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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte CHRISTOPHER M. JONES,
MICHAEL T. PELLETIER, and MARK PROETT

Appeal 2018-000068
Application 14/344,842
Technology Center 2800

Before LINDA M. GAUDETTE, WESLEY B. DERRICK, and
JENNIFER R. GUPTA, *Administrative Patent Judges*.

GAUDETTE, *Administrative Patent Judge*.

DECISION ON APPEAL¹

Appellants² appeal under 35 U.S.C. § 134(a) from the Examiner’s decision finally rejecting claims 1–31 under 35 U.S.C. § 101. Appeal Br. 3. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ This Decision includes citations to the following documents: Specification filed Mar. 13, 2014 (“Spec.”); Final Office Action mailed Nov. 28, 2016 (“Final”); Appeal Brief filed May 10, 2017 (“Appeal Br.”); Examiner’s Answer mailed Aug. 11, 2017 (“Ans.”); and Reply Brief filed Oct. 3, 2017 (“Reply Br.”).

² Appellants identify the real party in interest as Halliburton Energy Services, Inc. Appeal Br. 2.

The invention relates to measuring an adsorbing chemical in downhole fluids. *Spec.*, Title. During the drilling and completion of oil and gas wells, samples are taken from within the wellbore to determine various formation properties. *Id.* ¶ 2. In “tools for measuring or capturing formation fluids with adsorbing or corrosive chemicals, the adsorbing chemical interacts and reacts with the tool itself.” *Id.* ¶ 31. Because the actual concentration of the chemical in a pristine reservoir fluid is changed by tool interaction, the measurement of the chemical is not representative of its concentration within a reservoir fluid. *Id.* ¶ 34. According to the Specification, this inaccuracy is problematic because “[t]he acquisition of accurate data from the wellbore is critical to the optimization of hydrocarbon wells.” *Id.* ¶ 2. The invention provides a model or simulation that describes chemical-tool interaction and correlates measured to actual chemical levels in a reservoir fluid. *Id.* ¶ 41. Use of the model or simulation allows a sampling or measurement job to be modified in real time. *Id.*

In traversing the Examiner’s rejection, Appellants argue claims 1–31 as a group. *See generally*, Appeal Br. 3–9. Accordingly, we decide the appeal as to claims 1–31 on the basis of claim 1 alone. *See* 37 C.F.R. § 41.37(c)(iv). For reference, claim 1 is reproduced below:

1. A method of sampling fluids including an adsorbing chemical in a subterranean reservoir comprising:
 - modeling a chemical interaction between an adsorbing chemical and a downhole tool;
 - applying the model to a measurement of the adsorbing chemical from a downhole fluid sampled by the tool; and
 - adjusting the measurement in response to applying the model.

Appeal Br. 10.

Alice Corp. Pty. Ltd. v. CLS Bank International, 134 S. Ct. 2347 (2014) (“*Alice*”) identifies a two-step framework for determining whether claimed subject matter is judicially-excepted from patent eligibility under § 101. According to *Alice* step one, “[w]e must first determine whether the claims at issue are directed to a patent-ineligible concept,” such as an abstract idea. *Id.* at 2355. The second step of the *Alice* framework is “a search for an ‘inventive concept’—i.e., an element or combination of elements that is ‘sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.’” *Id.* (alteration in original) (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 72–73 (2012)).

Alice Step 1: Is claim 1 directed to a patent-ineligible concept?

The Examiner determines claim 1 is directed to a patent-ineligible concept, namely, the abstract idea of organizing information through mathematical correlations (the claim 1 modeling and applying steps) and comparing data to determine a risk level (the claim 1 adjusting step). Final 5–6. The Examiner contends “the claims do not go beyond requiring the collection, analysis, and updating [of] measurements by an algorithm in a particular field, stating those functions in general terms [T]he claims[] defin[e] a desirable information-based result and [are] not limited to inventive means of achieving the results.” Ans. 3–4 (citing *Electric Power Group, LLC v. Alstom S.A.*, 830 F.3d 1350 (Fed. Cir. 2016) (“*Electric Power Group*”).

Appellants argue the claims are directed to more than “mere patent ineligible mathematical relationships, . . . [and] in fact provide improved computer functions not previously provided by the prior art (as evidenced by the fact that all art rejections have been overcome).” Appeal Br. 5; *see also id.* at 4 (arguing the claims are not directed to a patent-ineligible concept “because, at the least, they are

directed to improvements in computer-related technology”) (citing *McRo, Inc. v. Bandai Namco Games America Inc.*, 837 F.3d 1299 (Fed. Cir. 2016) (“*McRo*”)); Reply Br. 4 (arguing the improved measurement of the invention “enables the computer to provide an improved measurement (*i.e.*, improved functionality) through use of a novel algorithm”). Appellants assert that

just as in the *McRo* case, the claimed invention improves upon computer-related technology in the oil and gas industry and the specification supports this assertion. The prior art failed to provide the ability to account for chemical adsorption into the downhole tool during measurement calculations, and the present claimed invention now provides this processing ability. Therefore, just as the claims in the *McRo* case were found patent eligible, the present claims should be found patent eligible at least for this reason.

Appeal Br. 5.

Claim 1 recites a method of sampling fluids that includes the steps of modeling, applying, and adjusting. Claim 1 does not explicitly recite the use of a computer to perform these steps, nor does claim 1 recite a specific algorithm.

Appellants have not directed us to, nor do we find, any disclosure in the Specification that supports a narrow interpretation of claim 1 as requiring the use of a computer or a particular algorithm. Because Appellants’ arguments rely on limitations that are not present in claim 1, we are not persuaded that the Examiner erred in determining claim 1 is directed to an abstract idea. *See In re Self*, 671 F.2d 1344, 1348 (CCPA 1982) (“Many of appellant’s arguments fail from the outset because, . . . they are not based on limitations appearing in the claims . . .”).³*Alice*

Step 2: Does claim 1 contain an inventive concept sufficient to transform the nature of the claim into a patent-eligible application?

³With respect to Appellants’ reliance on the absence of a rejection under 35 U.S.C. §§ 102 and 103 as supporting its contention that the claims are not directed to an abstract idea, *see* Appeal Br. 5 (“the claims . . . provide improved computer functions not previously provided by the prior art (as evidenced by the fact that all art rejections have been overcome)”), we note that “[t]he question . . . of whether a particular invention is novel is wholly apart from whether the invention falls into a category of statutory subject matter.” *Diamond v. Diehr*, 450 U.S. 175, 190 (1981) (internal quotation marks and citation omitted).

The Examiner determines the claims are not directed to a patent-eligible application of the abstract idea because the claims do no more than recite a “generic system of monitoring drilling and completion of oil and gas wells system [and] evaluating the production capabilities of formations” Final 10–11; Ans. 7.

Appellants argue that, even assuming claim 1 is directed to an abstract idea, the meaningful limitations are significantly more, thus rendering the claim patent-eligible. Appeal Br. 6. Appellants argue, more specifically, that

the claims provide improvements to the oil and gas industry^[4] Moreover, the claims recite features which go well beyond what is well-understood, routin[e] and conventional in the field. The prior art fails to teach any method by which to correct for the adsorption chemical/downhole tool interaction in adsorption analysis. Moreover, the measurements are adjusted (*i.e.*, transformed) to the corrected measurement, as claimed. Accordingly, the claims meet the “significantly more” test [of *Alice*], and the rejection should be withdrawn.

Id. at 7. The Examiner, in response, asserts that the step of “adjusting the measurement in response to applying the model” (claim 1) “merely present[s] the results of collecting and analyzing information,” Ans. 13, and is insufficient to transform the nature of the claim into a patent-eligible application, *see id.* (citing *Electric Power Group*). We agree with the Examiner that applying results obtained by collecting and analyzing information to the particular technological environment of measuring the concentration of a chemical in a reservoir fluid, as recited in claim 1, “is, without more, insufficient to transform [claim 1] into [a]

⁴Appellants also argue the claims provide “improvements to the functioning of the computer itself.” *Id.* at 7. As explained above, claim 1 does not require a computer, therefore, we do not address this argument since it is not commensurate in scope with claim 1.

patent-eligible application[] of the abstract idea” *Electric Power Group*, 830 F.3d at 1354; *see also Parker v. Flook*, 437 U.S. 584, 594–95 (1978) (“As the Court of Customs and Patent Appeals has explained, ‘if a claim is directed essentially to a method of calculating, using a mathematical formula, even if the solution is for a specific purpose, the claimed method is nonstatutory.’” (quoting *In re Richman*, 563 F.2d 1026, 1030 (1977))).

Appellants’ argument that “the claims . . . do not seek to preempt the use of any judicial exception” (Appeal Br. 7) has been fully addressed by the Examiner and is not persuasive for the reasons stated in the Answer (*see* Ans. 13–14). Appellants’ remaining arguments are based on alleged improvements in computer functionality provided by the invention. *See generally* Appeal Br. 4–8; Reply Br. 3–5. As explained above, these arguments are not persuasive because they are not commensurate in scope with the claims.⁵

Accordingly, we sustain the Examiner’s rejection of claims 1–31 under 35 U.S.C. § 101.

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

⁵Appellants rely heavily on the Court’s decision in *McRo* in support of their contention that the claims are eligible for patentability under 35 U.S.C. § 101. However, as acknowledged by Appellants, the claims in *McRo* were directed to improvements to computer functions. *See* Reply Br. 3. Accordingly, we do not view the decision in *McRo* as particularly relevant to the issue of whether claim 1, which does not recite a computer, is eligible for patentability under 35 U.S.C. § 101.