UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/297,053	06/05/2014	Aaron Payne Goldsmid	26295-26444	6814

87851	7590	09/13/2019

Facebook/Fenwick
Silicon Valley Center
801 California Street
Mountain View, CA 94041

EXAMINER
ROSS, SCOTT M

ART UNIT	PAPER NUMBER
3623	

NOTIFICATION DATE	DELIVERY MODE
09/13/2019	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

fwfacebookpatents@fenwick.com
ptoc@fenwick.com

PTOL-90A (Rev. 04/07)

UNITED STATES PATENT AND TRADEMARK OFFICE

———————————

BEFORE THE PATENT TRIAL AND APPEAL BOARD

———————————

Ex parte AARON PAYNE GOLDSMID, GEORGE LEE,
VISHU GUPTA, DANIEL RICHARD MORRIS, DAVID
JOSEPH ENGELBERG, BRENDAN MARTEN,
TINA MARIE CARDACI, and NIKET BISWAS

———————————

Appeal 2018-004157
Application 14/297,053
Technology Center 3600

———————————

Before BRADLEY W. BAUMEISTER, ERIC B. CHEN, and
JAMES B. ARPIN, *Administrative Patent Judges*.

BAUMEISTER, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant[1] appeals under 35 U.S.C. § 134(a) from the Examiner's
Final Rejection of claims 1–5, 7, and 10–27. App. Br. 6. These claims stand
rejected under 35 U.S.C. § 101 as being directed to patent-ineligible subject
matter. Final Action mailed Mar. 13. 2017 ("Final Act.") at 2–8. We have
jurisdiction under 35 U.S.C. § 6(b).

We affirm.

---

[1] Appellant identifies Facebook, Inc. as the real party in interest. Appeal
Brief filed September 28, 2017 ("App. Br.") at 2. (Appellant does not
include page numbers on their Appeal Brief or Reply Brief. For ease of
discussion, we treat the cover sheet of each document as corresponding to
page 1, with the subsequent pages consecutively numbered.)

SUBJECT MATTER

The recited methods and computer program products "relate[]
generally to social networking systems, and more specifically to predicting
interactions of users of a social networking system with applications." Spec.
¶ 1. More specifically, Appellant describes the purpose of such methods and
products as follows:

> To allow more accurate targeting of content for
> presentation via an application [(e.g., for games and tools)], a
> social networking system associates one or more classifications
> with a social networking system user based on the likelihoods of
> the user performing various types of interactions with the
> application. To determine the likelihoods of the user performing
> types of interactions, the social networking system retrieves
> information describing prior interactions by the user with one or
> more applications. For example, the social networking system
> provides a software development kit ("SDK") to third-party
> application developers including instructions for inclusion in one
> or more applications. When the instructions are executed, an
> application communicates information describing interactions
> with the application, identifying the application, and identifying
> a social networking system user performing the application. For
> example, an application communicates to the social networking
> system information identifying types of products a user
> purchased in the application, times of day the user interacted with
> the application, and a number of social interactions with other
> users performed by the application.

Id. ¶ 4; *see also id.* ¶ 2 (describing the types of applications).

Independent claim 1 is illustrative. It is reproduced below with
formatting modified for clarity and emphasis added to indicate the language
of the claim that recites abstract ideas:

1.   A method comprising:

[i]   providing program code to one or more developers of one
or more applications, the program code for inclusion in the one

or more applications and for communication of information describing interactions of users of a social networking system with the one or more applications to the social networking system;

[ii]   receiving, by a computer processor of the social networking system, the information from the provided program code, included in one or more applications describing interactions of users of the social networking system with each of the one or more applications, the information identifying an application in which the provided program code was included, identifying one or more users who interacted with the application in which the program code was included, and describing one or more interactions of the one or more users with the application in which the program code was included;

[iii]   storing, by the computer processor, the received information describing interactions of the one or more users with the one or more applications;

[iv]   retrieving information describing interactions of a user of the social networking system with the one or more applications;

[v]   *determining*, by the computer processor, *a likelihood of the user performing each of one or more types of interactions with a selected application based at least in part on the retrieved information describing the interactions of the user with the one or more applications, wherein determining a likelihood comprises*:

> [a]   retrieving stored information describing interactions of the user with one or more additional applications each having at least a threshold measure of similarity with the selected application, and

> [b]   *determining the likelihoods of the user performing one or more types of interactions with the selected application based at least in part on the retrieved information describing interactions of the user with the one or more applications and on the stored information describing interactions of the user with the one or more additional applications each having at least the threshold measure of similarity with the selected application*; and

> [vi] *determining*, by the computer processor, *one or more classifications associated with the user based at least in part on the determined likelihoods.*

PRINCIPLES OF LAW

A. SECTION 101

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 U.S. Supreme Court has long interpreted 35 U.S.C. § 101 to include implicit exceptions: "[l]aws of nature, natural phenomena, and abstract ideas" are not patentable. *E.g.*, *Alice Corp. 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 Court's two-step framework, described in *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66 (2012), and *Alice*. *Alice*, 573 U.S. at 217–18 (citing *Mayo*, 566 U.S. at 75–77). 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, 67 (1972)). Concepts

determined to be patent eligible include physical and chemical processes, such as "molding rubber products" (*Diamond v. Diehr*, 450 U.S. 175, 191 (1981)); "tanning, dyeing, making water-proof cloth, vulcanizing India rubber, smelting ores" (*id.* at 182 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 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 187; *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 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.* (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 (citation 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.*

B. USPTO SECTION 101 GUIDANCE

In January of 2019, the United States Patent and Trademark Office
("USPTO") published revised guidance on the application of 35 U.S.C.
§ 101. USPTO, 2019 Revised Patent Subject Matter Eligibility Guidance,
84 Fed. Reg. 50 (Jan. 7, 2019) ("2019 Guidance"). Under the
2019 Guidance, we first look to whether the claim recites the following:

> (1) any judicial exceptions, including certain groupings of abstract
> ideas (i.e., mathematical concepts, certain methods of organizing
> human activities such as a fundamental economic practice, or mental
> processes); and
>
> (2) additional elements that integrate the judicial exception into a
> practical application (*see* MPEP §§ 2106.05(a)–(c), (e)–(h)).

84 Fed. Reg. 52–55.

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.

84 Fed. Reg. 56.

ANALYSIS[2]

Step 2A, Prong 1:

Under step 2A, prong 1, of the 2019 Guidance, we first look to whether the claim recites any judicial exceptions, including certain groupings of abstract ideas (i.e., mathematical concepts, certain methods of organizing human activities such as a fundamental economic practice, or mental processes). 84 Fed. Reg. 52–55.

Limitations [v] and [vi] of claim 1 recite the following language:

[v] *determining*, by the computer processor, *a likelihood of the user performing each of one or more types of interactions with a selected application based at least in part on the retrieved information describing the interactions of the user with the one or more applications, wherein determining a likelihood comprises*:

> . . . .

> [b] *determining the likelihoods of the user performing one or more types of interactions with the selected application based at least in part on the retrieved information describing interactions of the user with the one or more applications and on the stored information describing interactions of the user with the one or more additional applications each having at least the threshold measure of similarity with the selected application*; and

[vi] *determining*, by the computer processor, *one or more classifications associated with the user based at least in part on the determined likelihoods*.

---

[2] Appellant argues claims 1–5, 7, and 10–27 together as a group. *See* App. Br. 6–16. Accordingly, we select independent claim 1 as representative. 37 C.F.R. § 41.37(c)(1)(iv).

These limitations reasonably can be interpreted as reciting mental processes that can be performed in the human mind or with the aid of pencil and paper. More specifically, the step of determining the likelihood of interactions and determining classifications reasonably can be characterized as mental observations, evaluations, judgments, or opinions. The 2019 Guidance expressly recognizes such mental observations and evaluations as examples of patent-ineligible abstract ideas. Accordingly, both of limitations [v.b] and [vi] reasonably are characterized as reciting patent-ineligible subject matter.

Step 2A, Prong 2:

Under step 2A, prong 2, of the 2019 Guidance, we next analyze whether claim 1 recites additional elements that integrate the judicial exception into a practical application. 84 Fed. Reg. 52–55.

Limitation [v] more specifically recites that a computer processor is what performs the abstract idea of "determining . . . a likelihood of the user performing each of one or more types of interactions." App. Br. 17. Limitation [vi] also recites that the computer processor performs the step of determining one or more classifications. *Id.*

However, additionally relying on a "processor" to "perform routine tasks more quickly or more accurately is insufficient to render a claim patent eligible." *OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1363 (Fed. Cir. 2015). "[T]he fact that the required calculations could be performed more efficiently via a computer does not materially alter the patent eligibility of the claimed subject matter." *Bancorp Servs., L.L.C. v. Sun Life Assur. Co. of Canada (U.S.)*, 687 F.3d 1266, 1278 (Fed. Cir. 2012); *see also DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257 (Fed.

Cir. 2014) (distinguishing a claimed solution necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks 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").

Claim 1 also recites a step of providing program code to application developers (limitation [i]) and various steps of receiving, retrieving, and storing data (limitations [ii]–[iv] and [v.a]). These steps do not add additional steps that integrate the abstract ideas into a practical application because these steps reasonably are characterized as merely constituting insignificant extra-solution activity:

> An example of pre-solution activity is a step of gathering data for use in a claimed process, *e.g.,* a step of obtaining information about credit card transactions, which is recited as part of a claimed process of analyzing and manipulating the gathered information by a series of steps in order to detect whether the transactions were fraudulent.

MPEP § 2106.05(g); *see also Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1241–42 (Fed. Cir. 2016) (holding that printing or downloading generated menus constituted insignificant extra-solution activity).

Appellant argues that

> the claims are not merely directed to "classifying users based on the likelihood of their interactions." Instead, they are directed to associating one or more classifications with a social networking system user based on the likelihoods of the user performing various types of interactions with an application to allow more accurate targeting of content for presentation via the application.

App. Br. 9; *see also* Reply Brief filed Mar. 9, 2018 ("Reply Br.") at 3–4 (presenting substantially the same argument).

This argument is unpersuasive because the act of associating classifications with a social networking system user based on the likelihood of various types of interactions entails one of the recited abstract ideas. "It has been clear since *Alice* that a claimed invention's use of the ineligible concept to which it is directed cannot supply the inventive concept that renders the invention 'significantly more' than that ineligible concept." *BSG Tech LLC v. BuySeasons, Inc.*, 899 F.3d 1281, 1290 (Fed. Cir. 2018); *see Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1151 (Fed. Cir. 2016) ("[A] claim for a *new* abstract idea is still an abstract idea."); *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1168 (Fed. Cir. 2018) ("What is needed is an inventive concept in the non-abstract application realm.").

Moreover, Appellant's Specification explains that apparatus for performing the operations described in the Specification "may be specially constructed for the required purposes, and/or *it may comprise a general-purpose computing device selectively activated or reconfigured by a computer program stored in the computer*." Spec. ¶ 47 (emphasis added); *see id.* ¶¶ 45, 46 (describing programs implementing such operations).

For these reasons, Appellant does not persuade us that claim 1 is directed to an improvement in the function of a computer or to any other technology or technical field. MPEP ¶ 2106.05(a). Nor has Appellant persuasively demonstrated that claim 1 is directed to a particular machine or transformation (MPEP ¶ 2106.05(b), (c)), or that claim 1 adds any other meaningful limitations (MPEP ¶ 2106.05(e)). Accordingly, Appellant has not persuaded us that claim 1 integrates the recited abstract ideas into a practical application within the meaning of the 2019 Guidance. 84 Fed. Reg. 52–55.

Step 2B:

Under step 2B of the 2019 Guidance, we next analyze whether claim 2 adds any specific limitation beyond the judicial exception that is not "well-understood, routine, conventional" in the field. 84 Fed. Reg. 56; MPEP § 2106.05(d).

The Examiner concludes that the claims do not include additional elements that are sufficient, either alone or in combination, to amount to significantly more than an abstract idea "because the code, computer processor, social network system, computer readable storage medium, instructions, etc. merely describe generic computer components performing their conventional functions in implementing the abstract idea." Final Act. 3. The Examiner cites to Appellant's Specification in support of this conclusion:

> Embodiments of the invention may also relate to an apparatus for performing the operations herein. This apparatus may be specially constructed for the required purposes, and/or *it may comprise a general-purpose computing device selectively activated or reconfigured by a computer program stored in the computer.* Such a computer program may be stored in a non-transitory, tangible computer readable storage medium, or any type of media suitable for storing electronic instructions, which may be coupled to a computer system bus. Furthermore, any computing systems referred to in the specification may include a single processor or may be architectures employing multiple processor designs for increased computing capability.

Spec. ¶ 47 (emphasis added, *cited in* Final Act. 30; *see id.* ¶¶ 45, 46 (cited above).

Appellant does not provide persuasive evidence that the additional elements are anything other than generic computer components performing

their conventional functions in implementing the abstract idea. App. Br. 6–15; Reply Br 2–5.

Furthermore, Appellant's Specification further supports the Examiner's determinations. *See, e.g.*, Spec. ¶ 12 "In one embodiment, a client device 110 is a conventional computer system, such as a desktop or a laptop computer. Alternatively, a client device 110 may be a device having computer functionality, such as a personal digital assistant (PDA), a mobile telephone, a smartphone or another suitable device."), ¶15 ("Conventional components such as network interfaces, security functions, load balancers, failover servers, management and network operations consoles, and the like are not shown so as to not obscure the details of the system architecture").

For these reasons, we determine that claim 1 does not recite additional elements that amount to significantly more than the abstract idea within the meaning of the 2019 Guidance. 84 Fed. Reg. 56–57; MPEP § 2106.05(d).

Accordingly, we sustain the Examiner's rejection of claim 1 under 35 U.S.C. § 101 as directed to patent-ineligible subject matter. We, likewise, sustain the 101 rejection of claims 2–5, 7, and 10–27, which Appellant does not argue separately. App. Br. 6–15; 37 C.F.R. § 41.37(c)(1)(iv).

DECISION

The Examiner's decision rejecting claims 1–5, 7, and 10–27 is affirmed.

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). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED