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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL
AND APPEAL BOARD

Ex parte JOHN LIONEL WESTON, STEPHEN VICTOR MULLIN, and ROGER EKSETH[1]

Appeal 2018-003536
Application 13/791,603
Technology Center 2800

Before BEVERLY A. FRANKLIN, JAMES C. HOUSEL, and LILAN REN, *Administrative Patent Judges*.

FRANKLIN, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants request our review under 35 U.S.C. § 134(a) of the Examiner's decision rejecting claims 1–14 and 16–28. We have jurisdiction over the appeal under 35 U.S.C. § 6(b).

STATEMENT OF THE CASE

Claim 1 is illustrative of Appellants' subject matter on appeal and is set forth below (with text in bold for emphasis):

1. A method of generating a survey of a wellbore section, the method comprising:

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[1] Appellants identify the real party in interest as Gyrodata, Incorporated.

acquiring first survey measurements for a first survey of the wellbore section using at least one first survey sensor, and acquiring second survey measurements for a second survey of the wellbore section using at least one second survey sensor;

analyzing the first survey of the wellbore section to identify survey measurements of the first survey that do not comprise first gross errors, and analyzing the second survey of the wellbore section to identify survey measurements of the second survey that do not comprise second gross errors;

generating an initial weighted average survey by combining the identified survey measurements of the first survey multiplied by a first initial weighting function and the identified survey measurements of the second survey multiplied by a second initial weighting function;

calculating a first set of measurement differences between the identified survey measurements of the first survey and the initial weighted average survey, and calculating a second set of measurement differences between the identified survey measurements of the second survey and the initial weighted average survey;

(a) calculating a first estimate of error terms for the first survey using the first set of measurement differences, and calculating a second estimate of error terms for the second survey using the second set of measurement differences;

(b) using the first estimate of error terms to correct the identified survey measurements of the first survey, and using the second estimate of error terms to correct the identified survey measurements of the second survey;

(c) generating an updated weighted average survey by combining the corrected identified survey measurements of the first survey multiplied by a first corresponding weighting function and the corrected identified survey measurements of the second survey multiplied by a second corresponding weighting function;

(d) calculating an updated first set of measurement differences between the identified survey measurements of the first survey and the updated weighted average survey, and calculating an updated second set of measurement differences between the identified survey measurements of the second survey and the updated weighted average survey;

(e) using the updated first set of measurement differences and the updated second set of measurement differences, iterating (a)-(d) until one or more conditions for terminating the iterations are met; and

steering a wellbore drilling tool based on the updated weighted survey after the iterations are terminated.

THE REJECTION

Claims 1–14 and 16–28 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to a judicial exception (i.e., a law of nature, a natural phenomenon, or an abstract idea) without significantly more.

ANALYSIS

Upon consideration of the evidence and each of the respective positions set forth in the record, we find that the preponderance of evidence supports Appellants' position in the record for essentially the reasons stated therein, with the following emphasis. We thus reverse the rejection.

As pointed out by Appellants on page 22 of the Appeal Brief, claim 1 (as well as the other independent claims 18 and 28) each include steering a wellbore drilling tool based on the updated weighted survey after the iterations are terminated, and that this is applying the alleged abstract concept "with, or by use of, a particular machine", and accordingly,

claim 1 amounts to significantly more than an abstract idea.[2] Appellants further argue (on pages 6–7 of the Reply Brief) that the improved accuracy of the resulting survey leads to an improved steering of the wellborne drilling tool. We are persuaded by such argument. The instant case can be likened to the case of *McRO, Inc. v. Bandai Namco Games America, Inc.* 837 F.3d 1299, 1314 (Fed. Cir. 2016) (the claim's construction incorporated rules of a particular type that improved an existing technological process). *See also Diamond v. Diehr*, 450 U.S. 175 (involves application of an algorithm to a process for molding and curing rubber). Additionally, we refer to the case of *Vanda Pharma. Inc. v. West-Ward Pharma. Int'l Ltd.*, 887 F.3d 1117, 1134–1136 (Fed. Cir. 2018). We analogize from *Vanda* that Appellants' claim 1 does not tie up all steering of the wellbore tool, but only those where the steering is performed based on the updated weighted survey after the iterations are terminated. Similarly, the end result of the claim is not simply an observation or detection or display of the results of the updated weighted survey after the iterations are terminated; rather the claims are directed to a new and useful process of steering a wellbore tool. The

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[2] To determine whether an invention claims ineligible subject matter, the Supreme Court has established a two-step framework. First, we must determine whether the claims at issue are directed to a patent-ineligible concept such as an abstract idea. *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2355 (2014). Second, if the claims are directed to an abstract idea, we must "consider the elements of each claim both individually and 'as an ordered combination' to determine whether the additional elements 'transform the nature of the claim' into a patent eligible application." *Id.* (quoting *Mayo*, 566 U.S. at 79). To transform an abstract idea into a patent-eligible application, the claims must recite "more than simply stating the abstract idea while adding the words 'apply it.'" *Id.* at 2357 (quoting *Mayo*, 566 U.S. at 72 (internal alterations omitted)).

Examiner's stated response made at the top of page 5 of the Answer does not take this aspect of the claims into proper consideration. We further note that our reviewing court has explained that the *Alice* test requires a factual determination as to whether a claim element or combination is conventional. *Berkheimer v. HP Inc.,* 881 F.3d 1360, 1368–69 (Fed Circ. 2018). This response by the Examiner also fails to establish under *Berkheimer* that the steering step was well-known, routine, and conventional in the art. Here, the Examiner states that the steering step is a conventional activity that could use any data to steer, yet the steering step in the claims relies specifically on the updated weighted survey after the iterations are terminated. Also, the Examiner fails to direct our attention to any evidence in the record to support this stated position. Thus, on this record, the Examiner fails to establish that steering a wellbore based on the updated weighted survey after the iterations are terminated is well-known, routine, and conventional.

In view of the above, we reverse the rejection.

DECISION

The rejection is reversed.

ORDER

REVERSED