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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte THOMAS ALISON, KIRANJIT S. SIDHU,
CAROL CHIA-FAN PAI, PETER H. MARTINAZZI,
FLORIN RATIU, and JENNIFER BURGE

Appeal 2019-002103
Application 13/277,180
Technology Center 2400

Before KRISTEN L. DROESCH, JOHNNY A. KUMAR, and
LINZY T. McCARTNEY, *Administrative Patent Judges*.

DROESCH, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from the Examiner's decision rejecting claims 1–20 and 24–29. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42 (2017). Appellant indicates the real party-in-interest is Facebook, Inc. Appeal Br. 2.

BACKGROUND

The disclosed invention relates to filtering and ranking recommended users on a social networking system. Spec. ¶ 1.

CLAIMED SUBJECT MATTER

Claim 1, which is representative of the subject matter of the appeal and is reproduced from the Claims Appendix of the Appeal Brief, reads as follows:

1. A method comprising:
maintaining a user profile for each of a plurality of users of a social networking system;
maintaining a plurality of connections established between users of the plurality of users of the social networking system;
for a viewing user of the plurality of users, receiving a request to recommend one or more other users with whom to establish a connection in the social networking system from the viewing user, the request comprising a user profile characteristic for recommending the one or more other users;
responsive to the request, identifying a plurality of candidate recommended users using profile information, comprising:
determining a plurality of the users of the social networking system with whom the viewing user has not already established a connection; and
filtering the determined plurality of users to eliminate users with profile information that does not match the user profile characteristic, the filtering resulting in the plurality of candidate recommended users;
generating a prediction value for each of the plurality of candidate recommended users, each prediction value estimating a likelihood that the viewing user will initiate a request to the candidate recommended user;
ranking the candidate recommended users based on the prediction values;
selecting one or more of the candidate recommended users based on the ranking; and

providing the selected candidate recommended users for display to the viewing user in an interface enabling the viewing user to establish a connection with the selected candidate recommended users.

REJECTION ON APPEAL

Claims 1–20 and 24–29 stand rejected under 35 U.S.C. § 101 as directed to patent-ineligible subject matter. Final Act. 3–7.

ANALYSIS

Appellant disputes the Examiner’s determination that claims 1–20 and 24–29 are directed to patent-ineligible subject matter. *See* Appeal Br. 5–12. Appellant argues claims 1–20 and 24–29 together as a group. *See id.* Consequently, we choose claim 1 as representative of the group consisting of claims 1–20 and 24–29. 37 C.F.R. § 41.37(c)(1)(iv).

The Supreme Court’s two-step framework guides our analysis of patent eligibility under 35 U.S.C. § 101. *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208, 217 (2014). In addition, the Office published revised guidance for evaluating subject matter eligibility under 35 U.S.C. § 101, specifically with respect to applying the *Alice* framework. USPTO, 2019 *Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50 (Jan. 7, 2019) (“Guidance”). If a claim falls within one of the statutory categories of patent eligibility (i.e., a process, machine, manufacture, or composition of matter) then the first inquiry is whether the claim is directed to one of the judicially recognized exceptions (i.e., a law of nature, a natural phenomenon, or an abstract idea). *Alice*, 573 U.S. at 217. As part of this inquiry, we must “look at the ‘focus of the claimed advance over the prior art’ to determine if the claim’s ‘character as a whole’ is directed to excluded subject matter.” *Affinity Labs of Tex., LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1257 (Fed.

Cir. 2016). According to the Guidance, this first inquiry has two prongs of analysis (i) does the claim recite a judicial exception (e.g., an abstract idea) and (ii) if so, is the judicial exception integrated into a practical application. *See* Guidance, 84 Fed. Reg. at 54. Under the Guidance, if the judicial exception is integrated into a practical application, the claim is patent eligible under § 101. *See id.* at 54–55. If the claims are not directed to a judicial exception, the inquiry ends. *See McRO Inc. v. Bandai Namco Games Amer. Inc.*, 837 F.3d 1299, 1312 (Fed Cir. 2016). However, if the claim *is* directed to a judicial exception (i.e., recites a judicial exception and does not integrate the exception into a practical application), the next step is to determine whether any element, or combination of elements, amounts to significantly more than the judicial exception. *See Alice*, 573 U.S. at 217; Guidance, 84 Fed. Reg. at 56.

Here, we determine that claim 1 recites:

determining a plurality of the users of the social networking system with whom the viewing user has not already established a connection, filtering the determined plurality of users to eliminate users with profile information that does not match the user profile characteristic; generating a prediction value for each of the candidate recommended users, each prediction value estimating a likelihood that the viewing user will initiate a request to the candidate recommended user; ranking the candidate recommended users based on the prediction values; selecting one or more of the candidate recommended users based on the ranking; and providing the selected candidate recommended users for display to the viewing user.

This is consistent with how Appellant describes the claimed invention. *See, e.g.*, Spec. ¶¶ 38–41, Fig. 3. Consistent with the Guidance and case law, we conclude the steps of:

determining a plurality of the users with whom a viewing user has not already established a connection, *filtering* the determined plurality of users to eliminate users with profile information that does not match a user profile characteristic; *generating a prediction value* for each of the candidate recommended users; *ranking* the candidate recommended users based on the prediction values; *selecting* one or more of the candidate recommended users based on the ranking, and *providing* the selected candidate users for display could be performed as mental processes with the aid of pen and paper and, thus, is an abstract idea. *See* Guidance, 84 Fed. Reg. at 52; *see also Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1139 (Fed. Cir. 2016) (holding that claims to “translating a functional description of a logic circuit into a hardware component description of the logic circuit” are directed to an abstract idea, because the claims “read on an individual performing the claimed steps mentally or with pencil and paper”); *Mortg. Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d 1314, 1324 (Fed. Cir. 2016) (holding that computer-implemented method for “anonymous loan shopping” was an abstract idea because it could be “performed by humans without a computer”); *Versata Dev. Grp. v. SAP Am., Inc.*, 793 F.3d 1306, 1335 (Fed. Cir. 2015) (“Courts have examined claims that required the use of a computer and still found that the underlying, patent-ineligible invention could be performed via pen and paper or in a person’s mind.”).

We are not persuaded by Appellant’s argument that “the claims are directed to a specific manner of determining one or more users to recommend to a social networking system user for a connection through predicting a likelihood of the social networking system user to initiate a

connection request to set of filtered candidate users, which is not an abstract idea.” *See* Appeal Br. 7. Appellant’s characterization of the claims also describes a mental process.

In response to the Examiner’s finding that the claims are directed to a mental process (Ans. 4), Appellant argues that claim 1 does not recite steps that may be simply performed in one’s mind. *See* Reply Br. 8, *see also id.* at 11 (the limitations of claim 1 are not “feasibly accomplished by any human mind”). According to Appellant, “[a] user’s mind knowing only which connections exist could not possibl[y] imagine connections that have not yet been established with others.” *Id.* at 8–9. Appellant further contends “it’s practically implausible that there exists a single physical database that catalogs each and every connection between humans which can then easily be parsed through by a human mind.” *Id.* at 9.

Appellant’s arguments are not persuasive because they are not commensurate in scope with the claim limitations. Appellant’s arguments are premised on an infinite number of users and possible social connections between users, when claim 1 does not recite or require a specific number of users or connections between users of the social networking system. The scope of claim 1 may include relatively small numbers of users, established connections between users, and users with whom the viewing user has not already established a connection, for example, in a social network for a neighborhood comprising 100 housing units, such that the human mind is capable of performing the mental processes recited in claim 1 with the aid of pen and paper.

Because claim 1 recites a judicial exception, we next determine whether the claim integrates the judicial exception into a practical

application. *See* Guidance, 84 Fed. Reg. at 54. To determine whether the judicial exception is integrated into a practical application, we identify whether there are “any additional elements recited in the claim beyond the judicial exception(s)” and evaluate those elements to determine whether they integrate the judicial exception into a recognized practical application. Guidance, 84 Fed. Reg. at 54–55 (emphasis added); *see* Manual of Patent Examining Procedure (“MPEP”) § 2106.05(a)–(c), (e)–(h) (9th ed. Rev. 08.2017, Jan. 2018).

The additional elements recited in claim 1 are: (1) “maintaining a user profile for each of a plurality of users of a social networking system; maintaining a plurality of connections established between the users of the plurality of users of the social networking system;” (2) “receiving a request [from a viewing user] to recommend one or more other users with whom to establish a connection in the social networking system from the viewing user, the request comprising a user profile characteristic;” and (3) “an interface enabling the viewing user to establish a connection with the selected candidate recommended users.” Considering these additional elements along with the limitations that recite a judicial exception, we determine that claim 1 does not integrate the judicial exception into a practical application. Contrary to Appellant’s arguments, *see* Appeal Br. 8–11; Reply Br. 8, the additional elements in combination with the limitations that recite a judicial exception do not: (1) reflect an improvement to the functionality of a computer or other technology or technical field (*see* MPEP § 2106.05(a)); (2) implement a “particular machine” to apply or use the judicial exception (*see* MPEP § 2106.05(b)); (3) effect a particular transformation of an article to a different thing or state (*see* MPEP

§ 2106.05(c)); or (4) apply the judicial exception in some other meaningful limitation beyond generally linking the use of the judicial exception to a particular technological environment, such that the claim as a whole is more than a drafting effort to designed to monopolize the exception (*see* MPEP § 2106.05(e)). *See* Guidance, 84 Fed. Reg. at 55.

The additional elements of: (1) “maintaining a user profile for each of a plurality of users of a social networking system; maintaining a plurality of connections established between the users of the plurality of users of the social networking system” and (2) “receiving a request [from a viewing user] to recommend one or more other users with whom to establish a connection in the social networking system from the viewing user, the request comprising a user profile characteristic,” recited in claim 1, are the types of extra-solution activity (i.e., in addition to the judicial exception) the courts have determined insufficient to transform judicially excepted subject matter into a patent-eligible application. *See* MPEP § 2106.05(g); *OIP Techs., Inc. v. Amazon.com*, 788 F.3d 1359, 1363–64 (Fed. Cir. 2015) (determining additional elements of storing information, and gathering information were insufficient to transform the abstract idea into a patent eligible application). The additional element “an interface enabling the viewing user to establish a connection with the selected candidate recommended users” amounts to the use of the claimed interface as a tool for “providing the selected candidate recommended users for display to the viewing user” of the abstract idea recited in claim 1. *See* MPEP 2106.05(f); *Intellectual Ventures I LLC v. Erie Indemnity Co.*, 850 F.3d 1315 (Fed. Cir. 2017) (determining the claimed mobile interface provides little more than a generic technological environment to allow users to access information

because the claims merely recite retrieving information through the mobile device).

Because we determine claim 1 is directed to a judicial exception, next we analyze the claims under step two of *Alice* to determine if there are additional elements that individually, or as an ordered combination, ensure the claims amount to “significantly more” than the abstract idea. *Alice*, 573 U.S. at 217–18 (citing *Mayo Collaborative Servs. v. Prometheus Labs.*, 566 U.S. 66, 77–79 (2012)). As stated in the Guidance, many of the considerations to determine whether the claims amount to “significantly more” under step two of the *Alice* framework are already considered as part of determining whether the judicial exception has been integrated into a practical application. *See* Guidance, 84 Fed. Reg. at 56. Therefore, at this point of our analysis, we determine if the claims add a specific element, or combination of elements, that is not well-understood, routine, conventional activity in the field, or simply append well-understood, routine, conventional activities at a high level of generality. *See id.* “Whether something is well-understood, routine, and conventional to a skilled artisan at the time of the patent is a factual determination.” *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1369 (Fed. Cir. 2018).

Here, Appellant’s claims append well-understood, routine, conventional activities previously known in the industry and do not recite specific elements or a combination of elements that are not well-understood, routine, and conventional. Again, the additional elements of claim 1 are: (1) “maintaining a user profile for each of a plurality of users of a social networking system; maintaining a plurality of connections established between the users of the plurality of users of the social networking system;”

(2) “receiving a request [from a viewing user] to recommend one or more other users with whom to establish a connection in the social networking system from the viewing user, the request comprising a user profile characteristic;” and (3) “an interface enabling the viewing user to establish a connection with the selected candidate recommended users.” Our reviewing courts have determined that receiving and storing information are conventional computer functions. *See OIP*, 788 F.3d at 1363–64 (gathering statistics generated during testing and storing test results); *Versata*, 793 F.3d at 1334 (Fed. Cir. 2016) (storing information was among several claim limitations that are well-understood, routine, and conventional activities previously known in the industry).

As to the additional element “an interface enabling the viewing user to establish a connection with the selected candidate recommended users,” the Specification indicates that this additional element is sufficiently well-known that it need not be described in technical detail to satisfy the requirements of 35 U.S.C. §112(a). *See e.g.* Spec. ¶¶ 20 (disclosing providing selected candidate recommended users to a viewing user device), 40–41 (disclosing providing a user interface to a viewing user for requesting a new connection, and disclosing an advertisement, email message, instant message, a pop-up dialog box, and the like as examples); *see also* USPTO, Memorandum on Changes in Examination Procedure Pertaining to Subject Matter Eligibility, Recent Subject Matter Eligibility Decision (*Berkheimer v. HP, Inc.*) at 3 (Apr. 19, 2018), available at <https://www.uspto.gov/sites/default/files/documents/memo-berkheimer-20180419.PDF> (explaining that a specification that describes additional elements “in a manner that indicates that the additional elements are sufficiently well-known that the

specification does not need to describe the particulars of such additional elements to satisfy 35 U.S.C. § 112(a)” can show that the elements are well understood, routine, and conventional); *Intellectual Ventures I LLC, v. Capital One Bank (USA)*, 792 F.3d 1363, 1370–1371 (Fed Cir. 2015) (finding “interactive interface” is a generic computer element).

We are not persuaded by Appellant’s argument that the following limitations of claim 1 provide an inventive concept: “determining a plurality of the users of the social networking system with whom the viewing user has not already established a connection,” “filtering the determined plurality of users to eliminate users with profile information that does not match the user profile characteristic, the filtering resulting in the plurality of candidate recommended users,” and “generating a prediction value for each of the plurality of candidate recommended users, each prediction value estimating a likelihood that the viewing user will initiate a request to the candidate recommended user.” *See* Appeal Br. 9. According to Appellant, “claim 1 specifically orders its limitations with language to tie each subsequent limitation to the prior limitations thereby crafting an ordered combination wherein lies the ‘inventive concept.’” *Id.* at 9–10. We also are not persuaded by Appellant’s argument that the Final Office Action improperly relegates the limitations of the claims to activities that are considered to be well-understood, routine, and conventional. *See* Appeal Br. 11–12 (quoting Changes in Examination Procedure Pertaining to Subject Matter Eligibility, Recent Subject Matter Eligibility Decision (*Berkheimer v. HP, Inc.*) 3–4; citing *Berkheimer v. HP, Inc.*, 881 F.3d 1360 (Fed. Cir. 2018)). Appellant’s arguments focus on the abstract idea recited in claim 1, and do not address the aforementioned additional elements recited in claim 1. *See* Final Act. 6–

7; Appeal Br. 11–12; Ans. 4–5; Reply Br. 6–7. “What is needed is an inventive concept in the non-abstract application realm.” *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1168 (Fed. Cir. 2018). For the foregoing reasons, we determine that the additional elements individually or as an ordered combination do not provide an inventive concept such that claim 1 amounts to significantly more than the recited judicial exception.

Accordingly, for the foregoing reasons we are not persuaded the Examiner erred in rejecting claims 1–20 and 24–29 under 35 U.S.C. § 101. Therefore, we sustain the rejection of claims 1–20 and 24–29 under 35 U.S.C. § 101 as directed to patent-ineligible subject matter.

CONCLUSION

We affirm the Examiner’s rejection of claims 1–20 and 24–29 under 35 U.S.C. § 101.

In summary:

Claims Rejected	35 U.S.C. §	Basis	Affirmed	Reversed
1–20, 24–29	101	Eligibility	1–20, 24–29	

TIME PERIOD FOR RESPONSE

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).

AFFIRMED