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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* ANATOLY STAROSTIN, TATIANA DANIELYAN, and  
IVAN SMUROV

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Appeal 2018-002282  
Application 14/974,578  
Technology Center 2600

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Before CARL L. SILVERMAN, SCOTT E. BAIN, and  
MICHAEL T. CYGAN, *Administrative Patent Judges*.

BAIN, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant<sup>1</sup> appeals under 35 U.S.C. § 134(a) from the Examiner’s decision to reject claims 1–19, which constitute all claims pending in the application. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

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<sup>1</sup> We use the word Appellant to refer to “applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as Abby Production LLC. Appeal Br. 3.

## BACKGROUND

### *The Claimed Invention*

Appellant’s claimed invention relates to “methods for natural language processing,” and specifically, to creating “ontologies” by analyzing natural language texts. Spec. ¶¶ 1, 26. An “ontology,” according to the Specification, is a “model representing objects pertaining to a certain branch of knowledge (subject area) and relationships among such objects.” *Id.* ¶ 27. Claims 1, 9, and 16 are independent. Claim 1 is illustrative of the invention and the subject matter of the appeal, and reads as follows (with disputed limitation emphasized):

1. A method, comprising:

receiving, by a computing device, identifiers of a first plurality of word groups within a natural language text, each word group comprising one or more natural language words;

associating an object represented by each word group with a concept of an ontology;

identifying, within the natural language text, a second plurality of word groups, wherein each word group of the second plurality of word groups is associated with the concept of the ontology;

responsive to receiving a confirmation that a word group of the second plurality of word groups represents an object associated with the concept of the ontology, modifying a parameter of a classification model that produces a value reflecting a degree of association of a given object with the concept of the ontology.

Appeal Br. 20 (Claims Appendix).

### *The Rejection on Appeal*

Claims 1–19 stand rejected under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter. Final Act. 2–5.

## DISCUSSION

We have reviewed the Examiner’s rejections in light of Appellant’s arguments presented in this appeal. Arguments which Appellant could have made but did not make in the Briefs are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(iv). On the record before us, Appellant has not persuaded us of error. We adopt as our own the findings and reasons set forth in the rejection from which the appeal is taken and in the Examiner’s Answer, and provide the following additional discussion.

### *Rejection Under 35 U.S.C. § 101*

The Examiner determined that the claims are directed to “modifying a classification model for processing natural language words,” which is a mental process and therefore an abstract idea. Final Act. 2–5; Ans. 3–5; *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 217 (2014) (describing two-step framework “for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts”). Further, the Examiner found that the additional elements in the claims merely constituted conventional steps performed on a generic computer, and therefore did not include additional elements sufficient to amount to significantly more than the abstract idea. Final Act. 3–5; Ans. 4–5. Accordingly, the Examiner concluded that the claims constitute ineligible subject matter.

Appellant argues that the Examiner “fails to explain the alleged relevance of . . . referenced court decisions” and “describes Appellant’s claims at a high level of abstraction and untethered from the language of the claims.” Appeal Br. 6–7. Appellant further argues that the claims “are focused on a *particular* natural language processing method and a

corresponding system,” and also “amount to significantly more than an abstract idea.” *Id.* 7–8 (emphasis added).

After the Briefs were filed and Answer mailed in this case, the USPTO published “Revised Subject Matter Eligibility Guidance” synthesizing case law and providing agency instruction on the application of § 101. *See* USPTO, 2019 Revised Patent Subject Matter Eligibility Guidance 84 Fed. Reg. 50 (Jan. 7, 2019) (“Guidance”). Under the Guidance, we must look to whether a 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) (“Step 2A, Prong One”); and

(2) additional elements that integrate the judicial exception into a practical application (*see* MPEP §§ 2106.05(a)–(c), (e)–(h)) (“Step 2A, Prong Two”).

*See* 84 Fed. Reg. at 54–55.

Only if a claim recites a judicial exception and 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 id.* 56 (collectively “Step 2B”).

We begin our review with Step 2A, Prong One of the Guidance, as applied to Appellant’s claim 1.<sup>2</sup> Claim 1 recites “a method” comprising the following elements: (1) “receiving,” by a computing device, “identifiers,” the identifiers being “of a first plurality of word groups within a natural language text, each word group comprising one or more natural language words;” (2) “associating” an object represented by each word group with a concept of an ontology; (3) “identifying,” within the natural language text, a second plurality of word groups, wherein each word group of the second plurality of word groups is “associated with” the concept of the ontology; (4) responsive to receiving a confirmation that a word group of the second plurality of word groups represents an object associated with the concept of the ontology, “modifying a parameter” of a classification model that “produces a value reflecting a degree of association” of a given object with the concept of the ontology. Appeal Br. 20. Upon review of the foregoing steps, we agree with the Examiner’s determination that the elements recited in claim 1 merely constitute the idea of a classification model for natural language processing, which is a process that could be performed by a human mentally or using a pen and paper, i.e., a mental process. Ans. 4. Each of the foregoing elements either recites collecting data (“receiving” identifiers, and “identifying” word groups) or processing data (“associating” an object with an ontology concept, and “modifying a parameter” of a model to reflect “degree of association”). A human could, mentally or using a pen and

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<sup>2</sup> The Guidance refers to “Step One” as determining whether the claimed subject matter falls within the four statutory categories identified by 35 U.S.C. § 101: process, machine, manufacture, or composition of matter. This step is not at issue in this case.

paper, (1) collect identifiers of word groups, (2) associate an object with an ontology concept, (3) identify another word group associated with the concept, and (4) modify a value of a model, as recited in claim 1. Ans. 3–5.

More specifically, each of the steps of claim 1 merely recites data collection, data analysis, or data association similar to that in *Electric Power Group*, which constitutes a mental process, i.e., one of the categories of subject matter deemed abstract under the Guidance. *Electric Power Group, LLC, v. Alstom S.A.*, 830 F.3d 1350, 1353–54 (Fed. Cir. 2016) (“[W]e have treated analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, as essentially mental processes within the abstract-idea category”); *id.* at 1353 (“[W]e have treated collected information, including when limited to particular content (which does not change its character as information), as within the realm of abstract ideas.”).

We next proceed to Step 2A, Prong 2 of the Guidance. Under this step, if the claim “as a whole” integrates the abstract idea into a “practical application,” it is patent eligible. Appellant argues that claim 1 is directed to “an improvement in computer-related technology.” Appeal Br. 7; *see also DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014).

Improving the functioning of a computer can reflect integration of an idea into a “practical application.” Guidance Section III; *see also DDR*, 773 F.3d 1245; *Bascom Global Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016). Appellant, however, does not explain, and we do not discern, any improvement in technology from the claimed invention. *Compare DDR*, 773 F.3d at 1258 (Fed. Cir. 2014) (“the claims at issue here specify how interactions with the Internet are manipulated to yield a desired result—a result that overrides the routine and conventional sequence of

events ordinarily triggered by the click of a hyperlink.”) (emphasis added); *see also Bascom*, 827 F.3d at 1350 (“harness[ing a] technical feature of network technology in a filtering system” to customize content filtering). The claims in *DDR*, for example, were “necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks,” *see, e.g., DDR*, 773 F.3d at 1257, but Appellant’s claim 1 recites receiving data and associating that data with other data, and modifying a parameter (value) of a model, using generic computing elements. *See, e.g., Spec.* ¶ 42 (describing a “general purpose processor, a memory, and at least one communication interface”).

Appellant also does not direct us to any evidence that claim 1 recites any unconventional rules, transforms or reduces an element to a different state or thing, or otherwise integrates the idea into a practical application. Rather, claim 1 recites associations and modification of a model according to algorithms not recited in the claim and only vaguely referenced in the Specification. App. Br. 20 (Claims App.). Reciting a result-oriented solution that lacks any details as to how the computer performed the modifications is the equivalent of the words “apply it.” *Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1341–42 (Fed. Cir. 2015) (citing *Elec. Power Grp., LLC, v. Alstom S.A.*, 830 F.3d 1350, 1356 (Fed. Cir. 2016) (cautioning against claims “so result focused, so functional, as to effectively cover any solution to an identified problem”)); *see also CyberSource v. Retail Decisions, Inc.*, 654 F.3d 1366, 1375 (Fed. Cir. 2011) (mere data gathering does not make a claim patent-eligible). The data gathering and processing steps in claim 1 do not add meaningfully to the recited mental processes.

Finally, under Step 2B of the Guidance, we must look to whether the claims include any “additional limitation that is not well-understood, routine [or] conventional.” The “question of whether a claim element or combination of elements is well-understood, routine and conventional to a skilled artisan in the relevant field is a question of fact.” *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1368 (Fed. Cir. 2018); *see also Mortg. Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d. 1314, 1325 (Fed. Cir. 2016) (holding that patent eligibility inquiry may contain underlying issues of fact).

Claim 1 recites a modification of a model by data gathering and processing steps. *See supra*. We agree with the Examiner’s finding that simply using standard computer elements (as described in the Specification, *see supra*) to implement the claimed natural language processing is well understood, routine, and conventional, and is not a meaningful limitation that amounts to significantly more than an abstract idea. Ans. 5; *see supra*. Appellant asserts that claim 1 recites “improvements in the field of natural language processing, at least by employing a method of extracting entities from natural language texts.” Reply Br. 10. Claim 1, however, recites no particular algorithm, relationship, or hardware, and Appellant does not identify any particular improvements recited in the claim. Thus, we agree with the Examiner’s determination that “[l]ooking at the limitations as an ordered combination adds nothing that is not already present when looking at the elements taken individually.” Ans. 5.

Similarly, we are unpersuaded by Appellants’ argument that claim 1 does not “preempt the use of the claimed approach in all fields.” Reply Br. 8–9. Although “preemption may signal patent ineligible subject matter, the

absence of complete preemption does not demonstrate patent eligibility.” *FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1098 (Fed. Cir. 2016) (quoting *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015); see also *OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362–63 (Fed. Cir. 2015), *cert. denied*, 136 S. Ct. 701, 193 (2015) (“[T]hat the claims do not preempt all price optimization or may be limited to price optimization in the e-commerce setting do not make them any less abstract.”). Where, as here, “a patent’s claims are deemed only to disclose patent ineligible subject matter under the *Mayo* framework . . . preemption concerns are fully addressed and made moot.” *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015).

We, therefore, sustain the rejection of claim 1 as constituting patent-ineligible subject matter. Appellant does not argue the subject matter ineligibility rejection of the remaining claims separately from claim 1. Appeal Br. 10. Accordingly, for the same reasons as claim 1, we also sustain the rejection of those claims.

## SUMMARY

In summary:

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
1–19	101	Ineligible Subject Matter	1–19	
<b>Overall Outcome</b>			1–19	

## DECISION

We affirm the Examiner’s decision rejecting claims 1–19.

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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. § 41.50(f).

AFFIRMED