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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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Ex parte ROBERT H. BURCHAM, GEOFFREY A. HOLMES,
and KENNETH LEE JONES

_____

Appeal 2019-000017
Application 14/532,969[1]
Technology Center 3600

_____

Before JASON J. CHUNG, SCOTT B. HOWARD, and SCOTT E. BAIN,
Administrative Patent Judges.

BAIN, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's
Final Rejection of claims 1–16, 19, and 20, which constitute all claims
pending in the application. Claims 17 and 18 have been canceled. We have
jurisdiction under 35 U.S.C. § 6(b).

We affirm.

BACKGROUND

The Claimed Invention

The invention relates to targeted advertising, i.e., "choosing targets for an advertis[ing] campaign" based upon particular characteristics such as "age" or other "demographic or behavioral information." Spec. ¶¶ 4–5. Claims 1, 8, and 12 are independent. Claim 12 is illustrative of the invention and the subject matter in dispute, and reads as follows:

> 1. A method for choosing targets for an advertisement campaign from a plurality of profiles with unknown data performed by an application stored in a non-transitory memory and executed by a processor, the method comprising:
>
> *determining correlations* between different *variables* of a plurality of variables in a first set of profiles based on known *data* for each of the plurality of variables, wherein a second set of profiles comprises unknown data for one or more of the plurality of variables;
>
> *imputing* a first set of *values* for the unknown *data* in the second set of profiles using a first imputation method based on the correlations between the different variables of the first set of profiles, wherein the first imputation method comprises a statistical scattering technique;
>
> *imputing* a second set of *values* for the unknown *data* in the second set of profiles using a second imputation method based on the correlations between the different variables of the first set of profiles, wherein the second imputation method comprises a most likely outcome technique, and wherein multiple values including a first value of the first set of values and a second value of the second set of values are imputed to each variable of the one or more of the plurality of variables comprising the unknown data in the second set of profiles;
>
> *storing*, in a database, the multiple *values* imputed to each variable of the one or more of the plurality of variables in the second set of profiles;
>
> *determining statistical* segment boundaries for the

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unknown data in the second set of profiles based on the first imputation method;

 accessing from each of the second set of profiles, one *value* of the multiple values imputed to at least one of the one or more of the plurality of variables in the second set of profiles, wherein the one value corresponds to the second imputation method;

 selecting a group of *targets* from at least the second set of profiles for an advertisement campaign based on the accessed *value* corresponding to the second imputation method from each of the second set of profiles;

 determining a confidence *factor* for each imputed value of the first and second sets of values;

 determining a *cost* associated with the selected group of targets based on the confidence factor; and

 sending an advertisement of the advertisement campaign to the selected group of targets.

App. Br. 26–27 (Claims Appendix) (emphases added).

The Rejections on Appeal

Claims 1–16, 19, and 20 are rejected under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter. Final Act. 9–11.

DISCUSSION

We have reviewed the Examiner's rejection in light of Appellants' arguments presented in this appeal. Arguments which Appellants could have made but did not make in the Briefs are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(iv). On the record before us, Appellants have not persuaded us of error.

Rejection Under 35 U.S.C. § 101

The Examiner determined that the claims are directed to "provid[ing] targeted ads to users," which is a fundamental economic practice and,

accordingly, constitutes an abstract idea. Final Act. 5–6; Ans. 6–7; *Alice Corp. v. CLS Bank Int'l*, 573 U.S. 208, 217 (2014) (describing two-step framework "for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts"). Further, the Examiner found that additional elements in the claims merely constituted conventional steps performed on a generic computer, and therefore did not include additional elements sufficient to amount to significantly more than the abstract idea. Final Act. 7–8; Ans. 12–14. Accordingly, the Examiner concluded that the claims constitute ineligible subject matter.

Appellants argue that the Examiner has reduced the claims to an overly "high level of abstraction" and that none of the claims cited by the Examiner are applicable. App. Br. 17–20; Reply Br. 4–5. Additionally, as discussed further below, Appellants argue the claims include "significantly more" than the alleged abstract idea, and that the Examiner failed to support a finding that additional elements are well-understood, routine, and conventional. App. Br. 21–24.

After the Briefs were filed and Answer mailed in this case, the USPTO published "Revised Subject Matter Eligibility Guidance" synthesizing case law and providing agency instruction on the application of § 101. *See* USPTO, *2019 Revised Patent Subject Matter Eligibility Guidance* 84 Fed. Reg. 50 (Jan. 7, 2019) ("Guidance"). Under the Guidance, we must look to whether a claim recites:

> (1) any judicial exceptions, including certain groupings of
> abstract ideas (i.e., mathematical concepts, certain methods of

organizing human activity such as a fundamental economic

practice, or mental processes) ("Step 2A, Prong One"); and

(2) additional elements that integrate the judicial exception into

a practical application (*see* MPEP §§ 2106.05(a)–(c), (e)–(h))

("Step 2A, Prong Two").

See Guidance, 84 Fed. Reg. at 54–55.

Only if a claim recites a judicial exception and 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

is 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 id. at 56 (collectively "Step 2B").

We begin our *de novo* review with Step 2A, Prong One of the

Guidance, as applied to Appellants' claim 1.[2] Claim 1 recites "a method for

choosing targets for an advertisement campaign." App. Br. 26 (Claims

Appendix). Our review of the claim discerns the following particular steps:

(1) "determining correlations" between "variables" (i.e., data); (2)

"imputing" (i.e., assigning) "values" for "data;" (3) "imputing" (i.e.,

assigning) a second set of "values" for "data;" (4) "storing . . . values" in a

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[2] The Guidance refers to "Step One" as determining whether the claimed
subject matter falls within the four statutory categories identified by
35 U.S.C. § 101: process, machine, manufacture, or composition of matter.
This step is not at issue in this case.

"database;" (5) "determining statistical segment boundaries" (i.e., data boundaries); (6) "accessing" one "value" (data); (7) "selecting" targets based on the foregoing; (8) "determining" a "confidence factor; (9) "determining" a "cost;" and (10) "sending an advertisement." App. Br. 26–27 (Claims Appendix). We agree with the Examiner's determination that the foregoing steps merely constitute the idea of targeted advertising, which is a fundamental economic practice. Each of the steps either recites collecting data regarding a user for targeted advertising, processing that data according to rules (not specifically recited) for the targeted advertising program, and/or determining and sending a targeted advertisement to send to a user.

Accordingly, we determine that, like the claims to targeted advertising in *Affinity Labs*, the claims to hedging in *Bilski*, and the claims to mitigating settlement risk in *Alice*, claim 1 recites a fundamental economic practice, which is one of the certain methods of organizing human activity deemed to be an abstract idea under the Guidance. *See Affinity Labs of Texas, LLC v. Amazon.com Inc.*, 838 F.3d 1266, 1267–69 (Fed. Cir. 2016) ("[T]he patent [is] directed to a 'method for targeted advertising' in which an advertisement is selected for delivery to the user of a portable device based on at least one piece of demographic information about the user."); *Bilski v. Kappos*, 561 U.S. 593 (2010); *Alice*, 573 U.S. 208.

We next proceed to Step 2A, Prong 2 of the Guidance. Under this step, if the claim "as a whole" integrates the abstract idea into a "practical application," it is patent eligible. Appellants argue that claim 1 recites a "specific computer implementation" that is similar to the claims held patent-eligible in *DDR* and *Bascom*. Reply Br. 6–8; *DDR Holdings, LLC v.*

Hotels.com, *L.P.*, 773 F.3d 1245 (Fed. Cir. 2014); *Bascom Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016).

Improving the functioning of a computer can reflect integration of an idea into a "practical application." Guidance, Sect. III. Appellants, however, do not explain, and we do not discern, any improvement in technology from the claimed invention. *Compare Bascom*, 827 F.3d at 1350 ("[H]arness[ing a] technical feature of network technology in a filtering system" to customize content filtering); *DDR*, 773 F.3d at 1258 ("[T]he claims at issue here specify *how* interactions with the Internet are manipulated to yield a desired result—a result that overrides the routine and conventional sequence of events ordinarily triggered by the click of a hyperlink.") (emphasis added). The claims in *Bascom* and *DDR*, for example, were "necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks" (*see, e.g.*, *DDR*, 773 F.3d at 1257), but Appellants' claim 1 recites a targeted advertising method that merely uses generic computing elements. *See, e.g.*, Spec. ¶¶ 18, 34–38. The Specification describes the invention as being implemented on a standard "computer system" including a "processor," "memory," "input/output devices," and "network connectivity devices," and further states that "by *well-known design rules*" any of the functionality performed by software can be "converted to a hardware implementation." *Id.* ¶¶ 34–35 (emphasis added); *see also id.* ¶¶ 36–38 (describing generic memory, input/output devices, and network devices).

Appellants also do not direct us to any evidence that claim 1 recites any unconventional rules, transforms or reduces an element to a different state or thing, or otherwise integrates the idea into a practical application.

Rather, claim 1 recites targeted advertising by collecting profile data and "determining" correlations and "statistical segment boundaries." App. Br. 26–27 (Claims App'x.). Reciting a result-oriented solution that lacks any details as to how the computer performed the modifications is the equivalent of the words "apply it." *Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1341–42 (Fed. Cir. 2017) (citing *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1356 (Fed. Cir. 2016) (cautioning against claims "so result focused, so functional, as to effectively cover any solution to an identified problem")); *see also CyberSource v. Retail Decisions, Inc.*, 654 F.3d 1366, 1375 (Fed. Cir. 2011) (mere data gathering does not make a claim patent-eligible). The data gathering and processing steps in claim 1 do not add meaningfully to the recited fundamental economic practice.

Finally, under Step 2B of the Guidance, we must look to whether the claims include any "additional limitation that is not well-understood, routine [or] conventional." The "question of whether a claim element or combination of elements is well-understood, routine and conventional to a skilled artisan in the relevant field is a question of fact." *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1368 (Fed. Cir. 2018); *see also Mortg. Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d. 1314, 1325 (Fed. Cir. 2016) (holding that patent eligibility inquiry may contain underlying issues of fact).

Claim 1 recites a targeted advertising method facilitated by various data gathering and data processing steps. *See supra*. We agree with the Examiner's finding that simply using standard computer elements (as described in the Specification, *see supra*) to implement rules for targeted

advertising is well understood, routine, and conventional. Ans. 12–13. As discussed above, the Specification explains at length that the invention is implemented on standard, conventional computing elements. Spec. ¶¶ 18, 34–39. Although Appellants assert that the claims recite an "ordered combination" that is "more than just 'software running on a computer and storing information in a database'" (Reply Br. 8), Appellants do not rebut the Examiner's findings or identify any unconventional elements, and we discern none. *See supra.* To the extent Appellants imply that it is a particular algorithm, not the hardware elements, that constitutes something "significantly more" in claim 1, the algorithm is not recited in the claim.

Accordingly, we conclude that the Examiner did not err in concluding that claim 1 constitutes ineligible subject matter. Appellants do not argue any of the remaining claims separately from claim 1. *See* 37 C.F.R. § 41.37(c)(1)(iv). We, therefore, sustain the rejection of claims 1–16, 19, and 20 under 35 U.S.C. § 101.

DECISION

We affirm the Examiner's decision rejecting claims 1–16, 19, and 20.

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). *See* 37 C.F.R. § 41.50(f).

AFFIRMED