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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* FREDERICK ROSS LEACH  
and SEAN MICHAEL BRUICH

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Appeal 2019-006479  
Application 13/933,598  
Technology Center 3600

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Before RICHARD M. LEBOVITZ, ULRIKE W. JENKS, and  
TAWEN CHANG, *Administrative Patent Judges*.

LEBOVITZ, *Administrative Patent Judge*.

DECISION ON APPEAL

The Examiner rejected the claims 1, 3, 5, 7–9, 11–13, and 21–23, under 35 U.S.C. § 103 as obvious and under 35 U.S.C. § 101 as reciting patent ineligible subject matter. Pursuant to 35 U.S.C. § 134(a), Appellant<sup>1</sup> appeals from the Examiner’s decision to reject the claims. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM but designate a portion of our affirmance as a New Ground of Rejection pursuant to our authority under 37 C.F.R. § 41.50(b).

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<sup>1</sup> We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as Facebook, Inc. Appeal Br. 2.

STATEMENT OF THE CASE

The claims stand rejected by the Examiner as follows:

Claims 1, 3, 5, 7–9, 11–13, and 21–23 are rejected under 35 U.S.C. § 103 as obvious over Krishnamoorthy et al. (US 2012/0030010 A1, published Feb. 2, 2012) (“Krishnamoorthy”), Kunal et al. (US 8,306,922 B1, issued Nov. 6, 2012) (“Kunal”), and Gordon (US 2013/0179440 A1, published July 11, 2013) (“Gordon”). Final Act. 11.

Claims 1, 3, 5, 7–9, 11–13, and 21–23 under 35 U.S.C. § 101 because the claimed invention is directed to a judicial exception to patent eligibility. Non-Final Act. 4.

Claim 1, the only independent claim on appeal, is reproduced below (annotated with bracketed numbers and letters for reference to the limitations in the claim):

1. A computer-implemented method comprising:

[1] maintaining an edge store database describing connections of one or more users of a social networking system;

[2] receiving one or more communications from a content generator of a social networking system, the one or more communications identifying one or more objects maintained by the social networking system associated with a brand owner;

[3] querying the edge store database to identify a set of connections of the content generator, each connection comprising another user with whom the content generator has established a connection in the social networking system;

[4] presenting the one or more communications from the content generator to a plurality of users of the social networking system, wherein one or more of the plurality of users is connected to the content generator;

for each communication from the content generator

[a] selecting a subset of exposed users and a subset of unexposed users from the plurality of users, wherein (i) the

subset of exposed users is comprised of users that viewed the one or more communications (ii) the subset of unexposed users is comprised of users that did not view the one or more communications (iii) the subset of exposed users and the subset of unexposed users are selected based on a threshold similarity in user profiles identified between the two subsets, the threshold similarity including a connection to the content generator;

[b] determining a sentiment from each of the selected subset of exposed users for the one or more communications from the content generator;

[c] determining a sentiment from each of the selected subset of unexposed users for the one or more objects maintained by the social networking system associated with the brand owner;

[d] comparing the sentiment from each of the selected subset of exposed users to the sentiment from each of the selected subset of unexposed users to determine an impact score, the impact score indicating a magnitude of impact of the one or more communications from the content generator on users of the social networking system;

[e] generating an impact report describing the impact scores associated with each of the selected subset of exposed users and each of the selected subset of unexposed users;

[f] presenting the generated impact report to the brand owner; and

[g] receiving rules from the brand owner, wherein the rules identifying at least one response communication for presentation to at least one group of users selected from the subsets of the plurality of users based on the report, and the at least one response communication identified by the rules reinforcing positive sentiment of one or more of the communications from the content generator responsive to a determination that the selected group of users have positive sentiments towards the object associated with the brand owner.

### CLAIM 1

Claim 1 is directed to a computer-implemented method comprising maintaining a database of connections of one or more users of a social networking system (step [1]). The Specification explains that a social networking system allows user to connect and communicate with each other and “share their interests and experiences with each other by posting content on the social networking system that may be viewed by additional users.” Spec. 2. The Specification further teaches that this “allows a business or brand to increases awareness about its products or services via a social networking system.” *Id.*

The method comprises receiving communications from a “content generator of a social networking system,” where the communications are “identifying one or more objects maintained by the social networking system associated with a brand” (step [2]). A “content generator” is a user who generates communications. Spec. 11. The Specification explains that an object is, for example, “a status update, photo, or other content . . . relating to a brand owner, its products or services.” *Id.* The claim does not recite who is the recipient of the communication, but in the context of the claim we understand it to be the social networking system.

The method further comprises “querying the edge store database to identify a set of connections of the content generator” established in the social networking system” (step [3]). The “edge store database” describes the connections between the users of the social networking system (step [1]). In the next step of the method, communications from the content generator are presented to users of the social networking system who are connected to

the user (step [4]). We interpret these steps to be carried out by the social networking system.

For each communication from the content generator, the claimed method selects subsets of “exposed users” and “unexposed users” who either viewed the communication or did not, respectively (steps [a](i), [a](ii)). The “exposed users” and “unexposed users” are “selected based on a threshold similarity in user profiles identified between the two subsets, the threshold similarity including a connection to the content generator” (step [a](iii)). The Specification explains that a user with “threshold similarity” to a content generator is a “lookalike user” who, for example, “has performed a threshold number of actions with an object that is similar to an object associated with a communication generated by a content generator or has a threshold amount of user profile information matching, or similar to, user profile information associated with a content generator.” Spec. ¶ 13. The Specification also discloses that lookalike users can be identified “based [on] user profile information, actions performed on the social networking system and/or one or more third party systems, geographic location, connections to additional users, or other information similar to information associated with a content generator.” *Id.*

In the subsequent steps of the method, “sentiments” from exposed users to the communication and sentiments from unexposed users to an object from the same brand owner are determined and compared to determine an impact score “indicating a magnitude of impact” of the communication from the content generator (steps [b]–[d]). The Specification does not provide a definition of sentiment, so we adopt its ordinary dictionary definition to mean “an attitude, thought, or judgment prompted by

feeling.”<sup>2</sup> Thus, the impact on the feelings of the exposed and unexposed users are determined. A report describing the impact scores is generated in the subsequent step [e] of the claim.

The report is presented to the brand owner (step [f]) and rules are received from the brand owner identifying a “response communication,” where the response is “reinforcing positive sentiment” of the communication from the content generator (step [g]). The claim does not recite that the response communication is sent to a user.

### OBVIOUSNESS REJECTION

The Examiner found that Krishnamoorthy describes the same steps of the claimed method of maintaining the database of connections between users of a social networking system and presenting a communication from a content generator to users connected to the content generator (steps [1]–[4] of claim 1). Non-Final Act. 12–13. The Examiner also found that Krishnamoorthy describes determining the sentiments of exposed and non-exposed users, comparing the sentiments, generating an impact report, and sending the report to the brand owner (steps [a]–[f]). *Id.* at 13.

The Examiner found that Krishnamoorthy “does not explicitly teach” step [a](iii) of selecting the subset of exposed users and the subset of unexposed users “based on a threshold similarity in user profiles identified between the two subsets, the threshold similarity including a connection to the content generator.” Non-Final Act. 13–14. For this limitation, the Examiner cited Kunal. *Id.* at 14. The Examiner determined it would have

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<sup>2</sup> <https://www.merriam-webster.com/dictionary/sentiment> (last accessed May 5, 2020).

been obvious to one of ordinary skill in the art to apply Kunal to Krishnamoorthy because “including Kunal’s threshold similarity measure for selecting users in the process of Krishnamoorthy would result in an improved system that detects content on a social network with greater efficiency and accuracy (Kunal, col. 3 ln. 1–13).” *Id.*

The Examiner further cited Gordon for describing the last step of claim 1 of receiving rules from the brand owner and applying them in the manner which is claimed. Non-Final Act. 14–15.

Appellant argues that neither Krishnamoorthy nor Kunal describes selecting “exposed” or “non-exposed” users “based on a threshold similarity in user profiles identified between the two subsets, the threshold similarity including a connection to the content generator.” Appeal Br. 18–19. With respect to Kunal, Appellant argues that the “threshold score determined by Kunal determines whether a profile page associated with different nodes is likely to include content associated with a subject of interest, which is distinct from the claimed ““threshold similarity in user profiles identified between the two subsets, the threshold similarity including a connection to the content generator.’ Kunal, 11:53-65.” Appeal Br. 19. Appellant also argues that Gordon does not disclose this feature. *Id.* at 20.

#### Discussion

Krishnamoorthy describes a database of user connections and a user communicating an advertisement (a “content generator” of claim 1) to another connected user of social network as required by steps [1]–[4] of claim 1. Krishnamoorthy ¶¶ 21, 22, 23 (“communication of information regarding the advertisement or a subject of the advertisement from the first

user 402 to a second user 408 in the social network 404, such as a family member or a friend of the first user 402”).

As required by the claim (steps [b]–[c]), the “sentiments” of the users to whom the communication was presented are determined:

Information regarding the communication, such as the nature of the communication, the mode of communication, the subject of the communications, circumstances surrounding the communication, *whether the communication was positive or negative and to what degree*, the time of the conversion, and other information, is stored in the database 412.

Krishnamoorthy ¶ 23 (emphasis added).

The assessment can include assessing the impact of the communications on the effectiveness of the advertisement, such as impact in connection with the behavior of the second user 408 in view of the communication 424 from the first user 402.

Krishnamoorthy ¶ 29

The “impact” of the communication described in Krishnamoorthy was reasonably found to correspond to the “sentiment” recited in claim, a finding not challenged by Appellant.

Comparisons of sentiments between users is also described by Krishnamoorthy (e.g., at ¶ 30: “For example, analysis of the effect of the communications 424, 426 on the effectiveness of the advertisement relative to the behavior of the second user 408 or third user 410”). *See also* Krishnamoorthy ¶ 36 discussed below.

Krishnamoorthy discloses performing “controlled experimentation” utilizing “multiple sets of similarly or identically targeted users can be identified, with similar or identical network structures, such as if each set includes only family members, etc.” Krishnamoorthy ¶ 36.

Krishnamoorthy describes using “exposed” and “unexposed” users, namely users who have seen the advertisement and users who have not:

For each of a first group, or experimental group, of sets, a particular advertisement is shown to a particular user in the set, called the main user, but not other users in the set. For each of a second group, or control group, of sets, the particular advertisement is purposely not shown to a particular user, or main user, or the other users in the set.

*Id.*

The behaviors of the groups are determined and compared to determine the impact of the advertising (Krishnamoorthy ¶ 36: “Tracking behavior over time of the users, other than the main users, in each of the experimental and control group (as well as other associated information and details) and then comparing the two, can facilitate assessment of the social or communications impact on advertising.”). The latter, as found by the Examiner and not contested by Appellant, correspond to comparing the sentiments of the different users as required by step [d] of claim 1.

Appellant contends that “Krishnamoorthy is silent regarding a relationship between its experimental group and its control group, instead disclosing that its experimental group includes multiple sets of similar users and that its second group of sets includes similar users.” Appeal Br. 18. However, as pointed out above, Krishnamoorthy discloses that “multiple sets of similarly or identically targeted users can be identified, with similar or identical network structures, such as if each set includes only family members, etc.” Krishnamoorthy ¶ 36. After making this statement, Krishnamoorthy then describes the different groups of users utilized in its controlled experimentation. *Id.* The disclosure of “similarly or identically targeted users” therefore reasonably suggests that similar or identical users

are shown the advertisements, including similar or identical users in the exposed and unexposed groups.

We take note of the fact that scientists, when performing controlled experiments as described in paragraph 36 of Krishnamoorthy, would seek to have as many conditions the same as possible to determine the impact of the advertisement on the user where all other variables are the same. To put it another way, if an advertisement about a hair care products is shown to a bald-headed man, he may rate the advertisement neutral or negative, not because of the content of the ad, but because he is biased because of his lack of hair and not interested in hair care products. Thus, to reduce bias, one of ordinary skill in the art would have sought to choose similar users when determining the impact of an advertisement. Consistently, Krishnamoorthy teaches targeting similar or identical users. Krishnamoorthy ¶ 36. Based on this teaching in Krishnamoorthy, one of ordinary skill in the art would have found it obvious to utilize a user's profile as a way of determining whether users are similar or identical to each other because a profile indicates the interests of each user<sup>3</sup> and therefore their similarity. Consistently, the Specification states, in its background section, that “[t]he impact of word-of-mouth communications is increased in online environments like social networking systems where large audiences sharing similar interests are able to easily communicate with each other over potentially large geographic areas and wide demographic distribution.” Thus, it would have been obvious

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<sup>3</sup> Kunal, col. 1, ll. 18–23 (“In general, a user of a social network has a profile page that is customizable by the user. A user can post content, such as text, images, and video, to its profile page.”). *Id.* at col. 4, ll. 50–52 (“Users that share a link may be likely to have common interests and may be likely to post content to their profile pages related to similar topics.”).

to one of ordinary skill in the art to select users with similar profiles as required by claim 1 (“selected based on a threshold similarity in user profiles”) to reduce bias.

Kunal’s disclosure of threshold scores was further cited by the Examiner as a technique to apply to Krishnamoorthy. Non-Final Act. 14. Kunal describes determining whether user have similar content based on the links that users have with one another. Kunal explains that “[u]sers that share a link may be likely to have common interests and may be likely to post content to their profile pages related to similar topics.” Kunal, col. 4, ll. 50–52. Threshold scores are described by Kunal to determine the likelihood a profile page contains similar content between users. Kunal explains that a graph of links between users of a social network (“nodes”) is constructed and then a score can be derived, for example, based on the number connections:

A score that is propagated to a node can be based upon the number of neighbors for the node (e.g., the number of other nodes connected to the node by links in the social graph). For example, a score propagated to a node can be the sum of the scores for each of the neighbor nodes divided by the number of neighbor nodes.

Kunal, col. 9, ll. 57–62.

Once the scores are propagated, Kunal discloses that a “content detection module 230 examines propagated scores . . . for nodes of the graph [which are the links between users] to determine a likelihood that a profile page associated with each of the nodes contains content associated with the particular subject.” Kunal, col. 11, ll. 48–52. Kunal further explains that the “content detection module can identify pages of the social network that are likely to contain content associated with the particular subject of interest

based upon a variety of factors, such as a comparison between a score for the page and a threshold score, a comparison between a score for the page and scores for other nodes, etc.” *Id.* at 11, ll. 52–59. Thus, the scores are used by Kunal *to determine whether the profiles contain similar content*. The scores are not used by Kunal to select users as found by the Examiner. Ans. 13–14. While the Examiner explained that “exposed users” are selected by high scores indicating similarity of the user profiles, the Examiner did not establish that the unexposed users are selected in this manner and appeared to acknowledge they are not (the unexposed users are the remaining users after identifying similar users by links; therefore, the unexposed users, by the Examiner’s reasoning, would not have profile similarity). Moreover, as discussed by Appellant, Kunal’s purpose is to predict whether a user shares content with another user, not to select users. Consequently, we do not agree that the disclosure cited by the Examiner is sufficient to establish the obviousness of claim 1.

However, as discussed above, Krishnamoorthy describes selecting “similarly or identically targeted users,” and therefore meets or makes obvious step (a) of claim 1. Thus, while the Examiner’s rejection based on Kunal is defective, the evidence of record is sufficient to sustain the rejection.

For the foregoing reasons, we affirm the rejection of claims 1 based on Krishnamoorthy, Kunal, and Gordon, but designate it as **new ground of rejection** because our reasoning differs from the Examiner’s. Kunal is cited in the rejection as evidence that profile similarity is one way of determining whether users are similar or identical.

Claims 3, 5, 7–9, 11–13, and 21–23 were not separately argued and fall with claim 1. 37 C.F.R. § 41.37(c)(1)(iv).

## SECTION 101 REJECTION

### Principles of Law

Under 35 U.S.C. § 101, an invention is patent-eligible if it claims a “new and useful process, machine, manufacture, or composition of matter.” However, not every discovery is eligible for patent protection. *Diamond v. Diehr*, 450 U.S. 175, 185 (1981). “Excluded from such patent protection are laws of nature, natural phenomena, and abstract ideas.” *Id.* The Supreme Court articulated a two-step analysis to determine whether a claim falls within an excluded category of invention. *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014); *Mayo Collaborative Servs. v. Prometheus Labs, Inc.*, 566 U.S. 66, 75–77 (2012).

In the first step, it is determined whether the claims at issue recite “one of those patent-ineligible concepts.” *Alice*, 573 U.S. at 217. If it is determined that the claims recite an ineligible concept, then the second step of the two-part analysis is applied in which it is asked “[w]hat else is there in the claims before us?” *Id.* The Court explained that this step involves:

a 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.’

*Alice*, 573 U.S. at 217–18 (citing from *Mayo*, 566 U.S. at 75–77).

*Alice*, relying on the analysis in *Mayo* of a claim reciting a law of nature, stated that in the second part of the analysis, “the elements of each claim both individually and ‘as an ordered combination’” must be

considered “to determine whether the additional elements ‘transform the nature of the claim’ into a patent-eligible application.” *Alice*, 573 U.S. at 217.

The PTO has published revised guidance on the application of 35 U.S.C. § 101. USPTO’s January 7, 2019 Memorandum, *2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50, 51–57 (2019) (“Eligibility Guidance”). This guidance provides additional direction on how to implement the two-part analysis of *Mayo* and *Alice*.

Step 2A, Prong One, of the 2019 Eligibility Guidance, looks at the specific limitations in the claim to determine whether the claim recites a judicial exception to patent eligibility. In Step 2A, Prong Two, the claims are examined to identify whether there are additional elements in the claims that integrate the exception in a practical application, namely, whether there is a “meaningful limit on the judicial exception, such that the claim is more than a drafting effort designed to monopolize the judicial exception.” 84 Fed. Reg. 54 (2. Prong Two).

If the claim recites a judicial exception that is not integrated into a practical application, then as in the *Mayo/Alice* framework, Step 2B of the Eligibility Guidance instructs us to determine whether there is a claimed inventive concept to ensure that the claims define an invention that is significantly more than the ineligible concept, itself. 84 Fed. Reg. 56. In making this determination, we must consider whether there are specific limitations or elements recited in the claim “that are not well-understood, routine, conventional activity in the field, which is indicative that an inventive concept may be present” or whether the claim “simply appends well-understood, routine, conventional activities previously known to the

industry, specified at a high level of generality, to the judicial exception, indicative that an inventive concept may not be present.” 84 Fed. Reg. 56 (footnote omitted).

With these guiding principles in mind, we proceed to determine whether the claimed subject matter in this appeal is eligible for patent protection under 35 U.S.C. § 101.

### Discussion

Claim 1 recites a “computer-implemented method.” Following the first step of the *Mayo* analysis, we find that the claim is directed to a “process,” one of the broad statutory categories of patent-eligible subject matter under 35 U.S.C. § 101. We thus proceed to Step 2A, Prong One, of the Eligibility Guidance.

#### Step 2A, Prong One

In Step 2A, Prong One, of the Eligibility Guidance, the specific limitations in the claim are examined to determine whether the claim recites a judicial exception to patent eligibility, namely whether the claim recites an abstract idea, law of nature, or natural phenomenon.

The Examiner found that the steps in the claim recite the “abstract idea category of mental processes.” Ans. 5, 6–7. We agree with this determination. Specifically, step [a] selects users based a threshold similarity, which is an evaluation that could be performed in the human mind by comparing profiles by visual inspection to determine which have similar content. Eligibility Guidance, 84 Fed. Reg. 52 (“(c) Mental

processes—concepts performed in the human mind (including an observation, evaluation, judgment, opinion)”).

Steps [b] and [c] of determining “sentiments” of users could also be performed in the human mind, for example, by surveys administered verbally to a user. The Specifications discloses the surveys can be presented to users to determine the impact of an object associated with a brand. Spec. ¶ 12. The comparison between the sentiments of exposed and exposed users recited in step [d] could be accomplished in the human mind by comparing answers from the two sets of users, by manual observation and evaluation as explained by the Examiner. Ans. 6–7.

Step [g] of the method recites “receiving rules from the brand owner.” This step could be accomplished mentally by informing the recipient of the rules. The rules are not specifically identified in the claim. Rather, the claim only recites that the result of the rule is a “response communication” for presentation to the users is identified. This “response communication is further identified in the step [g] as “reinforcing positive sentiment” of the communication from the content generator. The Specification discloses that a response communication can be “offers, discounts, promotions” and “discounts, advertisements, coupons, credits.” Spec. ¶¶ 14, 34. For example, if a positive response to a communication of a brand to a user is identified, the rule can specify that a discount coupon is sent to users. This step can be performed in the mind of a human because a human could evaluate the response to the communication, and if it is positive, identify a coupon or discount to positively reinforce it. Under the broadest reasonable interpretation, the step does not require that anything be done with the response communication other than identify it.

Appellant argues that steps [1]–[4] must be performed on a social networking system and therefore cannot be practically performed in a human mind. Reply Br. 3–4; Appeal Br. 7. We agree with Appellant that these steps are not necessarily mental processes. However, steps [a] through [d] and [g] are, and Appellant did not explain why these steps could not be performed practically in a human mind.

In sum, for the foregoing reasons, we find that claim 1 recites an abstract idea. Accordingly, we proceed to Step 2A, Prong Two, of the Eligibility Guidance.

#### Step 2A, Prong Two

Prong Two of Step 2A under the Eligibility Guidance asks whether there are additional elements that integrate the exception into a practical application. As discussed in the Eligibility Guidance, “[a] claim that integrates a judicial exception in a practical application will apply, rely on, or use the judicial exception in a manner that places a meaningful limit on the judicial exception, such that the claim is more than a drafting effort designed to monopolize the judicial exception.” Eligibility Guidance, 84 Fed. Reg. 54. Integration into a practical application is evaluated by identifying whether there are *additional elements* individually, and in combination, which go beyond the judicial exception. *Id.* at 54–55.

Appellant contends that “the claims recite a practical application of the alleged judicial exception that addresses a specific challenge in the field of online advertising, namely, the ability to evaluate effects of communication between different social networking system users on interactions by social networking system users with objects associated with a

brand owner and maintained by the social networking system.” Reply Br. 4. Appellant specifically refers to step [4] of presenting communications to user and step[a](iii) of selecting subsets of users and steps [b]–[d] of determining sentiments. Reply Br. 4–5. Appellant contends that, like in *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299 (Fed. Cir. 2016), “the pending claims herein are not to ‘any form’ of evaluating communications by users about a brand owner communicated via a social networking system,” but rather are specifically limited to the steps of [a](iii), [e], and [g] of claim 1. Appeal Br. 9. Appellant states these steps allow “the brand owner to reduce bias by selecting similar groups of users whose connections to the content generator are already known, allowing the brand owner to more accurately provide responses to the social networking system for presentation to a group of users that reinforce a positive sentiment of one or more of the communications from the content generator” as recited in step [g] of the claim. *Id.* at 10.

In *McRO*, the claims were directed to a “method for automatically animating lip synchronization and facial expression of three-dimensional characters.” *McRO*, 837 F.3d, 1307–08. The claim recited a series of steps that “produce[d] lip synchronization and facial expression control of said animated characters.” *Id.* The court found that the claimed “automation goes beyond merely ‘organizing [existing] information into a new form’ or carrying out a fundamental economic practice.” *McRO*, 837 F.3d at 1315 (citation omitted). Instead, the court found that the “claimed process uses a combined order of specific rules that renders information into a specific format that is then used and applied to create desired results: a sequence of synchronized, animated characters.” *Id.* *McRO* found that the recited rules

“are limiting in that they define morph weight sets as a function of the timing of phoneme sub-sequences.” *McRO*, 837 F.3d at 1313. The claims were found to be directed to a “technological improvement over the existing, manual 3-D animation techniques.” *McRO*, 837 F.3d at 1316.

In finding the claim patent-eligible, *McRO* noted that the “abstract idea exception has been applied to prevent patenting of claims that abstractly cover results where ‘it matters not by what process or machinery the result is accomplished.’ [*O’Reilly v. Morse*, 56 U.S. (15 How.) 62, 113,]; *see also Mayo*, 132 S.Ct. at 1301.” *McRO*, 837 F.3d at 1314. *McRO* stated that therefore, a court must “look to whether the claims in these patents focus on a specific means or method that improves the relevant technology or are instead directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery.” *McRO*, 837 F.3d at 1314.

None of the blaze marks of patent eligibility identified in *McRO* are present in rejected claim 1. As explained under Step 2A, Prong 2, step [g] of the claimed method comprises a mental step. The step recites “receiving rules from the brand owner,” but does not specifically identify the rules as the claims did in *McRO*. Instead, the claim only recites the result of the rule, namely, that a “response communication” for presentation to the users is identified. This response can be a coupon or discount to reinforce the positive sentiment identified in steps [b]–[d]. The rule is not recited with any specificity.

The improvement asserted by Appellant is that the users who are selected for receiving the response from the brand owner are selected on the basis of a threshold similarity between the profiles and on their connection to the content generator. Appeal Br. 12, 16. Appellant did not establish that

the Examiner was incorrect in determining that steps [a] and [g], which embody this asserted improvement, are abstract and therefore unable to serve as the additional element which integrates the abstract idea into a practical application. 84 Fed. Reg. 54–55 (the additional element recited in the claim must be “beyond” the judicial exception). Because the claim does not recite how the threshold similarity is determined or how the response communication is identified (or even require that a response communication is sent to a user), steps [a] and [g] would not deter preemption of the recited abstract idea.

In *McRO*, the court held that the “limitations in claim 1 prevent preemption of all processes for achieving automated lip-synchronization of 3–D characters.” *McRO*, 837 F.3d at 1315. The court explained that “[t]he specific structure of the claimed rules would prevent broad preemption of all rules-based means of automating lip synchronization.” *Id.* In contrast, the steps recited in rejected claim 1 are recited in general terms, namely, selecting users based on threshold similarity and identifying a response based on rules. Unlike *McRO*, none of these steps recite how the result is achieved or how to implement the selection of users and identification of the response communication in a specific manner. While “bias” maybe avoided as asserted by Appellant (Appeal Br. 9, 12) and provide a solution to a problem (Appeal Br. 16), this is accomplished by selecting users based on threshold similarity in profiles, a step which could be done in the human mind by comparing user profiles to identify ones which have, for example, similar interests. Thus, the solution is not a “technical” one.

In sum, we have not been guided to an additional element in the claim, beyond the abstract idea, that integrates the judicial exception in

practical application. The improvement is to the abstract idea, itself, and not to a technology or technical field. Eligibility Guidance, 84 Fed. Reg. 55.

## Step 2B

Because we determine that the judicial exception is not integrated into a practical application, we proceed to Step 2B of the Eligibility Guidelines, which asks whether there is an inventive concept. In making this Step 2B determination, we must consider whether there are specific limitations or elements recited in the claim “that are not well-understood, routine, conventional activity in the field, which is indicative that an inventive concept may be present” or whether the claim “simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception, indicative that an inventive concept may not be present.” Eligibility Guidance, 84 Fed. Reg. 56 (footnote omitted). We must also consider whether the combination of steps perform “in an unconventional way and therefore include an ‘inventive step,’ rendering the claim eligible at Step 2B.” *Id.* In this part of the analysis, we consider “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.

Appellant contends that the claims use “unconventional techniques to reduce bias when evaluating communications from a content generator about an object associated with a brand owner by selecting similar groups of users whose connections to the content generator are already known.” Appeal Br. 16. Appellant explains, quoting from the Specification at ¶ 33, “if users are

not exposed to a negative communication about a brand owner, the sentiments of the users' subsequent communications about the brand owner may be compared to the sentiment of users exposed to the negative communication and having a threshold number of similar characteristics in their user profiles as users not exposed to the negative communication." *Id.* at 16–17. Appellant further states:

Leveraging connections between users maintained by the social networking system allows the pending claims to avoid introducing bias that would otherwise exist if one of the selected groups (e.g., exposed or unexposed) were not connected to the content generator when selecting subsets of users who were and who were not exposed to a particular communication from the content generator.

Appeal Br. 17.

The unconventionality asserted by Appellant resides in step [a](iii) of claim 1 of selecting subsets of users based on threshold similarity of profiles and a connection to the content generator. However, as explained above, this step alone is an abstract idea because determining whether users have similar profiles and are connected can be accomplished by a human mind. An abstract idea, itself, cannot serve as the additional element to establish eligibility of the claim. Appellant did not address the nature of step [a] in the Appeal Brief or the Reply Brief. For example, Appellant asserts that steps [1]–[4] of the claim cannot practically be performed in the human mind, but do not assert that step [a] cannot be performed in the human mind. Appeal Br. 7–8; Reply Br. 4. Steps [b], [d], and [g] are also abstract. Thus, the *combination* of these steps cannot serve as the basis for patent eligibility. The question, therefore, is whether these steps in combination with the non-abstract steps of the claim, such as steps [1]–[4], [e], and [f] provide an

inventive step. We find that they do not, because the additional steps of the claim, when considered by themselves or as an ordered combination with, e.g., steps [a] and [g], merely recite generic computers / computer components performing generic computer functions. *Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1315 (Fed. Cir. 2016) (“Claims that ‘amount to nothing significantly more than an instruction to apply [an] abstract idea ... using some unspecified, generic computer’ and in which ‘each step does no more than require a generic computer to perform generic computer functions’ do not make an abstract idea patent-eligible.”). Neither has Appellant provided evidence that such steps, when considered in combination with steps [a] and [g], establish that the implementation of the method is unconventional and non-routine.

Accordingly, we affirm the rejection of claim 1 as ineligible for a patent under 35 U.S.C. § 101. Claims 3, 5, 7–9, 11–13, and 21–23 are not argued separately and fall with claim 1. 37 C.F.R. § 41.37(c)(1)(iv).

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s) /Basis	Affirmed	Reversed	New Grounds
1, 3, 5, 7-9, 11-13, 21-23	101	Eligibility	1, 3, 5, 7-9, 11-13, 21-23		
1, 3, 5, 7-9, 11-13, 21-23	103	Krishnamoorthy, Kunal, Gordon	1, 3, 5, 7-9, 11-13, 21-23		1, 3, 5, 7-9, 11-13, 21-23
<b>Overall Outcome</b>			1, 3, 5, 7-9, 11-13, 21-23		1, 3, 5, 7-9, 11-13, 21-23

TIME PERIOD FOR RESPONSE

This decision contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b). Section 41.50(b) provides “[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review.” Section 41.50(b) also provides:

When the Board enters such a non-final decision, the appellant, within two months from the date of the decision, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

(1) *Reopen prosecution.* Submit an appropriate amendment of the claims so rejected or new Evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the prosecution will be remanded to the examiner. The new ground of rejection is binding upon the examiner unless an amendment or new Evidence not previously of Record is made which, in the opinion

of the examiner, overcomes the new ground of rejection designated in the decision. Should the examiner reject the claims, appellant may again appeal to the Board pursuant to this subpart.

(2) *Request rehearing*. Request that the proceeding be reheard under §41.52 by the Board upon the same Record. The request for rehearing must address any new ground of rejection and state with particularity the points believed to have been misapprehended or overlooked in entering the new ground of rejection and also state all other grounds upon which rehearing is sought.

Further guidance on responding to a new ground of rejection can be found in the MPEP § 1214.01.

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), 41.52(b).

AFFIRMED; 37 C.F.R. § 41.50(b)