order to efficiently extract hydrocarbons using a dumpflooding process.” Appeal Br. 5. In addition, Appellant argues that “claim 1 according to the 2014 Interim Guidance includes subject matter that qualifies as ‘significantly more’ than the judicial exception itself.” *Id.*

These arguments are not persuasive because Appellant is arguing limitations that do not appear in the claim. Claim 1 neither recites an improvement to the functionality of hydrocarbon production nor does Appellant explain how claim 1’s recited steps improve the functionality of hydrocarbon production. Rather, claim 1 merely recites steps that amount to the collection and analysis of data, followed by the presentation of the results to the user, with the results including an option that may or may not be selected and implemented and thus are directed to an abstract idea similar to the claims in *Electric Power Group, LLC v. Alstom S.A.*, 830 F.3d 1350, 1353–54 (Fed. Cir. 2016). Ans. 10.

We are also not persuaded that claim 1’s steps are not conventional in the art as evidenced by the lack of prior art rejections. Reply Br. 3. “[T]he concept of inventiveness [under § 101] is distinct from that of novelty” and “[t]he inventiveness inquiry of § 101 should therefore not be confused with the separate novelty inquiry of § 102 or the obviousness inquiry of § 103.” *See Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1311 (Fed. Cir. 2016). A novel and nonobvious claim directed to a purely abstract idea is, nonetheless, patent-ineligible. *See Mayo*, 566 U.S. at 90.

Appellant argues that claim 1 is similar to the claims in *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1336 (Fed. Cir. 2016) and *McRO, Inc. v. Bandai Namco Games America Inc.*, 837 F.3d 1299, 1314 (2016), and does not claim an abstract idea. Appeal Br. 5–8.

Appellant’s arguments are not persuasive of reversible error. Unlike *Enfish* where the claims were deemed to be an improvement in computer technology, claim 1 recites steps in which a computer is used as a tool for performing calculations. Moreover, as the Examiner points out, the computer recited in claim 1 is a general purpose computer. Ans. 10; Spec. ¶ 22. Likewise, claim 1 is not similar to the claims in *McRO*, which allowed a computer to automatically perform a task which was previously performed in a different manner by humans. Rather, claim 1 receives data, performs a calculation, and displays the results like the claims found to be patent ineligible in *Electric Power*. Ans. 10. Nor is it evident from Appellant’s Specification that claim 1’s method recites a qualitatively different method for presenting dumpflood data to a user than had previously been available. As the Examiner explains, “[p]resumably[] a human previously trying to carry out the same task would or could have done so in the same manner, performing the same calculation ‘by hand’ and getting the same results, which would then provide the same information to determine which of various options would be most appropriate.” Ans. 11.

Appellant argues that the Examiner fails to present evidence or an explanation why “displaying on a computer display a graphical representation of the calculated pressures and inputs used to calculate the pressures” and “presenting an option comprising installing or operating a dumpflood component in response to the calculated pressures” are routine

and well understood in the art of hydrocarbon production technology.

Appeal Br. 9.

This argument is not persuasive because it is well established that generic computer displays are well-understood, routine, and conventional in the art. *Alice*, 134 S. Ct. at 2358 (“the mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention”); *id.* at 2357 (“[C]laims, which merely require generic computer implementation, fail to transform [an] abstract idea into a patent-eligible invention.”).

Because Appellant’s arguments do not identify reversible error in the Examiner’s 35 U.S.C. § 101 analysis, we sustain the rejection of claims 1–9.

Claims 10–16

Appellant argues that claim 10’s recitation of “installing or operating the dumpflood component in response to the option,” is a physical action using physical equipment (i.e., the dumpflood component). Appeal Br. 9. Appellant argues that the physical action using physical equipment is clearly not an abstract idea. *Id.* at 9–10. Consequently, claim 10 includes subject matter that is “significantly more” than the abstract idea itself alleged by the Examiner and is thus patent eligible under 35 U.S.C. 101. *Id.* at 10.

Appellant’s arguments are not persuasive of reversible error because, as the Examiner explains, the limitation “installing or operating the dumpflood component in response to the option” is recited at a very high level of generality, including essentially all possible actions that could be taken as a result of presenting the option to the user. Moreover, “installing or operating the dumpflood component in response to the option” includes choosing not to operate the dumpflood component, i.e., leaving the

dumpflood component idle. Spec. ¶ 13 (“the user may observe from the graph that the pressure from gravity is sufficient to flow the water and no further intervention may be required”). Thus, the additional limitation of claim 10 does not distinguish the claim in terms of patent eligibility over the limitations of claim 1.

Because Appellant’s arguments do not identify reversible error in the Examiner’s 35 U.S.C. § 101 analysis, we sustain the rejection of claims 10–16.³

DECISION

The rejection of claims 1–16 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

³ For the first time in the Reply Brief, Appellant raises arguments concerning claim 14. Reply Br. 7. This argument is untimely because it was not presented in the Appeal Brief, and the Appellant has not attempted to show good cause for presenting it for the first time in the Reply Brief. *See* 37 C.F.R. § 41.41(b)(2).