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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ANIL KAMATH

Appeal 2018-000030
Application 13/905,412
Technology Center 3600

Before HUNG H. BUI, JON M. JURGOVAN, and
JOSEPH P. LENTIVECH, *Administrative Patent Judges*.

LENTIVECH, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant[1] appeals from the Examiner's decision to reject claims 1–17, 19, 20, and 22. Claims 18 and 21 have been canceled. *See* App. Br. 22 (Claims Appendix). We have jurisdiction over the pending claims under 35 U.S.C. § 6(b).

We reverse.

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[1] According to Appellant, the real party in interest is Adobe Systems Incorporated. App. Br. 1.

STATEMENT OF THE CASE

Appellant's Invention

Appellant's claimed invention generally relates to "contextual advertisement position bidding." Spec. ¶ 2. Claim 1, which is illustrative, reads as follows:

> 1. A method for determining a bidding strategy for placing a plurality of bids for a plurality of marketing options, the method comprising:
>
> performing, by one or more computing devices:
>
> determining empirical data associated with marketing options based on performance metrics of the marketing options and based on observation of web site traffic from user devices to computing resources that expose the user devices to the marketing options;
>
> generating a predictive model that comprises one or more statistical models, wherein the predictive model is generated based on the empirical data;
>
> determining at least one modeling parameter for the predictive model, wherein the at least one parameter is variable and is associated with at least one of a user characteristic or a marketing option characteristic;
>
> determining at least one objective for the predictive model to optimize;
>
> receiving a trigger event to optimize the predictive model, the trigger event associated with web site traffic to a set of web sites;
>
> optimizing the predictive model by solving an objective function based in part on the at least one modeling parameter, and the at least one objective, and at least one constraint; and
>
> determining, in real time relative to the trigger event, the bidding strategy based on the optimization of

> the predictive model, wherein the bidding strategy comprises a set of the marketing options that results in the optimization in accordance with the at least one modeling parameter, the at least one objective, and the at least one constraint, the set of marketing options used in connection with subsequent web site traffic to the set of web sites.

Rejection

Claims 1–17, 19, 20, and 22 stand rejected under 35 U.S.C. § 101 because the claimed subject matter is judicially-excepted from patent eligibility under § 101. Final Act. 5–7.

ANALYSIS

Rejection under 35 U.S.C. § 101

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 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. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014) (citation omitted).

In determining whether a claim falls within an excluded category, we are guided by the Supreme Court's two-step 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, 69 (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 water-proof cloth, vulcanizing India rubber, smelting ores" (*id.* at 184 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 Supreme 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 176; *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 Supreme 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.* (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 (citation 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.* (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.*

The PTO recently published revised guidance on the application of § 101. USPTO's 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) ("Memorandum"). Under that guidance, 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 interactions such as a fundamental economic practice, or mental processes); and
>
> (2) additional elements that integrate the judicial exception into a practical application (*see* MANUAL OF PATENT EXAMINING PROCEDURE (MPEP) § 2106.05(a)–(c), (e)–(h) (9th ed. Jan. 2018)).

See Memorandum, 84 Fed. Reg. at 52, 54–55. Only if a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, do we then look to whether the claim:

> (3) adds a specific limitation beyond the judicial exception that are not "well-understood, routine, conventional" in the field (*see* MPEP § 2106.05(d)); or
>
> (4) simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.

See Memorandum, 84 Fed. Reg. at 56.

STEP 1: STATUTORY CATEGORY?

Claim 1 recites a series of steps. Claim 1, therefore, claims a process.

STEP 2A – PRONG 1: IS THE CLAIM DIRECTED TO A JUDICIAL EXCEPTION?

Claim 1 is directed to a method for "determining a bidding strategy for placing a plurality of bids for a plurality of marketing options." App. Br. 18 (Claims Appendix). Determining a bidding strategy for placing a plurality of bids for a plurality of marketing options is similar to the concept of offer-based price optimization to which the claims in *OIP Techs., Inc. v. Amazon.com, Inc.* were directed. 788 F.3d 1359, 1362 (Fed. Cir. 2015). Offer-based price optimization is a fundamental economic practice. *Id.* As such, we agree with the Examiner that claim 1 is directed to a method of organizing human activity and, therefore, an abstract idea. Final Act. 5–6.

STEP 2A – PRONG 2: INTEGRATED INTO A PRACTICAL APPLICATION?

The claim recites the additional elements of "generating a predictive model that comprises one or more statistical modes, wherein the predictive model is generated based on empirical data;" "optimizing the predictive model by solving an objective function based in part on the at least one

modeling parameter, and the at least one objective, and at least one constraint;" and:

> determining, in real time relative to the trigger event, the bidding strategy based on the optimization of the predictive model, wherein the bidding strategy comprises a set of the marketing options that results in the optimization in accordance with the at least one modeling parameter, the at least one objective, and the at least one constraint, the set of marketing options used in connection with subsequent web site traffic to the set of web sites.

App. Br. 18 (Claims Appendix). Thus, the claim requires generating, optimizing, and using a predictive model to determine a set of marketing options that are applied to web site traffic for a plurality of web sites. These limitations implement the recited abstract idea with the particular computing device that is integral to the claim and apply or use the recited abstract idea in a meaningful way beyond generally linking the use of the abstract idea to a particular technological environment, such that the claim as a whole is more than a drafting effort designed to monopolize the exception. *See* Memorandum, 84 Fed. Reg. at 55. As such, claim 1 integrates the abstract idea into a practical application and, therefore, is directed to patent-eligible subject matter.

Accordingly, we do not sustain the Examiner's rejection of claim 1; independent claims 10 and 17, which recite corresponding limitations; and claims 2–9, 11–16, 19, 20, and 22, which depend from claims 1, 10, and 17.

DECISION

We reverse the Examiner's rejection of claims 1–17, 19, 20, and 22 under 35 U.S.C. § 101.

REVERSED