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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte RONALD LEO CHRISTIAAN,
FRANK WARTENA, and LISA RUNCI

Appeal 2019-002152
Application 14/488,437
Technology Center 3600

Before JAMES R. HUGHES, JUSTIN BUSCH, and
JASON J. CHUNG, *Administrative Patent Judges*.

CHUNG, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals the Final Rejection of claims 1–4, 6, 7, 9–11, 16, and 20.² 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. According to Appellant, Koninklijke Philips Electronics N.V. is the real party in interest. Appeal Br. 2.

² Claims 5, 8, 12, 14, 15, and 17 are cancelled. Appeal Br. 23–25. Claims 13, 18, and 19 are withdrawn. *Id.* at 24–26.

INVENTION

The invention relates to recommending a service for use by a particular user. Spec. 1:2–3. Claim 1 is illustrative of the invention and is reproduced below:

1. A system for recommending a healthcare service to a particular user, the system comprising one or more processors and a computer-readable storage medium, wherein the computer-readable storage medium contains instructions for execution by the one or more processors, wherein the instructions cause the one or more processors to perform the steps of:

obtaining profile information of a plurality of users, the plurality of users using a set of pre-defined healthcare services;

determining a similarity level between a particular user among the plurality of users and the rest of the plurality of users based on a profile information of the particular user and the profile information of the rest of the plurality of users;

responsive to the similarity level between the particular user and one or more users of the rest of the plurality of users satisfying a similarity threshold, identifying the one or more users as similar users to the particular user;

determining, for the set of pre-defined healthcare services, actual usage of each service of the set of pre-defined healthcare services by the similar users, wherein determining the actual usage comprises determining usage frequency and usage duration of each service of the pre-defined healthcare services by the similar users;

determining a level of satisfaction of the similar users with each service of the pre-defined healthcare services based on the actual usage of the pre-defined healthcare services; and

recommending a service from the pre-defined healthcare services to be presented to the particular user based on the level of satisfaction with the recommended service.

Appeal Br. 22 (Claims Appendix) (emphasis added).

REJECTION³

Claims 1–4, 6, 7, 9–11, 16, and 20 stand rejected under 35 U.S.C. § 101 as being directed to patent ineligible subject matter. Final Act. 5–11.

ANALYSIS

I. Claims 1–4, 6, 7, 9–11, 16, and 20 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: “[I]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

³ The rejections under 35 U.S.C. §§ 112(a) and 112(b) are withdrawn. Ans. 9.

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 (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 U.S. Patent and Trademark Office (“USPTO”) 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* Manual of Patent Examining Procedure (“MPEP”) § 2106.05(a)–(c), (e)–(h)).

Only if a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, do we then look to whether the claim:

- (3) adds a specific limitation beyond the judicial exception that are 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 mental processes. Final Act. 7; Ans. 5. The Examiner also determines the present claims do not amount to significantly more than an abstract idea itself because additional elements that are well-understood, routine, and conventional perform the abstract idea. Final Act. 9; Ans. 11 (citing MPEP § 2106.05(d)).

Appellant argues the present claims recite an improvement in computer-related technology. Appeal Br. 7–10, 14–18 (citing *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 *Thales Visionix Inc. v. United States*, 850 F.3d 1343 (Fed. Cir. 2017)); Reply Br. 9–12. Appellant further argues the Examiner overgeneralizes the present claims in concluding that the present claims recite an abstract idea. Appeal Br. 9–10; Reply Br. 6–7.

Appellant argues the present claims recite a non-conventional and non-generic arrangement of known, conventional elements, which results in an inventive concept. Appeal Br. 11–14 (citing *BASCOM Global Internet Services, Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016)). Appellant argues that the Examiner fails to provide any evidence to support the finding that the abstract idea is implemented using additional elements that are well-understood, routine, and conventional. Appeal Br. 12–14 (citing *Berkheimer v. HP Inc.*, 881 F.3d 1360 (Fed. Cir. 2018)); Reply Br. 7–9. We disagree with Appellants.

C. Discussion

1. Step 2A, Prong 1

The emphasized portions of claim 1,⁴ reproduced above (*see supra* at 2), recite concepts performed in the human mind including observation, evaluation, judgment, and opinion because claim 1 requires “obtaining” “determining,” “identifying,” “determining,” “determining,” and “recommending.” These features can be performed by using pen and paper and using the human mind. According to the Memorandum, concepts performed in the human mind including observation, evaluation, judgment, and opinion fall into the category of mental processes. *See* Memorandum. Moreover, those mental processes are a type of an abstract idea. *See id.*

We also agree with the Examiner’s conclusion that the present claims are analogous to the claims in *Electric Power Group, LLC v. Alstom S.A.*, 830 F.3d 1350 (Fed. Cir. 2016). Final Act. 7; Ans. 5. In *Electric Power*, the court held that the claims were drawn to “collecting information, analyzing it, and displaying certain results of the collection and analysis,” which is a mental process (i.e., an abstract idea). *Id.* at 1355–1356. The present claims at issue here are similar because they recite “obtaining” (i.e., this is analogous to “collecting information” in *Electric Power*), numerous “determining” steps (i.e., these are analogous to “analyzing it” in *Electric Power*), “identifying” (i.e., this is analogous to “analyzing it” in *Electric*

⁴ Claim 1, reproduced above with emphases, recites similar features as independent claim 11. Appellant does not argue claims 2–4, 6, 7, 9–11, 16, and 20 separately, but asserts the § 101 rejection of those claims should be withdrawn for at least the same reasons as argued for independent claim 1. Appeal Br. 5–18. We, therefore, group claims 1–4, 6, 7, 9–11, 16, and 20 together and refer to those claims as the “present claims.”

Power), and “recommending” (i.e., this is analogous to “analyzing it, and displaying certain results of the collection and analysis” in *Electric Power*).

We, therefore, disagree with Appellant’s argument that the Examiner improperly overgeneralizes the present claims in concluding that the present claims recite an abstract idea. Appeal Br. 9–10. Although Appellant contends the Examiner overgeneralizes by interpreting claim 1 as corresponding to (1) a method of organizing human activity, (2) mathematical algorithms, (3) an idea of itself, and (4) identifying, comparing, processing, and presenting data, Appellant fails to provide an argument as to why the Examiner improperly overgeneralizes the present claims to recite mental processes. The Examiner’s conclusion (i.e., the present claims recite mental processes, which is an abstract idea), therefore, is unrebutted.

Because the present claims recite concepts performed in the human mind including observation, evaluation, judgment, and opinion, which fall into the category of mental processes (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*, the present claims recite an improvement in computer-related technology. Appeal Br. 7–10, 14–18; Reply Br. 9–12.

Appellant does not identify persuasively how the Specification sets forth an improvement in technology. The USPTO October 2019 Patent Eligibility Guidance Update (“Update”), available at

[https://www.uspto.gov/sites/default/files/documents/peg_oct_2019_update.p](https://www.uspto.gov/sites/default/files/documents/peg_oct_2019_update.pdf)

[df](#), 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 (footnote omitted, emphasis added).

In this case, the Examiner concludes the present claims do not recite an improvement to technology. Final Act. 2–3; Ans. 11–13. Consequently, we focus on any evidence Appellant cites pursuant to the Update. Here, Appellant does not cite any paragraphs in the Specification or other types of evidence. Appeal Br. 7–10, 14–18; Reply Br. 9–12. Therefore, the arguments in the Appeal Brief and Reply Brief citing to *Enfish*, *McRO*, and *Thales* are merely attorney arguments unsupported by evidence. Appeal Br. 7–10, 14–18; Reply Br. 9–12.

In addition, 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,” and “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, in *Enfish*, “[t]he structural requirements of current databases require a programmer to predefine a structure and subsequent [data] entry must conform to that structure,’ [and] the ‘database of the present invention does not require a programmer to preconfigure a structure to which a user must adapt data entry.’” *Id.* Based on the foregoing, the court determined the claims “achieve[d] other benefits over conventional databases, such as increased flexibility, faster search times, and smaller memory requirements.” *Id.* 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.

Also, Appellant does not identify any paragraphs in the Specification or any other evidence to support the argument that the present claims recite an improvement in technology as in *McRO*. The subject claims 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 1313. 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, 1314. Unlike the claims of *McRO*, the present claims do not recite rules for lip sync and facial expression animation or an improvement in computer technology.

Like the *Enfish* and *McRO* arguments, Appellant does not identify any paragraphs in the Specification or any other evidence to support the argument that the present claims recite an improvement in technology through the use of (non-abstract) electronic components in an uncommon way. The subject matter the *Thales* court considered was a method that eliminates many complications in previous solutions for determining position and orientation of an object on a moving platform. *Thales*, 850 F.3d at 1348. The *Thales* court reasoned that because the motion of a moving platform like a plane is more dynamic and unpredictable than the earth’s rotation, a traditional system that measured inertial data with respect to the earth had difficulty accurately calculating inertial data of an object on a moving platform. *Id.* The *Thales* court concluded the subject claims did not recite an abstract idea because the claims were directed to systems and methods that use inertial sensors in a new way to reduce errors in measuring the relative position and orientation of a moving object on a moving reference frame. *Id.* at 1348–49. Unlike the claims of *Thales*, the present claims do not recite using sensors to more efficiently track an object on a moving platform.

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 element beyond the above-identified abstract idea (i.e., “processors”) recited in the present claims is merely a generic computer component used to implement the abstract idea. Spec. 7:24–25. Further, the generic computer component individually and in combination, does not integrate the judicial exception into a practical application.

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). “[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).

Appellant does 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 on additional elements that are well-understood, routine, and conventional. Final Act. 9; Ans. 11 (citing MPEP § 2106.05(d)). The Specification supports the Examiner’s determination in this regard because it explains that the “processor” is a generic component. Spec. 7:24–25. Appellant’s Specification indicates this element was a well-understood, routine, and conventional component because it describes the processor at a

high level of generality and in a manner that indicates that it is sufficiently well-known. *Id.* Moreover, the additional element recited in the present claims, analyzed individually or in combination, does not result in the claim, as a whole, amounting to significantly more than the judicial exception.

Here, the Examiner cited to MPEP § 2106.05(d), which enumerates many cases that support a well-understood, routine, and conventional finding. MPEP § 2106.05(d) (cited at Ans. 11). The Examiner also cited Federal Circuit precedent to support their well-understood, routine, and conventional finding. *See* Final Act. 9 (citing *SiRF Tech., Inc. v. Int'l Trade Comm'n*, 601 F.3d 1319 (Fed. Cir. 2010)). We, therefore, disagree with Appellant's argument that, similar to *Berkheimer*, the Examiner fails to provide any evidence to support the finding that the abstract idea is implemented using additional elements that are well-understood, routine, and conventional. Appeal Br. 12–14; Reply Br. 7–9.

Additionally, we disagree with Appellant's argument that, similar to *BASCOM*, the present claims recite a non-conventional and non-generic arrangement of known, conventional elements, which results in an inventive concept. Appeal Br. 11–14. In *BASCOM*, the claims were directed to “a filter implementation versatile enough that it could be adapted to many different users' preferences while also installed remotely in a single location.” *BASCOM*, 827 F.3d at 1350. The inventive concept was “the installation of a filtering tool at a specific location, remote from the end-users, with customizable filtering features specific to each end user” that “gives the filtering tool both the benefits of a filter on a local computer and the benefits of a filter on the ISP server.” *Id.* Thus, when considered as an ordered combination, the court concluded the claims provided “an inventive

concept can be found in the non-conventional and non-generic arrangement of known, conventional pieces.” *Id.* Here, the present claims recite an abstract idea using an additional element that is a generic computer component as discussed *supra*, in §§ I.C.1. and I.C.2. or at best, improving an abstract idea—not an inventive concept for the reasons discussed in § I.C.2.

Appellant does not argue claims 2–4, 6, 7, 9–11, 16, and 20 separately, but asserts the § 101 rejection of those claims should be withdrawn for at least the same reasons as argued for independent claim 1. Appeal Br. 5–18. Accordingly, we sustain the Examiner’s rejection of: (1) independent claims 1 and 11; and (2) dependent claims 2–4, 6, 7, 9, 10, 16, and 20 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

Claim(s) Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–4, 6, 7, 9–11, 16, 20	101	Eligibility	1–4, 6, 7, 9–11, 16, 20	

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