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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte SHAWN HENRY¹

Appeal 2019-000362
Application 15/383,603
Technology Center 2100

Before ROBERT E. NAPPI, LARRY J. HUME, and JULIET MITCHELL
DIRBA, *Administrative Patent Judges*.

NAPPI, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134(a) from the Examiner's final rejection of claims 1 through 20. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

¹ We use the word Appellant to refer to "applicant" as defined in 37 C.F.R. § 1.42(a). According to Appellant, ASAPP, INC., is the real party in interest. App. Br. 2.

INVENTION

The invention is directed to a system for suggesting resources based on a context of interactions between two entities. Spec. ¶ 0017. Claim 9 is illustrative of the invention and is reproduced below.

9. A system for presenting information about a resource to a user, the system comprising:

at least one server computer comprising at least one processor and at least one memory, the at least one server computer configured to:

receive, a plurality of electronic messages during a session between a first computing device of a first user and a second computing device of a second user;

compute, a semantic representation of each message of the plurality of electronic messages;

compute, a first context vector by processing the semantic representations for the plurality of electronic messages;

quantize, the first context vector to obtain a first context hash vector;

select a first resource from a data store using the first context hash vector and a hash vector for the first resource, wherein the data store comprises a plurality of resources and each resource of the plurality of resources is associated with a hash vector; and

transmit, during the session, information about the first resource to the first computing device.

EXAMINER'S REJECTION

The Examiner rejected claims 1 through 20 under 35 U.S.C. § 101 for being directed to patent-ineligible subject matter. Final Act. 2–4.²

² Throughout this Decision we refer to the Appeal Brief filed June 7, 2018 (“App. Br.”); the Reply Brief filed October 16, 2018, (“Reply. Br.”); Final Office Action mailed February 9, 2018 (“Final Act.”); and the Examiner’s Answer mailed August 23, 2018 (“Ans.”)

ANALYSIS

We have reviewed Appellant’s arguments in the Briefs, the Examiner’s rejections, and the Examiner’s response to Appellant’s arguments. Appellant’s arguments have persuaded us of error in the Examiner’s rejection of all of the disputed claims under 35 U.S.C. § 101.

PRINCIPLES OF LAW

Patent-eligible subject matter is defined in 35 U.S.C. § 101 of the Patent Act, which recites:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

There are, however, three judicially created exceptions to the broad categories of patent-eligible subject matter in 35 U.S.C. § 101: “[I]aws of nature, natural phenomena, and abstract ideas.” *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014); *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 70 (2012).

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*. *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, 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. 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 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 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 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

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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.* (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 United States Patent and Trademark Office “USPTO” recently published revised guidance on the application of § 101. USPTO’s 2019 *Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50 (Jan. 7, 2019) (“Memorandum”). Under that guidance, we first determine 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) (9th Ed., Rev. 08.2017, Jan. 2018)).

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.

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See Memorandum.

DISCUSSION

The Examiner determined the claims are not patent eligible because they are directed to a judicial exception without reciting significantly more. Final Act. 2–4. Specifically, the Examiner has provided an analysis of the independent claims and concludes the claim recites limitations similar to those held abstract by the courts. Final Act. 2–3 (citing *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350 (Fed. Cir. 2016)); Answer 2–3 (citing *Elec. Power Grp.* and *SAP America, Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1163 (Fed. Cir. 2018)).

Appellant argues the claims are not abstract as the result is a tangible result. App. Br. 12. Further, Appellant argues that the claims are necessarily rooted in computer technology and represent a technological improvement. App. Br. 14–16, Reply Br. 2–3 (citing *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014) and *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299 (Fed. Cir. 2016)).

Appellant’s arguments have persuaded us of error in the Examiner’s rejection of independent claims 1, 9, and 16 under 35 U.S.C. § 101 as we disagree with the Examiner’s determination that the claims do not recite an improvement in a computer related technology.

Each of the independent claims recite receiving plural messages (a data gathering or observation element), computing a message embedding or semantic representation of a message, computing a context vector, quantizing the cortex vector, selecting a resource using hash values (data analysis or evaluation elements) and transmitting information (an significant

post solution activity).³ These steps could broadly be construed as reciting a mental process, however, in the context of the claims we consider the limitations to recite an ordered combination of specific rules and as such are patent eligible.

In *McRO* the court reviewed claims which use “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.” *McRO*, 837 F.3d at 1315. The court found that the claims did not “simply use a computer as a tool to automate conventional activity,” but instead used the computer to “perform a distinct process” that is carried out in a different way than the prior non-computer method to improve the technology (of 3-D animation techniques). *See McRO*, 837 F.3d at 1314–16.

Here, as discussed above, each of the independent claims recites a step of computing a message embedding or semantic representation for each message, computing a context vector by processing the embedding or semantic repetitions, quantizing the vector to obtain a hash vector and using the hash vector to select a resource using the hash and a hash of the resources. Thus, the claim recites a specific ordered set of rules to perform on the received message. We find no evidence to demonstrate that steps of computing context vectors from the messages, computing hashes of the vectors, and using the hash with a hash of resources to select a resource is a non-computer method of finding resources related to a message that is

³ We note that claim 1 contains a typographical error in that it recites “computing a message embedding for of message.” This typographical error appears to be created in the January 14, 2018 amendment which changed “semantic representation for each message” to the current language. We believe Appellant intended the claim to say “computing a message embedding for each message.”

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merely implemented on a computer. Thus, as in *McRO* we consider the claims to be directed to using a computer to perform a distinct process which is carried out in a different way than the prior non-computer method. As such we consider the claims to be directed to patent eligible subject matter and we do not sustain the Examiner's rejection of claims 1 through 20 under 35 U.S.C. § 101.

CONCLUSION

We reverse the Examiner's rejection of claims 1 through 20 under 35 U.S.C. § 101. We encourage Appellant to amend claim 1 to correct the typographical error noted in footnote 3.

DECISION SUMMARY

Claims Rejected	35 U.S.C §	Basis	Affirmed	Reversed
1-20	101	Subject Matter Eligibility		1-20

REVERSED