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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* THOMAS SHOWALTER

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Appeal 2017-004753  
Application 14/286,039  
Technology Center 3600

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Before CAROLYN D. THOMAS, ADAM J. PYONIN, and  
KARA L. SZPONDOWSKI, *Administrative Patent Judges*.

SZPONDOWSKI, *Administrative Patent Judge*.

DECISION ON APPEAL

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

We AFFIRM.

STATEMENT OF THE CASE

Appellant's invention is directed to a data analytics model for loan treatment. Spec. ¶ 5. Claim 15, reproduced below, is representative of the claimed subject matter:

15. A computer-implemented method for analytics in loan treatment comprising:

accessing, by a computer system from at least one data repository through a first communication channel, credit report information for a person associated with a loan, property information for a specific property associated with the loan, loan information for the loan, and real estate market information for a region including the specific property, wherein the real estate market information includes a time on market for the region including with the specific property, and wherein the property information includes a property value, equity, or open lien amount;

applying, by a data processor, a cluster model, the cluster model comprising an unsupervised machine-learned classifier configured to classify a borrower of the loan and the specific property into one of a plurality of borrower-property clusters, each of the plurality of borrower-property clusters being a function of both the credit report information and the property information;

applying, by the data processor, a net present value model as a function of the plurality of borrower-property clusters, the property information, the loan information, the loan treatment information, and the real estate market information, the net present value model comprising a machine trained model configured to calculate the net present value; and

outputting through a second communication channel the net present value.

## REJECTIONS

Claims 1–20 stand rejected under 35 U.S.C. § 101 because the claimed invention is directed to a judicial exception (i.e. a law of nature, a natural phenomenon, or an abstract idea) without significantly more.

Claims 1–20 stand rejected under 35 U.S.C. § 103(a) as being obvious over the combination of Goldblatt et al. (US 2006/0218079 A1; published Sept. 28, 2006) (“Goldblatt”) and Shao et al. (US 7,191,150 B1; issued Mar. 13, 2007) (“Shao”).

## ANALYSIS

### *35 U.S.C. § 101 Rejections*

To determine whether a claim is eligible under § 101, “[w]e must first determine whether the claims at issue are directed to a patent-ineligible concept.” *Alice Corp. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2355 (2014). “[I]n applying the §101 exception, we must distinguish between patents that claim the ‘buildin[g] block[s]’ of human ingenuity and those that integrate the building blocks into something more.” *Id.*, 134 S. Ct. at 2354–55. One must keep in mind that “all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas,” *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 71 (2012), and “describing the claims at . . . a high level of abstraction and untethered from the language of the claims all but ensures that the exceptions to § 101 swallow the rule.” *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1337 (Fed. Cir. 2016). Instead, “the claims are considered in their entirety to ascertain whether their character as a whole is directed to excluded subject matter.” *Internet Patents Corp. v. Active Network, Inc.*,

790 F.3d 1343, 1346 (Fed. Cir. 2015). “If the claims are not directed to an abstract idea [or other patent-ineligible concept], the inquiry ends. If the claims are ‘directed to’ an abstract idea, then the inquiry proceeds to the second step of the Alice framework.” *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1312 (Fed. Cir. 2016).

The Examiner determines:

In this case, a series of steps for performing data analytics in loan treatment, claims 1–20 recite a series of steps of applying, by a data processor, a cluster model, the cluster model comprising an unsupervised machine-learned classifier configured to classify a borrower of the loan and the specific property into one of a plurality of borrower-property clusters, each of the plurality of borrower-property clusters being a function of both the credit report information and the property information; applying, by the data processor, a net present value model as a function of the plurality of borrower property clusters, the property information, the loan information, the loan treatment information, and the real estate market information, the net present value model comprising a machine-trained model configured to calculate the net present value; and outputting through a second communication channel the net present value, which is a fundamental economic principle.

Final Act. 4. The Examiner further determines the functionality recited in the claims “has long been used in the industry in which people purchase goods, services, or other reasons, thus concluding a fundamental economic practice.” Ans. 19. The Examiner determines the claims are “similar to other concepts that have been identified as abstract . . . such as comparing new and stored information and using rules to identify options.” Final Act. 4. In addition, the Examiner determines the claims “can be performed with a

pencil and paper or in a computer and is similar to the ‘information processing technology’ at issue in *Content Extraction . . .*” Final Act. 5.

Appellant argues the Examiner “misidentified any abstract idea that may be present in claims 1–20” because the language “comparing new and stored information and using rules to identify options” is not recited in any of independent claims 1, 9, and 15. App. Br. 6. Appellant further argues that by merely quoting the claim language, the Examiner has not sufficiently explained why the subject matter of the claims is directed to a judicial exception. App. Br. 6–7. In addition, Appellant argues the detailed features in the claims “are in contrast to the very high-level abstract ideas in the relevant case law on this topic.” App. Br. 8.

Appellant’s arguments are not persuasive. In analyzing whether a claims is directed to an abstract idea, we look to other decisions where similar concepts were previously found abstract by the courts. *See Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1294 (Fed. Cir. 2016). The Examiner determined the claims were *similar* to those in *SmartGene, Inc. v. Advanced Biological Labs., SA*, 555 Fed. Appx. 950, 955 (Fed. Cir. 2014) (“comparing new and stored information and using rules to identify medical options” is an abstract idea), not that the claim language itself recites “comparing new and stored information and using rule”, as Appellant argues. *See* Final Act. 4. The Examiner also determined the claims were similar to those in *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat. Ass’n*, 776 F.3d 1343, 1347 (Fed. Cir. 2014). Final Act. 5; Ans. 19.

We agree with the Examiner that the claims are directed to performing data analytics in loan treatment, which is a fundamental economic practice,

and thus, an abstract idea. *See* Final Act. 3–4; Ans. 6. Moreover, the claims are directed to collecting information (e.g., “accessing . . . [data]”), analyzing the information (e.g., “applying . . . a cluster model,” “applying . . . a net present value model”), and displaying the information (“outputting . . . the net present value”). The claims are thus, comparable to other claims found to be directed to abstract ideas. *See, e.g., Electric Power Group, LLC v. Alstom S.A.*, 830 F.3d 1350, 1353–54 (Fed. Cir. 2016) (“collecting information, analyzing it, and displaying certain results of the collection and analysis” are “abstract-idea processes”); *Dealertrack, Inc. v. Huber*, 674 F.3d 1315, 1334 (Fed. Cir. 2012) (determining a loan clearinghouse process is abstract); *Digitech Image Techs., LLC v. Elecs. for Imaging, Inc.*, 758 F.3d 1344, 1350 (Fed. Cir. 2014) (“organizing information through mathematical correlations”); *Content Extraction*, 776 F.3d at 1347 (“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); *LendingTree, LLC v. Zillow, Inc.*, 656 F. Appx. 991, 996 (Fed. Cir. 2016) (claims directed to “a loan-application clearinghouse, or more simply, coordinating loans” are abstract).

In the second step of the *Alice* framework, we then “consider the elements of each claim both individually and ‘as an ordered combination’ to determine whether the additional elements ‘transform the nature of the claim’ into a patent-eligible application.” *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 566 U.S. at 78–79). The Supreme Court describes this as “a 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.* (quotation omitted).

The Examiner determines the claims “can be performed with a pencil and paper or in a computer and [are] similar to the ‘information processing methodology’ at issue in *Content Extraction*.” Final Act. 5; *see also* Ans. 19. Further, the Examiner determines the claims “require[] no more than a generic computing device (server), a client (generic computer) interface, and a network (connected generic computers) to perform generic functions that are well-understood, routine, and conventional activities previously known in the industry.” Final Act. 6; *see also* Ans. 6–9.

Appellant argues the claims do not “‘tie up’ the use of the alleged abstract idea of ‘comparing new and stored information and using rules to identify options.’” App. Br. 9. Appellant further argues the Examiner has not provided sufficient factual findings that the features of the claims are “well-understood, routine and conventional,” nor that they have been “long used in the industry in which people purchase goods, services, or other reasons, thus concluding a fundamental economic practice.” App. Br. 10. According to Appellant, “neither Goldblatt nor Shao, either alone or in combination, discloses” the limitations in claim 15, “so these features are clearly not ‘well-understood, routine and conventional.’” App. Br. 11–12.

Appellant’s arguments are not persuasive. The claims generically recite a “computer system” and “data processor.” Appellant does not direct our attention to anything in the Specification that shows any specialized computer hardware or other “inventive” computer components are required. Nor has Appellant persuasively argued why the functions performed in the claims – accessing data, analyzing data, and outputting data – are not



routine, conventional, and well-known functions of a generic computer. *See buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1355 (Fed. Cir. 2015) (“[t]hat a computer receives and sends information over a network—with no further specification—is not even arguably inventive”); *In re TLI Communications LLC Patent Litigation*, 823 F.3d 607, 614 (Fed. Cir. 2016) (server that receives data, extracts classification information from the received data, and stores the digital images insufficient to add an inventive concept); *Lending Tree*, 656 Fed. Appx. at 996 (“automating conventional activities using generic technology does not amount to an inventive concept”). Rather, the Specification describes generic computer components performing generic computer functions that are routine and conventional, and are performing the normal, basic functions of a computer. *See, e.g.*, Spec. ¶ 8 (“[a] computer generates a user interface . . . [a] user input of the computer receives . . . [t]he computer calculates . . . [t]he receiving and calculating are repeated . . . [a] display displays . . .”); *see also* Spec. ¶¶ 49, 12, 13, 71; *see also Electric Power*, 830 F.3d at 1355 (“Nothing in the claims, understood in light of the specification, requires anything other than off-the-shelf, conventional computer, network, and display technology for gathering, sending, and presenting the desired information.”). “In order for the addition of a machine to impose a meaningful limit on the scope of a claim, it must play a significant part in permitting the claimed method to be performed, rather than function solely as an obvious mechanism for permitting a solution to be achieved more quickly, i.e., through the utilization of a computer for performing calculations.” *SiRF Tech., Inc. v. Int’l Trade Comm’n*, 601 F.3d 1319, 1333 (Fed. Cir. 2010); *see also Bancorp Services, L.L.C. v. Sun Life Assur. Co. of Canada*, 687 F.3d 1266, 1277–78 (Fed. Cir. 2012).

Accordingly, Appellant has not adequately explained how the claims are performed such that they are not routine, conventional functions of a generic computer. The claims at issue do not require any nonconventional computer or display components, or even a “non-conventional and non-generic arrangement of known, conventional pieces,” but merely call for performance of the claimed data collection, analysis, and display “on a set of generic computer components.” *Bascom Global Internet Services, Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1349–52 (Fed. Cir. 2016). Thus, considering the features of the claims, individually and as an ordered combination, we find there are no additional elements that transform the nature of the claim into a patent-eligible application. *Alice*, 134 S. Ct. at 2355.

With regard to Appellant’s argument that the pending claims are patent eligible because Golblatt and Shao do not teach the limitations, (see App. Br. 11–12), Appellant improperly conflates the requirements for eligible subject matter (§ 101) with the independent requirements of novelty (§ 102) and non-obviousness (§ 103). “The ‘novelty’ of any element or steps in a process, or even of the process itself, is of no relevance in determining whether the subject matter of a claim falls within the § 101 categories of possibly patentable subject matter.” *Diamond v. Diehr*, 450 U.S. 175, 188–89 (1981); *see also Genetic Techs. Ltd. v. Merial L.L.C.*, 818 F.3d 1369, 1376 (Fed. Cir. 2016) (stating that, “under 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”).

Appellant’s preemption argument is likewise unpersuasive of Examiner error. Although preemption “might tend to impede innovation more than it would tend to promote it, ‘thereby thwarting the primary object of the patent laws’” (*Alice*, 134 S. Ct. at 2354 (citing *Mayo*, 566 U.S. 70)), “the absence of complete preemption does not demonstrate patent eligibility.” *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) (“[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.”).

Accordingly, we are not persuaded the Examiner erred in rejecting claims 1–20 under 35 U.S.C. § 101, and we, therefore, sustain the Examiner’s rejection of claims 1–20.

### *35 U.S.C. § 103(a) Rejections*

*Dispositive Issue:* Did the Examiner err in finding the combination of Goldblatt and Shao teaches or suggests

applying, by a data processor, a cluster model, the cluster model comprising an unsupervised machine-learned classifier configured to classify a borrower of the loan and the specific property into one of a plurality of borrower-property clusters, each of the plurality of borrower-property clusters being a function of both the credit report information and the property information,

as recited in independent claim 15 and commensurately recited in independent claims 1 and 9?

The Examiner relies on Shao to teach or suggest the disputed limitation. Final Act. 8, 22–23 (citing Shao 7:19–33, 10:39–52); Ans. 15–17

(citing Shao 7:19–33, 10:39–52). Appellant argues “there is no disclosure or suggestion in the cited sections of Shao of ‘classify[ing] a borrower of the loan and the specific property into one of a plurality of borrower-property clusters,’ much less where ‘each of the plurality of borrower-property clusters [is] a function of both the credit report information and the property information.’” App. Br. 16. According to Appellant:

While Shao discloses that ‘document vectors  $v_i$  are then clustered,’ there is no disclosure or suggestion in Shao that this clustering is performed ‘to classify a borrower of the loan and the specific property into one of a plurality of borrower-property clusters,’ much less where ‘each of the plurality of borrower-property clusters [is] a function of both the credit report information and the property information.’ Rather, it is the document vectors  $v_i$  that are clustered. There is simply no disclosure or suggestion that ‘a borrower of the loan and the specific property’ are classified ‘into one of a plurality of borrower-property clusters.’

App. Br. 17.

We are persuaded by Appellant’s arguments. Although Shao teaches clustering document vectors  $v_i$  in order to determine subject matter similarities pertaining to debt collectors’ notes (Shao 10:39–52, 11:15–24), Shao does not describe classifying a borrower of the loan and the specific property into one of a plurality of borrower-property clusters, each of the plurality of borrower-property clusters being a function of both the credit report information and the property information. Rather, Shao describes clustering based on similar contextual information in the collectors’ notes, such as, for example, clusters based on illness, criminal and legal issues, payment plans and settlements, or foreclosure and job issues. Shao 14:5–48.

Appeal 2017-004753  
Application 14/286,039

The Examiner has not sufficiently explained how Shao, even in combination with Goldblatt, teaches or suggests the disputed limitation.

Because we agree with at least one of the arguments advanced by Appellant, we need not reach the merits of Appellant's other arguments. Accordingly, we do not sustain the Examiner's 35 U.S.C. § 103 rejection of independent claims 1, 9, and 15. For the same reasons, we do not sustain the Examiner's 35 U.S.C. § 103 rejections of dependent claims 2–8, 10–14, and 16–20.

#### DECISION

The Examiner's 35 U.S.C. § 101 rejection of claims 1–20 is affirmed.

The Examiner's 35 U.S.C. § 103(a) rejection of claims 1–20 is reversed.

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).

AFFIRMED