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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* ANDREW GARROD BOSWORTH and  
MICHAEL PATRICK MURPHY

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Appeal 2017-007425  
Application 13/040,158<sup>1</sup>  
Technology Center 3600

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Before JOSEPH L. DIXON, JAMES W. DEJMEK, and  
MATTHEW J. McNEILL, *Administrative Patent Judges*.

McNEILL, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1, 2, 5, 6, 9–15, 18, 19, 22–29, 32, 33, and 36–39, which are all the claims pending in this application. Claims 3, 4, 7, 8, 16, 17, 20, 21, 30, 31, 34, and 35 were cancelled. App. Br. 13–19. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

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<sup>1</sup> According to Appellants, the real party in interest is Facebook, Inc. App. Br. 3.

## STATEMENT OF THE CASE

### *Introduction*

Appellants' application relates to a social networking system that identifies experts and influencers for advertising, social grouping, and other purposes. Spec. ¶ 3. Claim 1 illustrates the appealed subject matter and reads as follows:

1. A method comprising:

by one or more computer server machines hosting a social-networking system, associating a plurality of elements of information to a subject matter;

by the computer server machines, transmitting the plurality of elements of information to a plurality of users of the social-networking system in response to sharing actions by one or more first users of the social-networking system, wherein each of the users is associated with one or more nodes of the social-networking system;

by the computer server machines, identifying one or more of the first users as influencers based at least in part on one or more increases in one or more rates of sharing for the transmitting of one or more of the elements of information using the social-networking system;

by the computer server machines, identifying one or more second users associated with nodes that are within a particular distance of one or more of the nodes associated with the first users;

by the computer server machines, assigning potential expert status with respect to the subject matter to one or more of the second users; and

by the computer server machines, performing an action related to the users identified as influencers or assigned potential expert status.

*The Examiner's Rejection*

Claims 1, 2, 5, 6, 9–15, 18, 19, 22–29, 32, 33, and 36–39 stand rejected under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter. Final Act. 2–4.

ANALYSIS

We have reviewed the Examiner's rejections in light of Appellants' contentions that the Examiner has erred. We disagree with Appellants' contentions. Except as noted below, we adopt as our own: (1) the findings and reasons set forth by the Examiner in the Final Action from which this appeal is taken; and (2) the reasons set forth by the Examiner in the Examiner's Answer in response to Appellants' Appeal Brief. We concur with the Examiner's conclusions. We highlight the following additional points.

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: “[I]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).

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*. *Alice*, 573 U. S. 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, 192 (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.* (citation omitted) (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 (quotation marks 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.* (alterations in original) (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 January 7, 2019 Memorandum, *2019 Revised Patent Subject Matter Eligibility Guidance* 84 Fed. Reg. 50 (“Revised Guidance”). 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)).

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 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* Revised Guidance.

*Revised Guidance Step 1*

Step 1 of the Revised Guidance asks whether the claimed subject matter falls within the four statutory categories of patentable subject matter identified by 35 U.S.C. § 101: process, machine, manufacture, or composition of matter. *See* Revised Guidance. Claim 1 recites “a method.” Appellants do not argue the Examiner erred in concluding claim 1 falls within the four statutory categories of patentable subject matter. We agree with the Examiner’s conclusion because claim 1 falls within the process category.

*Revised Guidance Step 2A, Prong 1*

Under Step 2A, Prong 1 of the Revised Guidance, we determine whether the claims recite 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). *See* Revised Guidance.

Claim 1 recites the following limitations: (1) “identifying one or more of the first users as influencers based at least in part on one or more increases in one or more rates of sharing,” (2) “assigning potential expert status with respect to the subject matter to one or more of the second users,”

and (3) “performing an action related to the users identified as influencers or assigned potential expert status.” These limitations, under their broadest reasonable interpretation, recite a method of identifying users of a “social-networking system” as influencers and experts because the limitations all recite operations that ordinarily take place in identifying influencers and experts.

For example, “identifying one or more of the first users as influencers based at least in part on one or more increases in one or more rates of sharing,” as recited in limitation (1) is characteristic of identifying influencers, or people have “the power to sway or influence others based on, for example, prestige, wealth, ability, or position.” Spec. ¶ 16. Similarly, “assigning potential expert status with respect to the subject matter to one or more of the second users” as recited in limitation (2) is characteristic of identifying experts, or people who have “extensive knowledge or ability based on education, research, experience, or occupation in a specific field.” *Id.* Claim 1 further recites “performing an action” related to the influencers and potential experts. Identifying influencers and potential experts involves managing personal behavior or relationships or interactions between people. This is similar to the claims in *In re Ferguson*, 558 F.3d 1359, 1364 (Fed Cir. 2009) (holding methods “directed to organizing business or legal relationships in the structuring of a sales force (or marketing company)” to be ineligible). Accordingly, we conclude the claims recite a method of managing personal behavior or relationships or interactions between people, which is one of the certain methods of human activities identified in the Revised Guidance, and thus an abstract idea.

*Revised Guidance Step 2A, Prong 2*

Under the Step 2A, Prong 2 of the Revised Guidance, we next determine whether the claims recite additional elements that integrate the judicial exception into a practical application (*see* MPEP § 2106.05(a)–(c), (e)–(h)).

Appellants argue the claims are necessarily rooted in computer technology in order to overcome a problem specifically arising in computer networks. App. Br. 6–7 (citing *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257 (Fed. Cir. 2014)); *see also* MPEP § 2106.05(a). According to Appellants, the claims are directed to the problem of identifying influencers and experts as they exist within a social networking system, and the terms influencer and expert are conceptual types of users in social-networking systems. *Id.* at 7. Appellants argue this challenge is particular to a certain type of computer network. *Id.* at 7.

Appellants have not persuaded us of Examiner error. The nature of claim 1 as a whole is not to define a specific technological improvement, which may constitute integrating the claims into a practical application. Instead, claim 1 merely recites the steps necessary to perform the abstract idea itself. Specifically, claim 1 employs “generic processes and machinery” to achieve results and is not focused on “a specific means or method that improves the relevant technology.” *McRO, Inc. v. Bandai Namco Games America Inc.*, 837 F.3d 1299, 1314 (Fed. Cir. 2016). Claim 1 focuses on the manner in which influencers and experts are identified, not improvements to the technology used to host the social-networking website within which these influencers and experts operate.

Appellants cite *DDR Holdings* to support their argument. Although the Federal Circuit in *DDR Holdings* found claims “necessarily rooted in computer technology” to be patent eligible, the court issued a relevant warning:

[W]e caution, however, that not all claims purporting to address Internet-centric challenges are eligible for patent. For example, in our recently-decided *Ultramercial* opinion, the patentee argued that its claims were “directed to a specific method of advertising and content distribution that was previously unknown and never employed on the Internet before.” But this alone could not render its claims patent-eligible. In particular, we found the claims to merely recite the abstract idea of “offering media content in exchange for viewing an advertisement,” along with “routine additional steps such as updating an activity log, requiring a request from the consumer to view the ad, restrictions on public access, and use of the Internet.”

*DDR Holdings*, 773 F.3d at 1258 (citations omitted).

The claims in *DDR Holdings* addressed a problem unique to the Internet in a manner that was “not merely the routine or conventional use of the Internet.” *Id.* at 1259. In particular, rather than the expected behavior of simply sending the website visitor to a third-party website, the claimed invention behaved in a manner different than expected by sending a website visitor to a hybrid web page presenting information from a third-party with the look and feel of the host website. *Id.* at 1258–59. In contrast, Appellants have not identified any unconventional behavior by the recited computer limitations in claim 1.

Appellants’ Specification also contradicts Appellants’ argument that the claims are necessarily rooted in computer technology because social-networking systems are a “certain type of computer network.” App. Br. 8.

The Specification discloses that a social network may be an example “social-network system,” which may be “implemented as a social-networking website.” Spec. ¶ 14. In other words, social-networking systems may be, but are not necessarily, implemented as websites. Accordingly, Appellants’ argument that the claims are *necessarily* rooted in computer technology is unpersuasive because the Specification teaches that social networks and social-networking systems may exist separate and apart from social-networking websites.

Additionally, we also note that “the decisional mechanism courts now apply is to examine earlier cases in which a similar or parallel descriptive nature can be seen — what prior cases were about, and which way they were decided.” *Amdocs (Isr.) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1294 (Fed. Cir. 2016) (citing *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353–54 (Fed. Cir. 2016)). Here, a survey of other cases supports our finding that claim 1 is directed to an abstract idea. That is, claim 1 is analogous to other cases where the Federal Circuit has found claims relating to computer-implemented business methods to be directed to abstract ideas, for example, *Inventor Holdings, LLC v. Bed Bath & Beyond, Inc.*, 876 F.3d 1372, 1374 (Fed. Cir. 2017) (“purchasing goods at a local point-of-sale system from a remote seller”), *Credit Acceptance Corp. v. Westlake Servs.*, 859 F.3d 1044 (Fed. Cir. 2017) (providing financing packages to a customer for products in a dealer’s inventory based on customer financial information transmitted to a server via a communication network), *OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362–63 (Fed. Cir. 2015) (automatic optimization of product pricing based on potential customer responses to offers), and *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350 (Fed. Cir. 2014)

(performing a transaction performance guaranty service for online commercial transactions).

Similarly, our reviewing court has concluded that abstract ideas include the concepts of collecting data, recognizing certain data within the collected data set, and storing the data in memory. *Content Extraction & Transmission LLC v. Wells Fargo Bank, N.A.*, 776 F.3d 1343, 1347 (Fed. Cir. 2014). Additionally, the collection of information and analysis of information (e.g., recognizing certain data within the dataset) are also abstract ideas. *Elec. Power*, 830 F.3d at 1353. Similarly, “collecting, displaying, and manipulating data” is an abstract idea. *Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1340 (Fed. Cir. 2017). Also, the gathering and combining of data that does not require input from a physical device is an abstract idea. *Digitech Image Techs., LLC v. Elecs. for Imaging, Inc.*, 758 F.3d 1344, 1351 (Fed. Cir. 2014). Our reviewing court has also concluded that “creating an index and using that index to search for and retrieve data” is an abstract idea. *Intellectual Ventures I LLC v. Erie Indem. Co.*, 850 F.3d 1315, 1327 (Fed. Cir. 2017).

Accordingly, we find claim 1 does not contain the specificity necessary to show how the processors’ operations differ from prior human methods, and is therefore not directed to a technological improvement, but the abstract idea itself. *See McRO*, 837 F.3d at 1314 (“The computer here is employed to perform a distinct process to automate a task previously performed by humans. . . . This is unlike *Flook*, *Bilski*, and *Alice*, where the claimed computer-automated process and the prior method were carried out in the same way.”) (citations omitted). For these reasons, Appellants have

not persuaded us the Examiner erred in finding claim 1 is directed to an abstract idea.

*Revised Guidance Step 2B*

Under Step 2B of the Revised Guidance, we next determine whether the claims recite an “inventive concept” that “must be significantly more than the abstract idea itself, and cannot simply be an instruction to implement or apply the abstract idea on a computer.” *BASCOM Global Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1349 (Fed. Cir. 2016). There must be more than “computer functions [that] are ‘well-understood, routine, conventional activit[ies]’ previously known to the industry.” *Alice*, 573 U.S. at 224 (second alteration in original) (quoting *Mayo*, 566 U.S. at 73).

Appellants argue the claims recite “significantly more” than the abstract idea because the claims describe specific implementation details and do not merely apply the abstract idea on the Internet or a generic computer. App. Br. 9–11; Reply Br. 4–5. In particular, Appellants argue the claimed invention solves technical problems involved in social-networking systems. App. Br. 10–11.

Appellants have not persuaded us of Examiner error. As discussed above, claim 1 is generally directed to identifying users of a “social-networking system” that is hosted by “one or more computer server machines” as influencers and experts. Appellants argue the claims are akin to the claims in *DDR Holdings* that were necessarily rooted in computer technology. See App. Br. 6–11. We disagree. In *DDR Holdings*, the Federal Circuit found claims drawn to “generating a composite web page that combines certain visual elements of a ‘host’ website with content of a

third-party merchant” provided a solution “necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks.” *DDR Holdings*, 773 F.3d at 1248, 1257. In contrast, claim 1 solves a problem of identifying users of a social-networking system, a business challenge that was previously addressed using a manual process; it does not embody a solution to a computer-based problem.

Thus, as noted above, claim 1 is similar to the type of claim the Federal Circuit admonished against in *DDR Holdings*. *DDR Holdings*, 773 F.3d at 1257 (differentiating the claims at issue from claims that “merely recite the performance of some business practice known from the pre-Internet world along with the requirement to perform it on the Internet”).

Moreover, our reviewing court has made it clear that merely making the practice of an abstract idea more effective by implementing the idea on a computer does not suffice to meet the inventive concept requirement of *Alice*. See *OIP Techs.*, 788 F.3d at 1363 (“[R]elying on a computer to perform routine tasks more quickly or more accurately is insufficient to render a claim patent eligible.”).

For these reasons, we are not persuaded the Examiner erred in rejecting claim 1 as patent ineligible. We, therefore, sustain the rejection of independent claim 1. We also sustain the rejection of independent claims 14 and 27, for which Appellants provide no separate argument. See App. Br. 6–11. We also sustain the rejection of dependent claims 2, 5, 6, 9–13, 15, 18, 19, 22–26, 28, 29, 32, 33, and 36–39, for which Appellants provide no separate argument. See *id.*

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Application 13/040,158

DECISION

We affirm the decision of the Examiner rejecting claims 1, 2, 5, 6, 9–15, 18, 19, 22–29, 32, 33, and 36–39.

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