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Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO. Includes details for application 13/705.066, inventor John B. Ferber, and examiner Patricia H. Munson.

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JOHN B. FERBER, SCOTT FERBER, STEIN E. KRETSINGER,
ROBERT LUENBERGER, and DAVID LUENBERGER

Appeal 2017-004526
Application 13/705,066¹
Technology Center 3600

Before ANTON W. FETTING, BRUCE T. WIEDER, and
SHEILA F. McSHANE, *Administrative Patent Judges*.

McSHANE, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants seek our review under 35 U.S.C. § 134(a) of the Examiner's final decision to reject claims 1–28, 32, and 33. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ According to Appellants, the real party in interest is Facebook, Inc. Appeal Brief filed May 2, 2016, hereafter “App. Br.,” 2.

BACKGROUND

The invention is directed to optimizing advertisement selection for Internet-delivered advertisements. Specification, hereafter “Spec.,” 4:1. The advertisement selection may include “optimally choosing the next ad.” *Id.* at 4:21–22.

Claims 1, 11, and 21 are the independent claims on appeal. Representative claim 1 is reproduced below from pages 16 and 17 of the Claims Appendix of the Appeal Brief (Claims App.) as follows:

1. A method comprising:

identifying a plurality of advertisements, each advertisement of the plurality of advertisements having an associated target number of clicks or impressions;

aggregating the associated target number of clicks and impressions for each advertisement of the plurality of advertisements to obtain a total target number of clicks or impressions;

receiving advertisement requests;

determining, by at least one processor, a probability that each advertisement of the plurality of advertisements will be selected if served in connection with a given advertisement request; and

serving, in response to the advertisement requests, the plurality of advertisements based on the determination of probabilities until the total target number of clicks and impressions is met, wherein the total number of clicks or impressions is met when $\sum_{j=1}^m (\alpha_{i,j} p_{i,j} d_j + \alpha_{m,j} p_{m,j} d_j) \leq (1 + \delta)(c_l + c_m)$ and wherein:

m is a number of web sites;

$\alpha_{i,j}$ is the number of times the first advertisement l is served on web site j for a time period;

$\alpha_{m,j}$ is the number of times the second advertisement m is served on web site j for the time period;

$p_{i,j}$ is the probability that the first advertisement l from web site j will be selected;

$p_{m,j}$ is the probability that the second advertisement m from web site j will be selected;
 d_j is the estimated number of clicks and impressions for the time period;
 δ is a target number of clicks and impressions;
 c_l is the number of clicks or impressions for the first advertisement; and
 c_m is the number of clicks or impressions for the second advertisement.

The Examiner rejects claims 1–28, 32, and 33 under 35 U.S.C. § 101 as reciting a judicial exception without significantly more. Final Action mailed December 1, 2015, hereafter “Final Act.,” 2–3; *see also* Examiner’s Answer mailed November 21, 2016, hereinafter “Ans.,” 2.

DISCUSSION

Appellants generally argue the 35 U.S.C. § 101 rejection using independent claim 1 as representative, with an additional argument presented for claim 21. *See* App. Br. 8–14; Reply Brief mailed January 23, 2017, hereafter “Reply Br.,” 2–6. We will address the rejection in the same manner.

The Examiner determines that the claims, and more specifically, representative claim 1, are directed to non-statutory subject matter because “identifying a plurality of advertisements, aggregating clicks and impressions, receiving advertisement requests, determining a probability, and serving advertisements are directed toward a fundamental economic practice and mathematical relationships or formulations and thus, the claims are drawn to a patent ineligible abstract idea.” Final Act. 2. The Examiner compares the claims to cases where claims were directed to similar subject matter which was deemed to be abstract ideas. *Id.* at 2–3. The Examiner

finds that there are similar case to the instant claims which are directed to “comparing new and stored information and using rules to identify options,” “organizing information through mathematical correlations,” and “using categories to organize, store and transmit information.” *Id.* The Examiner further determines the claims do not include limitations that are significantly more than the judicial exception because they do not include “an improvement to another technology or technical field, an improvement to the functioning of the computer itself, or meaningful limitations beyond generally linking the use of an abstract idea to a particular technological environment.” *Id.* at 3. The Examiner further finds that the limitations are instructions that are implemented by a generically recited computer and require no more than a generic computer performing known generic computer functions. *Id.*

Appellants argue that the rejection of claim 1 is flawed because the claims are not directed to an abstract idea. App. Br. 9–11. Appellants argue that the claims are not abstract for the same reasons as the claims in *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed Cir. 2014) (“*DDR*”). *Id.* at 9. Appellants allege that like *DDR*, the inventors sought to solve an “Internet-centric problem.” *Id.* In *DDR*, Appellants allege, the patent claims were deemed to not be an abstract idea because they addressed “a problem specifically arising in the realm of computer networks” and presented a solution “necessarily rooted in computer technology.” *Id.* Appellants aver that, as in *DDR*, the instant claims solve a problem unique to the Internet. *Id.* Appellants argue that “the pending claims seek to prevent a webserver from serving an Internet advertisement without accounting for how users interact with other advertisements with click-thrus or impressions.” *Id.* at

10. Appellants allege that “the method determines the probability that each advertisement will be selected in connection with a given request and serves the plurality of advertisements based on those determined probabilities,” as evidenced by claim 21’s offering of a first or second advertisement based on higher probability of selection. *Id.* Appellants assert that the characterizations in the rejection strip the invention of its novel limitations that are directed to concrete steps that apply “an algorithmic optimizer to unique attributes of the Internet.” *Id.* at 11. Appellants also argue that the claims do not cover “a fundamental economic practice” because pre-Internet technologies lacked the ability of constraining advertisements in the manner claimed. *Id.*

In the Reply Brief, Appellants also assert similarities to *BASCOM Global Internet Servs. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016) (“*BASCOM*”), arguing that the independent claims recite a combination of features that are comparable to *BASCOM*. Reply Br. 3. Appellants allege that the claims are patent eligible because they do not preempt all forms of targeted marketing on the Internet and “are directed towards a specific, discrete implementation of serving Internet advertisements-namely optimizing the service of Internet advertisements based on the ads’ selection probabilities and a dynamic algorithm that accounts for each ads’ clicks and impressions.” *Id.* at 4. Appellants argue that with the specificity of the recited claims they go beyond abstraction, where, for instance, the independent claim recite a specific set of factors of an algorithm to satisfy an advertising campaign. *Id.* at 4–5.

Appellants additionally assert that the claims recite significantly more than an abstract idea. App. Br. 11–14. Appellants contend that the claims

are similar to a patent-eligible stock alert claim², which was to an abstract idea but recital of the series of acts for distributing stock quotes to selected remote devices, such as filtering stock quotes, storing user preferences, and generating a stock quote alert was deemed to be significantly more than the abstract idea. *Id.* at 11–12. In light of this case, Appellants argue that “Internet limitations are not simply a field of use that is an attempt to limit the abstract idea to a particular technological environment; rather, the Internet limitations solve an Internet-centric problem.” *Id.* at 12. Appellants contend that similarly, “the pending independent claims solve an Internet-centric problem—fixing a webserver that applies isolated measurements and constraints on an Internet advertisement’s distribution and click-thrus, without accounting for the click-thru-rate of other, related advertisements,” and “address this problem through a combination of recited features.” *Id.* at 13. Appellants allege that the claims are not merely abstract ideas using a generic computer to perform routine and conventional activities that were previously known, as evidenced by the Examiner’s withdrawal of rejections under § 103. *Id.* Appellants further argue that courts have repeatedly found that claims implemented by a generic computer are directed to patent-eligible subject matter. Reply Br. 5–6.

To provide context, 35 U.S.C. § 101 provides that a new and useful “process, machine, manufacture, or composition of matter” is eligible for

² Appellants refer to “Example 21” of the July 2015 Update of the 2014 Interim Guidance on Patent Subject Matter Eligibility issued by the U.S.P.T.O. on December 16, 2014. “Example 21” is modeled after the technology in *Google Inc. v. Simpleair, Inc.*, Covered Business Method Case No. CBM 2014-00170 (January 22, 2015), but the claims are hypothetical. July 2015 Update, 1.

patent protection. The Supreme Court has made clear that the test for patent eligibility under Section 101 is not amenable to bright-line categorical rules. *See Bilski v. Kappos*, 561 U.S. 593, 609 (2010). There are, however, three limited, judicially created exceptions to the broad categories of patent-eligible subject matter in § 101: “[L]aws of nature; natural phenomena, and abstract ideas.” *See Mayo Collaborative Services v. Prometheus Labs., Inc.*, 566 U.S. 66, 70 (2012).

In *Alice Corporation Pty, Ltd. v. CLS Bank International*, 134 S.Ct. 2347 (2014) (“*Alice*”), the Supreme Court reiterated the framework set forth previously in *Mayo*, “for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts.” *Alice*, 134 S.Ct. at 2355 (citation omitted). Under *Alice*, the first step of such analysis is to “determine whether the claims at issue are directed to one of those patent-ineligible concepts.” *Id.* (citation omitted). If it is determined that the claims are directed to a patent-ineligible concept, the second step in the analysis is to consider the elements of the claims “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, 78). In other words, the second step is to “search for an ‘inventive concept’—*i.e.*, 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.’” *Id.* (alteration in original) (quoting *Mayo*, 566 U.S. at 72–73).

After considering Appellants' arguments and the evidence presented in this Appeal for the § 101 rejections, we are not persuaded that Appellants identify reversible error. We add the following for emphasis.

Here, in the first step of the analysis, the Examiner finds that the claims are directed to “identifying a plurality of advertisements, aggregating clicks and impressions, receiving advertisement requests, determining a probability, and serving advertisements [and thus, the claims] are directed toward a fundamental economic practice and mathematical relationships or formulations.” Final Act. 2. We agree with the Examiner that the claims as a whole are directed to the purpose of advertising, which is a fundamental economic practice. *See Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709 (Fed. Cir. 2014). The specific steps of the claims, which include collecting ad click information and using that information to determine which ads to present upon requests, are aspects of optimizing advertising, but, in any event, these steps are all directed to the furtherance of advertising, and, in particular, targeted advertising. *See* Final Act. 3; *see also Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1369–70 (Fed. Cir. 2015). We do not find Appellants' arguments based on *DDR* to be persuasive. Even if the claims are “Internet-centric,” the Federal Circuit has cautioned that this alone does not make claims patent-eligible. *See DDR*, 773 F.3d at 1258. In *DDR*, the invention did not merely use the Internet but rather changed how interactions on the Internet operated and thereby claimed a solution “necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks.” *Id.* at 1257. The claims at issue here are directed to collecting user data and

attempting to optimize advertising, but merely use the Internet and do not provide a technical solution to a computer technology problem.

We also agree with the Examiner’s finding that the claims do not represent significantly more than the judicial exception because they do not include a technological improvement or an improvement to the functioning of the computer itself, but rather the limitations are instructions that are done by a generic computer. The stock alert claim example (Example 21) that Appellants argue is distinguishable—in that invention one computer automatically controlled a specific component on another computer, which is a technological improvement, unlike the claims here. *See* July 2015 Update, 4. Appellants fail to explain why the instant claims are similar to those in *BASCOM*, short of the alleged specific implementation of Internet advertising and lack of pre-emption. Reply Br. 4. Although the claims recited specific steps, that does not mean that they are not directed to an abstract idea, as discussed above. And although it may be true that the claims recite specific steps for optimizing advertising, that issue is not dispositive as to whether the claims are patent eligible. *See Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1377 (Fed. Cir. 2015) (“While preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility.”). Finally, the withdrawal of a § 103 rejection relates to whether a claim is non-obvious, not whether the claim is significantly more than the judicial exception. *See Two-Way Media Ltd. v. Comcast Cable Commc’ns.*, 874 F.3d 1329, 1339-40 (Fed. Cir. 2017) (“Eligibility and novelty are separate inquiries.”).

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We therefore sustain the Examiner's rejection of claims 1–28, 32, and 33 under 35 U.S.C. § 101.

SUMMARY

The rejection of claims 1–28, 32, and 33 under 35 U.S.C. § 101 is sustained.

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