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BEFORE THE PATENT TRIAL AND APPEAL BOARD
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Ex parte KAMAL ZAMER, LUCY MA ZHAO,
and JAYASREE MEKALA
————————————

Appeal 2019-002193
Application 14/226,399
Technology Center 3600
————————————

Before ERIC S. FRAHM, JASON J. CHUNG, and
JOYCE CRAIG, *Administrative Patent Judges*.

CHUNG, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant[1] appeals the Final Rejection of claims 1–8 and 10–21.[2] We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

INVENTION

The invention relates to implementing real-time event notifications. Spec. ¶ 1. Claim 1 is illustrative of the invention and is reproduced below:

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[1] We use the word "Appellant" to refer to "applicant" as defined in 37 C.F.R. § 1.42. According to Appellant, eBay Inc. is the real party in interest. Appeal Br. 4.

[2] Claim 9 is cancelled. Appeal Br. 16.

1.   A system comprising:

a non-transitory memory *storing information about a user account, wherein the information comprises preferences of a user*; and

one or more hardware processors coupled to the non-transitory memory and configured to *read instructions* from the non-transitory memory *to cause* the system *to perform operations comprising*:

receiving, via short distance wireless electronic communication, a plurality of event notifications broadcasted from mobile communication devices of *other users within a range of the short distance wireless electronic communication, the event notifications indicating occurrences of events detected by* the mobile communication devices of *the other users*;

filtering the plurality of event notifications based on the preferences of the user by:

scanning the non-transitory memory *for information pertaining to the user;*

identifying, in the non-transitory memory, *a previous transaction of the user related to the event notifications; and*

selecting a subset of the event notifications based on the previous transaction of the user related to the event notifications;

presenting, via an electronic display, *the subset of the event notifications to the user based on the filtering; and*

broadcasting, via short *distance wireless electronic communication, the subset of the event notifications to other* mobile communication devices *within the range of the short distance wireless electronic communication.*

Appeal Br. 15 (Claims Appendix) (emphases added).

REJECTION

Claims 1–8 and 10–21 stand rejected under 35 U.S.C. § 101 as being directed to patent ineligible subject matter. Final Act. 2–5.

ANALYSIS

I. *Claims 1–8 and 10–21 Rejected Under 35 U.S.C. § 101*

A. *Legal Principles*

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: "[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 Supreme Court's two-step framework, described in *Mayo* and *Alice*. *Id.* 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, 191

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(1981)); "tanning, dyeing, making water-proof cloth, vulcanizing India rubber, smelting ores" (*id.* at 182 n.7 (quoting *Corning v. Burden*, 56 U.S. (15 How.) 252, 267–68 (1854))); 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 187; *see also id.* at 192 ("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.* (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.* (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* ("Memorandum"). 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 activity 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)).

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 Memorandum.

    B.   The Examiner's Conclusions and Appellant's Arguments

The Examiner concludes the present claims recite managing interactions between people. Ans. 4. The Examiner also determines the present claims do not amount to significantly more than an abstract idea itself because the abstract idea is implemented using additional elements that

are well-understood, routine, and conventional. *Id.* at 6–7 (citing O'Neill
(US Patent No. 6,069,588; issued May 30, 2000)).

Appellant argues the present claims do not recite an abstract idea
because the claims recite specific limitations regarding implementation of
real-time event notifications and the Examiner's analysis is oversimplifying
the present claims. Appeal Br. 8–9; Reply Br. 2–3. Appellant argues,
similar to *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016),
McRO, Inc. v. Bandai Namco Games America Inc., 837 F.3d 1299, 1308–14
(Fed. Cir. 2016), and *Visual Memory, LLC v. NVIDIA Corporation*, 867 F.3d
1253 (Fed. Cir. 2017), the present claims are directed to an improvement in
computer-related technology to implement real-time event notifications.
Appeal Br. 9–11 (citing Spec. ¶¶ 2, 39, 41, 43–48, 55); Reply Br. 3–5.
Appellant argues the present claims recite a combination of non-
conventional and non-generic arrangement of known, conventional
elements, which results in an inventive concept. Appeal Br. 12–13; Reply
Br. 5–6. Appellant argues the Examiner fails to provide any evidence to
support the finding that the abstract idea is implemented using generic
components that are well-understood, routine, and conventional previously
known to the industry. Appeal Br. 13–14 (citing USPTO Commissioner for
Patents Memorandum dated Apr. 9, 2018, "Changes in Examination
Procedure Pertaining to Subject Matter Eligibility, Recent Subject Matter
Eligibility Decision" (*Berkheimer v. HP, Inc.*)); Reply Br. 6. Appellant
argues the Examiner fails to follow the "2019 Revised Patent Subject Matter
Eligibility Guidance" ("Revised Guidance") because the Examiner does not
map the abstract idea to any of the three categories (i.e., mathematical
concepts, certain methods of organizing human activity, mental processes).

Reply Br. 7–11.[3] We disagree with Appellant.

C.   Discussion

1.   Step 2A, Prong 1

The emphasized portions of claim 1,[4] reproduced above (*see supra* at 1–2), recite managing personal behavior or interactions between people because event notifications for events such as concerts cause some people to attend those events. *See also* Ans. 4 (the Examiner concludes the present claims recite managing interactions between people). According to the Memorandum, managing personal behavior or interactions between people falls into the category of certain methods of organizing human activity. *See* Memorandum. Moreover, those certain methods of organizing human activity are a type of an abstract idea. *See id.*

We, therefore, disagree with Appellant's argument the present claims do not recite an abstract idea because the claims recite specific limitations regarding implementation of real-time event notifications and the Examiner's analysis is oversimplifying the present claims. Appeal Br. 8–9; Reply Br. 2–3; *see also* Ans. 4 (the Examiner concludes the present claims recite managing interactions between people). We also disagree with Appellant's argument that the Examiner fails to follow the Revised Guidance because the Examiner does not map the abstract idea to any of the three categories. Reply Br. 7–11; *see also* Ans. 4 (the Examiner concludes

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[3] This argument is timely because the Revised Guidance was announced between the filing of the Appeal Brief and the Reply Brief.
[4] Claim 1, reproduced above with emphases, recites similar features as independent claims 10 and 17. Appellant does not argue claims 2–8, 11–16, and 18–21 separately. Appeal. Br. 7–14. We, therefore, group claims 1–8 and 10–21 together and refer to those claims as the "present claims."

the present claims recite managing interactions between people).

Because the present claims recite managing personal behavior or interactions between people, which falls into the category of certain methods of organizing human activity (i.e., an abstract idea), we proceed to prong 2.

2. *Step 2A, Prong 2*

The present claims do not integrate the abstract idea into a practical application because they do not impose any meaningful limits on practicing the abstract idea. In particular, we disagree with Appellant's argument that, similar to *Enfish*, *McRO*, and *Visual Memory*, the present claims recite an improvement in computer-related technology by implementing real-time event notifications. Appeal Br. 9–11 (citing Spec. ¶¶ 2, 39, 41, 43–48, 55); Reply Br. 3–5.

Appellant does not identify persuasively how the Specification sets forth an improvement in technology. The USPTO October 2019 Patent Eligibility Guidance Update ("Update") addresses how we consider any evidence that is presented to us. The Update states:

> [d]uring examination, the examiner should analyze the "improvements" consideration by evaluating the specification and the claims to ensure that a technical explanation of the asserted improvement is present in the specification, and that the claim reflects the asserted improvement. Generally, examiners are not expected to make a qualitative judgment on the merits of the asserted improvement. *If the examiner concludes the disclosed invention does not improve technology, the burden shifts to applicant to provide persuasive arguments supported by any necessary evidence to demonstrate that one of ordinary skill in the art would understand that the disclosed invention improves technology.* Any such evidence submitted under 37 C.F.R. § 1.132 must establish what the specification would convey to one of ordinary skill in the art and cannot be used to supplement the specification. For example, in response to a rejection under

> 35 U.S.C. § 101, an applicant could submit a declaration under § 1.132 providing testimony on how one of ordinary skill in the art would interpret the disclosed invention as improving technology and the underlying factual basis for that conclusion.

Update, 13 (emphasis added).

In this case, the Examiner concludes the present claims do not recite an improvement to technology. Final Act. 6–7; Ans. 4–6. Consequently, we focus only on any evidence Appellant cites pursuant to the Update. Here, although Appellant identifies paragraphs 2, 39, 41, 43–48, and 55 of the Specification, those paragraphs merely discuss notifying a large number of users in real-time when a spontaneous event is about to occur and enabling users to purchase tickets to that event (i.e., certain methods of organizing human activity, which is an abstract idea as discussed *supra*), not an improvement to technology. Appeal Br. 9–11 (citing Spec. ¶¶ 2, 39, 41, 43–48, 55); Reply Br. 3–5. Paragraphs 2, 38, 41, 43–48, and 55 of the Specification are unlike the technological improvements in *Enfish*.

In *Enfish*, the Federal Circuit considered how the present invention was superior to the technology in the prior art. That is, the court considered "the specification's emphasis that 'the present invention comprises a flexible, self-referential table that stores data,'" "[t]he specification also teaches that the self-referential table functions differently than conventional database structures," "traditional databases, such as 'those that follow the relational model and those that follow the object oriented model' are inferior to the claimed invention." *Enfish, LLC v. Microsoft Corp.*, 822 F.3d at 1337 (interior citations omitted). Moreover, "'[t]he structural requirements of current databases require a programmer to predefine a structure and subsequent [data] entry must conform to that structure,' the 'database of the

present invention does not require a programmer to preconfigure a structure to which a user must adapt data entry.'" *Id.* Then, the court determined the claims "achieve[d] other benefits over conventional databases, such as increased flexibility, faster search times, and smaller memory requirements." Unlike the claims of *Enfish,* the present claims do not recite "a specific improvement to the way computers operate, embodied in the self-referential table." *Id.* at 1336.

Similar to the *Enfish* argument, Appellant does not identify persuasively how paragraphs 2, 39, 41, 43–48, 55 of the Specification sets forth an improvement in technology. Moreover, the subject claim considered by the *McRO* court concerned a method for automatically animating lip synchronization and facial expressions. *McRO*, 837 F.3d at 1303. The *McRO* court concluded the subject claims did not recite an abstract idea because the computer animation improved the prior art through the use of rules, rather than artists, to set morph weights and transitions between phonemes. *Id.* at 1308. Thus, the claimed invention in *McRO* allowed for computer performance of animation steps that previously had to be performed by human animators. *Id.* at 1309. The subject claims in *McRO* used "limited rules in a process specifically designed to achieve an improved technological result" over "existing, manual 3-D animation techniques." *Id.* at 1316 (emphasis added). In contrast to the claims of *McRO*, the present claims do not recite rules for lip sync and facial expression animation or an improvement in computer technology.

Similar to the *Enfish* and *McRO* arguments, Appellant does not identify persuasively how paragraphs 2, 39, 41, 43–48, 55 of the Specification sets forth an improvement in technology. The *Visual Memory*

court focused on how the claims presented an improvement over prior art memory systems. In particular, the court noted:

> [a]lthough prior art memory systems possessed the flexibility to operate with multiple different processors, this one-size-fits-all approach frequently caused a tradeoff in processor performance. The '740 patent's teachings *obviate the need to design a separate memory system for each type of processor, which proved to be costly and inefficient, and, at the same time, avoid the performance problems of prior art memory systems.* Finally, in addition to *enabling interoperability with multiple different processors, the '740 patent specification explains that the selective definition of the functions of the cache memory based on processor type results in a memory system that can outperform a prior art memory system that is armed with "a cache many times larger than the cumulative size of the subject caches."*

Visual Memory, LLC v. NVIDIA Corporation, 867 F.3d at 1259 (internal citations omitted) (emphases added). Dissimilar to the claims in *Visual Memory*, the present claims do not recite an enhanced computer memory system described above.

Instead, the present claims recite an abstract idea as discussed *supra*, in § I.C.1. or at best, improving an abstract idea—not a technological improvement. The Specification indicates the additional elements (i.e., "non-transitory memory,"[5] "processor,"[6] "mobile communications device," and "an electronic display"[7]) recited in the present claims are merely generic computer components used to implement the abstract idea. Spec. ¶¶ 9, 11, 17, 57, 58. Further, the additional elements individually and in combination, does not integrate the judicial exception into a practical application.

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[5] Claims 1 and 17 recite this feature, whereas claim 10 does not.
[6] Claims 1 and 10 recite this feature, whereas claim 17 does not.
[7] Claims 1 and 17 recite this feature, whereas claim 10 does not.

Additionally, "a claim for a *new* abstract idea is still an abstract idea." *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1151 (Fed. Cir. 2016) (emphasis added). "[U]nder the *Mayo/Alice* framework, a claim directed to a newly discovered law of nature (or natural phenomenon or abstract idea) cannot rely on the novelty of that discovery for the inventive concept necessary for patent eligibility . . . ." *Genetic Techs. Ltd. v. Merial L.L.C.*, 818 F.3d 1369, 1376 (Fed. Cir. 2016) (citations omitted).

Appellants do not make any other arguments pertaining to step 2A, prong 2. Because the present claims recite an abstract idea that is not integrated into a practical application, we proceed to Step 2B.

3.   *Step 2B*

We agree with the Examiner's determination that the abstract idea is implemented using additional elements that are well-understood, routine, and conventional. Ans. 6–7 (citing O'Neill, Abstract). The Specification supports the Examiner's determination in this regard because it explains that "non-transitory memory," "processor," "mobile communications device," and "an electronic display" are generic components. Spec. ¶¶ 9, 11, 17, 57, 58. Appellant's Specification indicates these elements were well-understood, routine, and conventional components because it describes them at a high level of generality and in a manner that indicates that they are sufficiently well-known. *Id.* Moreover, the additional elements recited in the present claims, taken individually and in combination, do not result in the claim, as a whole, amounting to significantly more than the judicial exception.

We, therefore, disagree with Appellant's argument that the Examiner fails to provide any evidence to support the finding the abstract idea is

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implemented using additional elements that are well-understood, routine, and conventional previously known to the industry. Appeal Br. 13–14; Reply Br. 6.

We also disagree with Appellant's argument that the present claims recite a combination of non-conventional and non-generic arrangement of known, conventional elements, which results in an inventive concept. Appeal Br. 12–13; Reply Br. 5–6. Significantly, we note that Appellant does not argue specifically how the present claims provide a non-conventional and non-generic arrangement of known, conventional pieces when considered as an ordered combination.[8] Moreover, we note that the Appellant does not refer to any evidence (e.g., a specific paragraph in the Specification, an affidavit, etc.) that discusses why or how the particular placement of the "non-transitory memory," "processor," "mobile communications device," and "an electronic display" within the system results in a non-conventional and non-generic arrangement of known, conventional pieces when considered as an ordered combination. As a result, we conclude that the present claims recite an abstract idea using generic components as discussed *supra*, in §§ I.C.1. and I.C.2. or at best, improving an abstract idea—not an inventive concept.

Appellant does not argue claims 2–8 and 10–21 separately with particularity, but assert the § 101 rejection of those claims should be withdrawn for at least the same reasons as argued for independent claim 1.

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[8] Although Appellant argues the Examiner does not make a conclusion that the present claims provide a non-conventional and non-generic arrangement of known, conventional pieces when considered as an ordered combination (Appeal Br. 12–13; Reply Br. 5–6), we note that the Examiner does make this conclusion (Final Act. 3–4; Ans. 5–6).

Appeal Br. 7–14. Accordingly, we sustain the Examiner's rejection of:
(1) independent claims 1, 10, and 17; and (2) dependent claims 2–8, 11–16,
and 18–21 under 35 U.S.C. § 101.

We have only considered those arguments that Appellant actually
raised in the Briefs. Arguments Appellant could have made, but chose not to
make, in the Briefs have not been considered and are deemed to be waived.
See 37 C.F.R. § 41.37(c)(1)(iv).

CONCLUSION

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–8, 10–21	101	Eligibility	1–8, 10–21	

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. § 1.136(a)(1)(iv).

AFFIRMED