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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* PRABIR MAJUMDER

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Appeal 2018-004581  
Application 15/212,621<sup>1</sup>  
Technology Center 2600

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Before MAHSHID D. SAADAT, JASON J. CHUNG, and  
MATTHEW J. McNEILL, *Administrative Patent Judges*.

CHUNG, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) of the Final Rejection of claims 1–3, 5–9, 11–15, and 17–20.<sup>2</sup> We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

INVENTION

The invention is directed to providing a text affinity analyzer for performing communication analytics. Spec. ¶ 1. Claim 1 is illustrative of the invention and is reproduced below:

1. A computer-implementable method for analyzing text affinity among a plurality of social media communications

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<sup>1</sup> According to Appellant, Dell Products L.P. is the real party in interest. App. Br. 1.

<sup>2</sup> Claims 4, 10, and 16 are cancelled. App. Br. 7, 8, and 10.

within a social media environment, the social media environment comprising a social media system executing on hardware processor of a social media server, a text affinity analysis system executing on hardware processor of a text analysis server and an administrator information handling system, the method comprising:

dividing a first social media communication into first plurality of social media communication threads received from the social media system;

dividing a second social media communication into a second plurality of social media communication threads received from the social media system;

performing a text affinity analysis operation between respective threads of the first plurality of social media communication threads and the second plurality of social media communication threads; and,

determining a level of intervention to perform based upon the text affinity analysis operation; and wherein

the dividing the first social media communication, the dividing the second social media communication and the performing a text affinity analysis operation are performed by the text affinity analysis system;

the determining the level of intervention is performed via the administrator information handling system; and,

the text affinity analysis score is based upon a Mahalanobis Distance (MD) between respective threads of the first plurality of social media communication threads and the second plurality of social media communication threads.

#### REJECTION AT ISSUE

Claims 1–3, 5–9, 11–15, and 17–20 stand rejected under 35 U.S.C. § 101 as being directed to patent ineligible subject matter. Final Act. 3–4.

## ANALYSIS

### *I. Claims 1–3, 5–9, 11–15, and 17–20 Rejected Under 35 U.S.C. § 101*

#### *A. The Examiners Conclusions and Appellants’ Arguments*

The Examiner concludes the present claims are directed to an abstract idea of mathematical concepts. Ans. 2. And the Examiner determines the present claims do not amount to significantly more than an abstract idea because the Examiner finds the abstract idea is implemented on a computer using generic computers that are well-understood, routine, and conventional activities previously known to the industry. Final Act. 3.

Appellant argues the present claims are not abstract because they are directed to an improvement that is a distributed architecture and the claims do not preempt any abstract idea. App. Br. 4; Reply Br. 1–3. Appellant argues the present claims are directed to analyzing text affinity among a plurality of social media communication threads that provide an improvement over the art in the field. App. Br. 4; Reply Br. 2–3. We disagree with Appellant.

#### *B. 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 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, 192 (1981)); “tanning, dyeing, making waterproof cloth, vulcanizing India rubber, smelting ores” (*id.* at 184 n.7 (quoting *Corning v. Burden*, 56 U.S. 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 176; *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 interactions 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 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.

*C. The Examiners Conclusions and Appellants’ Arguments*

*1. Step 2A, Prong 1 (Alice Step 1)*

As an initial matter, we discern no error in the Examiner’s conclusion that the present claims are directed to an abstract idea of mathematical concepts. Ans. 2. We consider claim 1 (with emphasis), reproduced below.

1. A computer-implementable method for analyzing text affinity among a plurality of social media communications within a social media environment, the social media environment comprising a social media system executing on hardware processor of a social media server, a text affinity analysis system executing on hardware processor of a text analysis server and an administrator information handling system, the method comprising:

*dividing a first social media communication into first plurality of social media communication threads received from the social media system;*

*dividing a second social media communication into a second plurality of social media communication threads received from the social media system;*

*performing a text affinity analysis operation between respective threads of the first plurality of social media communication threads and the second plurality of social media communication threads; and,*

*determining a level of intervention to perform based upon the text affinity analysis operation; and wherein the dividing the first social media communication, the dividing the second social media communication and the performing a text affinity analysis operation are performed by the text affinity analysis system;*  
*the determining the level of intervention is performed via the administrator information handling system; and,*  
*the text affinity analysis score is based upon a Mahalanobis Distance (MD) between respective threads of the first plurality of social media communication threads and the second plurality of social media communication threads.*

Additionally, we note that paragraph 34 of Appellant's Specification states the formula for Mahalanobis Distance is:

$$MD = \sum_{i=1}^k z_i^2$$

In light of the formula from paragraph 34 of Appellant's Specification illustrated above, we conclude the emphasized portions of claim 1 recite the abstract idea of a mathematical concepts. Spec. ¶ 34.

We, therefore, disagree with Appellant's argument (App. Br. 4; Reply Br. 1–3) the present claims are not abstract because they are directed to an improvement that is a distributed architecture. Additionally, we disagree with Appellant's argument that the present claims are patent eligible because they do not preempt any abstract idea (App. Br. 4; Reply Br. 1–3); while preemption may denote patent ineligibility, its absence does not demonstrate patent eligibility. *See FairWarning, IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1098 (Fed. Cir. 2016). For claims covering a patent-ineligible

concept, preemption concerns “are fully addressed and made moot” by an analysis under the *Mayo/Alice* framework. *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015).

Because the present claims recite a mathematical concept, we proceed to prong 2.

2. *Step 2A, Prong 2 (Alice Step 2)*

From reproduced claim 1, shown above in the discussion pertaining to *Alice* step 1, prong 1, claim 1 does not integrate the abstract idea into a practical application because it does not impose any meaningful limits on practicing the abstract idea. In particular, the present claims do not recite improvements to the functioning of a computer or to any other technology or technical field; instead, the present claims merely recite a mathematical concept in a social media environment. Nor do the present claims recite other meaningful limitations that describes a process or product that applies the exception in a meaningful way; rather, the present claims recite a mathematical concept in a social media environment. Because the present claims are directed to an abstract idea, we proceed to Step 2B.

3. *Step 2B, Prong 2 (Alice Step 2)*

We discern no error in the Examiner’s determination that the independent claims do not amount to significantly more than an abstract idea because the Examiner finds the abstract idea is implemented on a computer using generic computer functions that are well-understood, routine, and conventional activities previously known to the industry. Final Act. 3. In addition, we note Appellant’s Specification states “a processor (**e.g., central processor unit or ‘CPU’**) 102, input/output (I/O) devices 104, **such as a**

display, a keyboard, a mouse, and associated controllers, a hard drive or disk storage 106, **and various other subsystems 108**” (emphases added), which denotes the generic nature of components in information handling system 100. Spec. ¶ 16.

We, thus, disagree with Appellant’s argument (App. Br. 4; Reply Br. 2–3) that the present claims are directed to analyzing text affinity among a plurality of social media communication threads that provide an improvement over the art in the field because this is conclusory. Moreover, Appellant’s argument (App. Br. 4; Reply Br. 2–3) that there is an improvement over the art in the field better pertains to the abstract idea prong of the analysis; nonetheless, we determine Appellant fails to explain how this provides an improvement over the prior art.

Appellant does not argue separately claims 1–3, 5–9, 11–15, and 17–20 with particularity, but assert the rejections of those claims should be withdrawn for at least the same reasons. App. Br. 4–5. Accordingly, we sustain the Examiner’s rejection of claims 1–3, 5–9, 11–15, and 17–20 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).

#### DECISION

We affirm the Examiner’s decision rejecting claims 1–3, 5–9, 11–15, and 17–20 under 35 U.S.C. § 101.

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).

Appeal 2018-004581  
Application 15/212,621

AFFIRMED