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EXAMINER
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CAMPEN, KELLY SCAGGS

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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* PIERO PATRONE BONISSONE,  
RAJESH VENKAT SUBBU, WEIZHONG YAN, and  
ANINDYA CHAKRABORTY

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Appeal 2017-005750  
Application 10/425,610<sup>1</sup>  
Technology Center 3600

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Before DEBRA K. STEPHENS, DANIEL J. GALLIGAN, and  
DAVID J. CUTITTA II, *Administrative Patent Judges*.

STEPHENS, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from a final rejection of claims 1, 3, 4, 6, 8–11, 13, 14, 16, 18–20, 31, 33, 34, 36, 38, and 39, which are all of the claims pending in the application. We have jurisdiction under 35 U.S.C. § 6(b). Claims 2, 5, 7, 12, 15, 17, 21–30, 32, 35, 37, and 40 have been cancelled.

We AFFIRM.

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<sup>1</sup> According to Appellants, the real party in interest is Genworth Holdings, Inc. (App. Br. 1).

### CLAIMED SUBJECT MATTER

According to Appellants, the claims are directed to an automated insurance underwriting system for classifying insurance applications (Spec. ¶ 55, Abstract). Claim 1, reproduced below, is representative of the claimed subject matter:

1. A computer implemented system for underwriting an insurance application based on a plurality of previous insurance application underwriting decisions, where underwriting the insurance application includes assigning a classification to the insurance application, the system disposed in computer-usable medium, the system comprising:

a pre-processing module tangibly embodied, where the pre-processing module:

a) processes a plurality of features associated with the insurance application;

b) normalizes ranges of the plurality of features so as to allow for comparison of the plurality of features to a given value;

c) generates a tag for each of a plurality of rule sets applied to the plurality of features, wherein the tag starts with a default value and is modified based on a comparison of one of the plurality of features to at least one threshold within one of the rule sets; and

d) outputs a processed result for each of the plurality of features;

a plurality of binary classifiers, where there is a binary classifier for each classification and where each of the binary classifiers:

a) receives the plurality of processed results; and

b) outputs a classification result for the insurance application based on the plurality of processed results;

at least one post-processor module tangibly embodied,  
where the at least one post-processor module:

- a) processes each of the classification results; and
- b) outputs a plurality of processed classification results based on the processing of the classification results;  
and

a classification selector tangibly embodied for selecting one of the processed classification results, where the selection indicates a classification assignment for the insurance application and selects the most statistically supported of the processed classification results.

#### REJECTION

Claims 1, 3, 4, 6, 8–11, 13, 14, 16, 18–20, 31, 33, 34, 36, 38, and 39 stand rejected under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter (Final Act. 3–9).

Our review in this appeal is limited only to the above rejection and the issues raised by Appellants. Arguments not made are waived (*see* MPEP § 1205.02; 37 C.F.R. §§ 41.37(c)(1)(iv) and 41.39(a)(1)).

#### ISSUE

##### *35 U.S.C. § 101*

Appellants argue their invention as recited in claims 1, 3, 4, 6, 8–11, 13, 14, 16, 18–20, 31, 33, 34, 36, 38, and 39 is directed to patent-eligible subject matter (App. Br. 11–21). The issue presented by Appellants' arguments is:

*Issue:* Has the Examiner erred in concluding the invention as recited is directed to patent-ineligible subject matter?

## ANALYSIS

Turning to subject matter eligibility, in *Alice*, the Supreme Court sets forth an analytical “framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts” (*Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2355 (2014) (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1296–97 (2012))). The first step in the analysis is to “determine whether the claims at issue are directed to one of those patent-ineligible concepts” (*id.*). If so, the second step is to consider the elements of the claims “individually and ‘as an ordered combination’ to determine whether the additional elements ‘transform the nature of the claim’ into a patent-eligible application” (*id.* (quoting *Mayo*, 132 S. Ct. at 1297–98)). In other words, the second step is to “search for an ‘inventive concept’ — *i.e.*, an element or combination of elements that is ‘sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself’” (*id.* (brackets in original) (quoting *Mayo*, 132 S. Ct. at 1294)).

### *Step One*

As an initial matter, we observe that independent claims 1, 8, 11, 18, 31, and 38 recite systems, methods, and non-transitory computer readable media. As such, the claims are directed to statutory classes of invention within 35 U.S.C. § 101.

Turning to the first step of the *Alice* analysis, we agree with the Examiner that the present claims are directed to “the abstract idea of underwriting insurance for creating an insurance contract” by “assigning a

classification to the insurance application” (Final Act. 5; *see* Ans. 8). We also agree with the Examiner’s determination that the processes recited in the claims are abstract processes performed for insurance underwriting (Final Act. 5). The claims support the Examiner’s determination, reciting limitations for “underwriting an insurance application” by performing steps including “process[ing],” “receiv[ing],” and “output[ting]” data.

Appellants’ arguments that the claims are not directed to an abstract idea because the “claims do not recite . . . a fundamental economic or longstanding commercial practice” or any other abstract idea “previously found by the courts” (App. Br. 11–12, 15–16; Reply Br. 4), are not persuasive. Appellants agree with the Examiner that the “claims address [the] business challenge” of “underwriting an insurance application based on a plurality of previous insurance application underwriting decisions” (*id.* at 11). Initially, aside from the preamble, the claims do not recite limitations explaining how previous underwriting decisions are used to underwrite the insurance application. Further, our reviewing court has determined that insurance policy management is an abstract idea. *Bancorp Servs., L.L.C. v. Sun Life Assur. Co. of Canada (U.S.)*, 687 F.3d 1266, 1278 (Fed. Cir. 2012) (describing “managing a stable value protected life insurance policy” as an abstract idea). Moreover, insurance underwriting is a long-standing fundamental economic practice. The background of Appellants’ Specification explains the “underwriting process consists of assigning a given insurance application . . . to one of the risk categories (also referred to as rate classes)” which “affect[s] the premium paid by the applicant, *e.g.*, the higher the risk category, the higher the premium” (Spec. ¶ 3). That is, insurance underwriting is a form of risk management or protection based on

classifying the risk of an insurance application. Claims directed to “the basic concept of hedging, or protecting against risk” recite “a fundamental economic practice.” *Bilski v. Kappos*, 561 U.S. 593, 611 (2010) (citations omitted). Further, although the claims recite steps describing the collection of insurance application information to classify the insurance application, the collection, analysis, and classification of information are abstract concepts. *In re TLI Commc’ns LLC Patent Litig.*, 823 F.3d 607, 613 (Fed. Cir. 2016) (determining that “classifying and storing digital images” is an abstract idea); *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat. Ass’n*, 776 F.3d 1343, 1347 (Fed. Cir. 2014) (determining that claims reciting “1) collecting data, 2) recognizing certain data within the collected data set, and 3) storing that recognized data in a memory” are directed to an abstract idea).

Additionally, Appellants’ argument that the claims are not directed to an abstract idea because the claims are instead “directed to a specific computer implemented system that includes a pre-processing module tangibly embodied; a plurality of binary classifiers; a post-processor module tangibly embodied and a classification selector tangibly embodied” (App. Br. 12–13) is unpersuasive. Contrary to Appellants’ argument that the claims are directed to a “specific” computer system, Appellants’ Specification teaches “the systems and processes described in this invention may be implemented on any *general purpose computational device*” (Spec. ¶ 277 (emphasis added)). Furthermore, the Specification describes that modules and classifiers are “implemented using software code on a processor” (Spec. ¶¶ 119, 275), i.e., the modules and classifiers are software-coded features executed by a generic processor. Moreover, the claimed

“pre-processing module,” “binary classifiers,” “post-processor module,” and “classification selector” do not define any particular computer or computing elements (*see* Claim 1). Instead, those elements are defined by the broadly recited functions that they perform without any particular detail as to how those functions are performed, e.g., “process a plurality of features,” “output[] a classification result,” “process[] each of the classification results,” “select[] one of the processed classification results” (*see* Claim 1). As such, the claimed modules and classifiers describe generic computing elements for implementing the abstract idea identified by the Examiner.

This implementation of the abstract idea using generic computing elements is not “override[n]” because “the claims are specific to underwriting an insurance application based on a plurality of previous insurance application underwriting decisions, where underwriting the insurance application includes assigning a classification to the insurance application” (App. Br. 15). The “attempt[] to limit the abstract concept to a computer implementation and to a specific industry,” here, insurance underwriting, “do[es] not provide additional substantive limitations” that save the claims from patent-ineligibility (*Accenture Glob. Servs., GmbH v. Guidewire Software, Inc.*, 728 F.3d 1336, 1345 (Fed. Cir. 2013)).

### *Step Two*

Because the claims are directed to an abstract idea, we next consider whether the additional elements recited by the claims transform the claims into a patent-eligible application of the claimed subject matter. We agree with the Examiner that the claims do not recite any additional limitations that amount to significantly more than the abstract idea itself and instead

provide a “generic recitation of a computer and a computer network performing their generic computer functions” to implement the abstract idea (Final Act. 7).

Appellants’ argument that the claims are “significantly more than the alleged abstract idea of underwriting insurance” because the claims recite “generat[ing] a tag for each of a plurality of rule sets applied to the plurality of features, wherein the tag starts with a default value and is modified based on a comparison of one of the plurality of features to at least one threshold within one of the rule sets” (App. Br. 16) is unpersuasive. The limitation Appellants argue is a feature of the abstract idea discussed *supra*, i.e., a process for underwriting an insurance application by classifying the insurance application. Appellants’ Specification defines a tag as “essentially an *ordinal categorical variable* developed from a collection of indicators for the various decision boundaries as defined by human experts” to “provide a utilization of the available human expert knowledge” (Spec. ¶¶ 211–212 (emphasis added)). That is, the human-defined tag appended to the application data is part of the abstract classification processes, discussed *supra*. Moreover, we agree with the Examiner’s finding that the claimed tagging of insurance information is a “generic computer function[]” (Ans. 8).

Further, Appellants’ argument that the “claimed invention addresses [a] computer-centric challenge” (App. Br. 17–18) is not persuasive. The “challenge” addressed by the claimed invention, as described by Appellants and by the Specification, is “a *business challenge*,” namely, “underwriting an insurance application” (App. Br. 11 (emphasis added); Spec. ¶¶ 4–7). As

such, we determine the claimed invention does not solve a computer technology problem.

Furthermore, the “improve[ments] [to] the functioning of a computer processing system” that Appellants argue (App. Br. 19–20) are “so only in the sense that the claims permit automation of previously manual processing” tasks (*Credit Acceptance Corp. v. Westlake Servs.*, 859 F.3d 1044, 1055 (Fed. Cir. 2017)). And our reviewing court has “made clear . . . mere automation of manual processes using generic computers does not constitute a patentable improvement in computer technology” (*Credit Acceptance Corp. v. Westlake Servs.*, 859 F.3d 1044, 1055 (Fed. Cir. 2017)). Here, Appellants’ Specification describes that the insurance underwriting challenge is solved by automating the manual process of insurance underwriting (*see* Spec. ¶¶ 4 (“manual underwriting, however, is not only time-consuming, but also often inadequate in consistency and reliability”), 55 (“provide an automated process for consistent and accurate underwriting decisions for insurance applications”). Although Appellants argue “an embodiment of the present invention improve[s] the performance of neural network classifiers” (App. Br. 17), the claims do not recite neural network classifiers. Nor have Appellants adequately explained how, or provided any evidence that, the claims improve neural network classifiers, let alone use neural network classifiers. Accordingly, the claimed automation of insurance underwriting does not amount to a patentable improvement in computer technology.

Additionally, Appellants’ argument that “the claims here are **admittedly novel and nonobvious**” (Reply Br. 3–4) does not persuade us that the claims are patent-eligible. Our reviewing court has held that it is not

“enough for subject-matter eligibility that claimed techniques be novel and nonobvious in light of prior art, passing muster under 35 U.S.C. §§ 102 and 103.” *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1163 (Fed. Cir. 2018). As discussed *supra*, we determine that the claims do not recite significantly more than the abstract idea itself and, in this case, the absence of prior art that anticipates or renders obvious the claimed invention does not persuade us that the claims are patent-eligible.

Additionally, Appellants’ argument that “[t]here is no risk of preempting the abstract idea” (App. Br. 15; *see* App. Br. 14, 17; *see also* Reply Br. 5) does not persuade us that the claims are directed to patent-eligible subject matter. Although preemption is characterized as a driving concern for patent eligibility, preemption itself is not the test for patent eligibility. Rather, “[w]hile preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility” (*Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015)). Where claims are deemed to recite only patent-ineligible subject matter under the two-step *Alice* analysis, as they are here, “preemption concerns are fully addressed and made moot” (*id.*).

Accordingly, Appellants have not persuaded us independent claims 1, 8, 11, 18, 31, and 38 are directed to patent-eligible subject matter. Further, Appellants have not proffered sufficient evidence or argument to persuade us that any of the limitations in the dependent claims provide a meaningful limitation that transforms the claims into a patent eligible application. Therefore, we sustain the rejection of claims 1, 3, 4, 6, 8–11, 13, 14, 16, 18–20, 31, 33, 34, 36, 38, and 39 under 35 U.S.C. § 101 as not being directed to statutory subject matter.

Appeal 2017-005750  
Application 10/425,610

DECISION

The Examiner's rejection of claims 1, 3, 4, 6, 8–11, 13, 14, 16, 18–20, 31, 33, 34, 36, 38, and 39 under 35 U.S.C. § 101 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 41.50(f).

AFFIRMED