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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte CHUMKI BASU, KAUSHIK DAS, JAGABONDHU HAZRA, and DEVASENAPATHI P. SEETHARAMAKRISHNAN

Appeal 2017-007628
Application 14/015,426
Technology Center 2800

Before ROMULO H. DELMENDO, BRIAN D. RANGE, and MICHAEL G. MCMANUS, *Administrative Patent Judges*.

DELMENDO, *Administrative Patent Judge*.

DECISION ON APPEAL

The Applicant (hereinafter "Appellant")[1] appeals under 35 U.S.C. § 134(a) from the Primary Examiner's final decision to reject claims 1–20.[2] We have jurisdiction under 35 U.S.C. § 6(b).

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[1] The Appellant is the Applicant, "International Business Machines Corporation," which, according to the Brief, is the real party in interest (Appeal Brief filed December 12, 2016, hereinafter "Br.," 3).

[2] Br. 21–34; Final Office Action entered July 11, 2016, hereinafter "Final Act.," 2–5, 8–12; Examiner's Answer entered February 21, 2017, hereinafter "Ans.," 2–14.

We affirm. Because we discern no reversible error in the Examiner's factual findings and analysis in support of the rejection, we adopt them as our own and add the following for emphasis.

I. BACKGROUND

The subject matter on appeal relates generally to "[s]ystems and methods for cognitive alarm management in a power grid" (Specification filed August 30, 2013, hereinafter "Spec.," Abstract). Representative claim 1 is reproduced from the Claims Appendix to the Appeal Brief (Br. 37), with key limitations emphasized, as follows:

> 1. A method of cognitive alarm management, said method comprising:
>
> ***utilizing at least one processor to execute computer code*** configured to perform the steps of:
>
> ***receiving, from a plurality of sensors of a power grid, a plurality of sensor measurements***;
>
> transforming the plurality of sensor measurements into a state estimation of the power grid, the state estimation of the power grid including two or more alarms;
>
> determining rankings of the two or more alarms, wherein the determining comprises identifying a historical alarm condition having a similarity to the state estimation of the power grid and ranking the two or more alarms based upon a resolution of the historical alarm condition;
>
> simulating power flow resulting from resolution of the two or more alarms in rank-order, according to the rankings of the two or more alarms;
>
> determining a final ranking of the two or more alarms based on said simulating;
>
> wherein the final ranking of the two or more alarms identifies a causal alarm to be prioritized for resolution, wherein

> the causal alarm comprises an alarm that when resolved resolves at least one other of the two or more alarms; and
>
> providing a recommendation based upon the final ranking, wherein the recommendation comprises recommending an order for resolving the two or more alarms, wherein the order comprises the causal alarm being prioritized.

II. REJECTION ON APPEAL

On appeal, claims 1–20 stand rejected under 35 U.S.C. § 101 as unpatentable because these claims are directed to a judicial exception—i.e., an abstract idea—that does not amount to significantly more than a patent on the abstract idea itself (Ans. 2–14; Final Act. 2–12).

III. DISCUSSION

The Appellant argues claims 1–20 together (Br. 22–34). Therefore, we confine our discussion to claim 1, which we select as representative pursuant to 37 C.F.R. § 41.37(c)(1)(iv). As provided by this rule, claims 2–20 stand or fall with claim 1.

The Examiner finds that claim 1 recites limitations that concern "organizing information through mathematical correlations or algorithms, similar to concepts found abstract previously by the courts" (Ans. 2–3; Final Act. 2–3). In particular, the Examiner finds that "[t]he claim is particularly similar to [a] recent case"—namely, *Electric Power Group, LLC v. Alstom Ltd.*, 830 F.3d 1350, 1351–1352 (Fed. Cir. 2016) (Ans. 3). The Examiner finds further that claim 1 does not recite additional elements or limitations that amount to significantly more than the abstract idea itself because the relevant additional elements or limitations (highlighted above in reproduced

claim 1) "are recited at a high level of generality, necessary, routine, or conventional to facilitate the application of the abstract idea" (*id.* at 2, 4).

The Appellant contends that the Examiner "has failed to articulate how the claims are directed to an abstract idea and fail to amount to significantly more than an abstract idea" (Br. 22). According to the Appellant, the Examiner's rejection is based on a "broad overgeneralization of the claims and that the Office has clearly ignored other claim limitations and relevant factors" (*id.* at 23). The Appellant argues that, under the *2014 Interim Guidance on Patent Subject Matter Eligibility*, 79 Fed. Reg. 74618 (Dec. 16, 2014) (hereinafter "*2014 Interim Guideline*"), the "claims are . . . directed to a technique for providing a resolution plan for managing and resolving the alarms" (*id.* at 24)—not "concepts that are fundamental or essential to science, technology, or modern commerce" (*id.* at 25; emphasis omitted). The Appellant urges that several court decisions, including *Diamond v. Diehr*, 450 U.S. 175 (1981), further support its view (*id.* at 26–33). Furthermore, the Appellant argues (*id.* at 33–34):

> [The] claims add "significantly more" to providing a plan recommendation for resolving two or more alarms by adding a capability the plan is based upon a determined ranking of the alarms, where the ranking is determined by identifying historical alarm conditions and simulating power flow resulting from the resolution of the alarms.

The Appellant's arguments fail to identify any reversible error in the Examiner's rejection. *In re Jung*, 637 F.3d 1356, 1365 (Fed. Cir. 2011).

The Supreme Court of the United States reaffirmed the long-held principle that 35 U.S.C. § 101 contains an "important implicit exception: Laws of nature, natural phenomena, and abstract ideas are not patentable." *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2354 (2014)

(quoting *Assoc. for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013)). The Court provided a two-step analytical framework for determining whether a claim is patent eligible. *Id.* at 2355. The first step requires determining whether the claim is directed to one of these exceptions, such as an abstract idea. *Id.* If so, the second step requires determining "[w]hat else is there in the claims before us?" *Id.* (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 78 (2012)). That step involves searching for an inventive concept—i.e., an element or combination of elements in the claim that is "sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [abstract idea] itself." *Id.* (quoting *Mayo*, 566 U.S. at 73).

Applying this analytical framework starting with the first step, we agree with the Examiner's finding (Ans. 3–4) that claim 1 is directed to the abstract idea of organizing information through mathematical correlations (or an algorithm) using a conventional computer (Spec. ¶ 17), consistent with the *2014 Interim Guideline* (79 Fed. Reg. at 74622), for the purpose of providing a recommendation based on alarm rankings in a manner that is similar to other claims held to be directed to an abstract idea. *Electric Power Group*, 830 F.3d at 1351–1352 (method comprising gathering a plurality of data streams from a power grid, analyzing and displaying event analysis results and diagnoses of events (using, e.g., historical data), updating data, and deriving a composite indicator of reliability that indicates power grid vulnerability based on computations held to be an abstract idea that does not amount to significantly more). Claim 1's determining a final ranking of alarms is analogous or similar to deriving composite reliability indicators indicative of power grid vulnerability as in *Electric Power Group*.

Even if the claims are "novel and nonobvious as compared to prior art techniques" as alleged by the Appellant (Br. 32–33 (emphasis omitted)), "a claim for a *new* abstract idea is still an abstract idea." *Synopsys, Inc. v. Mentor Graphics Corporation*, 839 F.3d 1138, 1151 (Fed. Cir. 2016).

The court precedents relied on by the Appellant are inapposite for the reasons given by the Examiner (Ans. 8–14). In particular, the invention in *Diehr* is significantly different from the invention recited in current claim 1 because, in *Diehr*, the new application of a mathematical correlation in a physical molding process resulted in an improved molding process that overcomes curing problems in the prior art. *Diehr*, 450 U.S. at 178, 187 ("[I]f the computer use incorporated in the process patent significantly lessens the possibility of 'overcuring' or 'undercuring,' the process as a whole does not thereby become unpatentable subject matter."). Furthermore, the reasons provided by the Court in *Electric Power Group*, 830 F.3d at 1354–1355, for finding that *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016), and *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014), are less relevant to a fact situation such as in the current appeal are also applicable here.

Turning to the second step in *Alice*, we find nothing in claim 1 that adds significantly more than the abstract idea itself. Although claim 1 recites "utilizing at least one processor to execute computer code configured to perform" certain steps including "receiving, from a plurality of sensors of a power grid, a plurality of sensor measurements" (Br. 37), claim 1 is directed to data gathering recited at a high level of generality using any conventional computer and then carrying out computations recited at a high level of generality using historical data to determine and recommend alarm

rankings. As in *Electric Power Group*, 830 F.3d at 1355, "[n]othing in the claims, understood in light of the specification, requires anything other than off-the-shelf, conventional computer, network, and display technology for gathering, sending, and presenting the desired information." Furthermore, as in *Electric Power Group*, *id.* at 1354, "the focus of the claims is not on . . . an improvement in computers as tools, but on certain independently abstract ideas that use computers as tools."

For these reasons and those given by the Examiner, we sustain the Examiner's rejection.

IV. SUMMARY

The rejection under 35 U.S.C. § 101 of claims 1–20 is sustained. Therefore, the Examiner's final decision to reject claims 1–20 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