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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/060,862	10/23/2013	Ali Jalali	AMOBP502	1014

19694 7590 05/17/2019

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EXAMINER
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ART UNIT	PAPER NUMBER
3681	

NOTIFICATION DATE	DELIVERY MODE
05/17/2019	ELECTRONIC

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ALI JALALI, ALI DASDAN, and KUANG-CHIH LEE

Appeal 2018-005381
Application 14/060,862[1]
Technology Center 3600

Before: JOHN PINKERTON, BETH Z. SHAW, AND NORMAN BEAMER, *Administrative Patent Judges*.

SHAW, *Administrative Patent Judge*.

DECISION ON APPEAL

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[1] According to Appellants, the real party in interest is Amobee, Inc. App. Br. 3.

Appellants appeal under 35 U.S.C. § 134 from a rejection of claims 1–8 and 10–20. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

The invention is for efficient pacing of budgets for online advertising campaigns. Spec. ¶ 1. Claim 1, reproduced below, is illustrative of the claimed subject matter:

> 1. A method comprising:
>
> receiving, at a communications interface, a plurality of advertising requests from a real-time bidding exchange during a time interval, the time interval divided into a plurality of time periods, the plurality of time periods including a designated time period and one or more preceding time periods, each of the advertising requests capable of being purchased to present a respective online advertisement;
>
> determining, via a processor, a target budget for the designated time period;
>
> analyzing, via the processor, historical data for the one or more preceding time periods to generate a previous win rate that corresponds to a ratio of the number of bid requests placed and won on an advertising request to the total number of bid requests placed;
>
> for the designated time period, predicting via the processor a win ratio indicating a ratio of a first win rate for the designated time period to a second win rate for the one or more preceding time periods;
>
> analyzing, via the processor, historical data for one or more preceding time periods to predict a request ratio that corresponds to a ratio of the number of requests received for the one or more preceding time periods and the estimated number of requests to be received during the designated time period;
>
> determining, via the processor, a pacing rate for the designated time period, the pacing rate designating a portion of the advertising requests received during the designated time period on which to bid, wherein determining the pacing rate for

the designated time period is based on the predicted win ratio, the predicted request ratio, and the target budget; and

placing a plurality of bids on selected ones of the advertising requests received during the designated time period in accordance with the pacing rate by transmitting such bids via the communications interface to the real-time bidding exchange for presenting on-line advertisements to targeted users.

REJECTION

Claims 1–8, and 10–20 are rejected under 35 U.S.C. § 101.

OPINION

Appellants argue the pending claims as a group. As permitted by 37 C.F.R. § 41.37, we decide the appeal based on claim 1. *See* 37 C.F.R. § 41.37(c)(1)(iv) (2016).

Section 101 of the Patent Act provides that "any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof" is patent eligible. 35 U.S.C. § 101. But the Supreme Court has long recognized an implicit exception to this section: "Laws of nature, natural phenomena, and abstract ideas are not patentable." *Alice Corp. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014) (quoting *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013)). To determine whether a claim falls within one of these excluded categories, the Court has set out a two-part framework. The framework requires us first to consider whether the claim is "directed to one of those patent-ineligible concepts." *Alice*, 573 U.S. at 217. If so, we then examine "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." *Alice*, 573 U.S. at 217 (quoting *Mayo*

Collaborative Servs. v. Prometheus Labs., Inc., 566 U.S. 66, 78, 79 (2012)). That is, we examine the claims for an "inventive concept," "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.'" *Alice*, 573 U.S. at 217–18 (alteration in original) (quoting *Mayo*, 566 U.S. at 72–73).

The Patent Office recently issued guidance about this framework. *See* 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) ("2019 Eligibility Guidance"). Under the guidance, to decide whether a claim is "directed to" an abstract idea, we evaluate whether the claim (1) recites an abstract idea grouping listed in the guidance *and* (2) fails to integrate the recited abstract idea into a practical application. *See* 2019 Eligibility Guidance, 84 Fed. Reg. at 51. If the claim is "directed to" an abstract idea, as noted above, we then determine whether the claim recites an inventive concept. The 2019 Eligibility Guidance explains that when making this determination, we should consider whether the additional claim elements add "a specific limitation or combination of limitations that are not well-understood, routine, conventional activity in the field" or "simply append[] well-understood, routine, conventional activities previously known to the industry." 2019 Eligibility Guidance, 84 Fed. Reg. at 56.

With these principles in mind, we turn to the Examiner's § 101 rejection.

Abstract idea

Turning to Step 2A, Prong 1, the claimed method is for efficient pacing of budgets for online advertising campaigns. Spec. ¶ 1. Claim 1 includes the following calculations: "determining" "a target budget for a designated time period;" "analyzing" "historical data for the one or more

preceding time periods to generate a previous win rate that corresponds to a ratio of the number of bid requests placed and won on an advertising request to the total number of bid requests placed;" "for the designated time period," "predicting a win ratio;" "analyzing" "historical data for one or more preceding time periods to predict a request ratio that corresponds to a ratio of the number of requests received for the one or more preceding time periods and the estimated number of requests to be received during the designated time period;" and "determining" "a pacing rate for the designated time period, the pacing rate designating a portion of the advertising requests received during the designated time period on which to bid, wherein determining the pacing rate for the designated time period is based on the predicted win ratio, the predicted request ratio, and the target budget." Thus, the system calculates an optimal amount of bids based on a predetermined pacing rate.

Claim 1 recites an abstract idea grouping listed in the 2019 Eligibility Guidance: "mental processes." *See* 2019 Eligibility Guidance, 84 Fed. Reg. at 52, 53 (listing "[m]ental processes—concepts performed in the human mind (including an observation, evaluation, judgment, opinion)" as one of the "enumerated groupings of abstract ideas" (footnote omitted)). The guidance explains that "mental processes" include acts that people can perform in their minds or using pen and paper, even if the claim recites that a generic computer component performs the acts. *See* 2019 Eligibility Guidance, 84 Fed. Reg. at 52 n.14 ("If a claim, under its broadest reasonable interpretation, covers performance in the mind but for the recitation of generic computer components, then it is still in the mental processes category unless the claim cannot practically be performed in the mind."); *see also Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1318

(Fed. Cir. 2016) ("[W]ith the exception of generic computer-implemented steps, there is nothing in the claims themselves that foreclose them from being performed by a human, mentally or with pen and paper."), *quoted in* 2019 Eligibility Guidance, 84 Fed. Reg. at 52 n.14; *Mortg. Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d. 1314, 1324 (Fed. Cir. 2016) (holding that computer-implemented method for "'anonymous loan shopping'" was an abstract idea because it could be "'performed by humans without a computer'"); *quoted in* 2019 Eligibility Guidance, 84 Fed. Reg. at 52 n.14.

The method recited in claim 1 executes steps that people can perform in their minds or using pen and paper. A person can perform the "determining" and "analyzing" steps of claim 1 by using his or her mind (or pen and paper) in the claimed manner. For example, a person can determine a target budget for a designated time period using his or her mind or pen and paper. A person can analyze historical data for the one or more preceding time periods to generate a previous win rate that corresponds to a ratio of the number of bid requests placed and won on an advertising request to the total number of bid requests placed, using pen and paper. A person can predict a win ratio for the designated time period using his or her mind or pen and paper. A person can analyze historical data for one or more preceding time periods to predict a request ratio that corresponds to a ratio of the number of requests received for the one or more preceding time periods and the estimated number of requests to be received during the designated time period. A person can, using pen and paper, determine a pacing rate for the designated time period, the pacing rate designating a portion of the advertising requests received during the designated time period on which to bid, wherein determining the pacing rate for the designated time period is

based on the predicted win ratio, the predicted request ratio, and the target budget.

Accordingly, claim 1 recites a mental process, and thus an abstract idea.

Turning to Step 2A, Prong 2, the remaining elements recited in claim 1 do not integrate the abstract idea into a practical application. In addition to the steps discussed above, claim 1 recites "receiving, at a communications interface, a plurality of advertising requests," performing certain steps or calculations by "a processor," and "placing a plurality of bids" "via the communications interface." The written description discloses that the recited computers encompass generic components. *See, e.g.*, Spec. Fig. 4, ¶ 110 (listing simply "a processor 401"). Simply programming a general-purpose computer "processor" to perform abstract ideas does not integrate those ideas into a practical application. *See* 2019 Eligibility Guidance, 84 Fed. Reg. at 55 (identifying "merely includ[ing] instructions to implement an abstract idea on a computer" as an example of when an abstract idea has not been integrated into a practical application).

Thus, the claims do not integrate the judicial exception into a practical application. The claims do not (1) improve the functioning of a computer or other technology, (2) are not applied with any particular machine (except for a generic computer), (3) do not effect a transformation of a particular article to a different state, and (4) are not applied in any meaningful way beyond generally linking the use of the judicial exception to a particular technological environment, such that the claim as a whole is more than a drafting effort designed to monopolize the exception. *See* MPEP §§ 2106.05(a)–(c), (e)–(h).

Inventive Concept

Because we determine claim 1 is "directed to" an abstract idea, we consider whether claim 1 recites an "inventive concept." The Examiner determined claim 1 does not recite an inventive concept because the additional elements in the claim do not amount to "significantly more" than an abstract idea. *See* Final Act. 4.

We agree. The additional elements recited in the claim include the "processor" and "a communications interface." The claim recites these elements at a high level of generality, and the written description indicates that these elements are generic computer components. *See, e.g.*, Fig. 4, Spec. ¶ 110. Using generic computer components to perform abstract ideas does not provide the necessary inventive concept. *See Alice*, 573 U.S. at 223 ("[T]he mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention."). Thus, these elements, taken individually or together, do not amount to "significantly more" than the abstract ideas themselves.

Appellants contend various elements recited in the claim provide the necessary "inventive concept." App. Br. 16. But these elements form part of the recited abstract ideas and thus are not "additional elements" that "'transform the nature of the claim' into a patent-eligible application." *Alice*, 573 U.S. at 217 (quoting *Mayo*, 566 U.S. at 78); *see also* 2019 Eligibility Guidance, 84 Fed. Reg. at 55 n.24 ("USPTO guidance uses the term 'additional elements' to refer to claim features, limitations, and/or steps that are recited in the claim *beyond the identified judicial exception*." (emphasis added)).

Rather, the recited (1) *processor*; and (2) *communications interface* are the additional recited elements whose generic computing functionality is

well-understood, routine, and conventional. *See Intellectual Ventures*, 792 F.3d at 1368 (noting that a recited user profile (i.e., a profile keyed to a user identity), database, and communication medium are generic computer elements); *Mortgage Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d 1314, 1324–25 (Fed. Cir. 2016) (noting that components such an "interface," "network," and "database" are generic computer components that do not satisfy the inventive concept requirement); *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1355 (Fed. Cir. 2014) ("That a computer receives and sends the information over a network—with no further specification—is not even arguably inventive."). *Accord* Final Act. 3 (Concluding that the claims' additional generic computer components do not add significantly more than the abstract idea.); *see also* Spec. Figs. 2, 3, ¶¶ 48–50, 78–82 ("program instructions may be provided to a processor of a general purpose information handling device"). Appellants' arguments do not persuade us claim 1 is "directed to" a patent-eligible concept.

To the extent Appellants contend that the claimed invention is rooted in technology because it is ostensibly directed to a technical solution (*see* App. Br. 10–12), we disagree. Even assuming, without deciding, that the claimed invention can place bids on advertising requests based on certain criteria faster than doing so manually, any speed increase comes from the capabilities of the generic computer components—not the recited process itself. *See FairWarning IP, LLC v. Iatric Systems, Inc.*, 839 F.3d 1089, 1095 (Fed. Cir. 2016) (citing *Bancorp Services, LLC v. Sun Life Assurance Co.*, 687 F.3d 1266, 1278 (Fed. Cir. 2012) ("[T]he fact that the required calculations could be performed more efficiently via a computer does not materially alter the patent eligibility of the claimed subject matter.")); *see also Intellectual Ventures I LLC v. Erie Indemnity Co.*, 711 F. App'x 1012,

1017 (Fed. Cir. 2017) (unpublished) ("Though the claims purport to accelerate the process of finding errant files and to reduce error, we have held that speed and accuracy increases stemming from the ordinary capabilities of a general-purpose computer 'do[ ] not materially alter the patent eligibility of the claimed subject matter.'"). Like the claims in *FairWarning*, the focus of claim 1 is not on an improvement in computer processors as tools, but on certain independently abstract ideas that use generic computing components as tools. *See FairWarning*, 839 F.3d at 1095 (citations and quotation marks omitted).

Conclusion

For at least the above reasons, we agree with the Examiner that claim 1 is "directed to" an abstract idea and does not recite an "inventive concept." Accordingly, we sustain the Examiner's rejection of claims 1–8 and 10–20 under 35 U.S.C. § 101.

DECISION

For the above reasons, the Examiner's rejection of claims 1−8 and 10−20 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)(1)(iv) (2009).

AFFIRMED