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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte MIKE FIELDS, ROBERT T. TREFZGER,
TIM G. SANIDAS, and RAMAKRISHNA DUVVURI

Appeal 2019-003222
Application 14/863,504
Technology Center 3600

Before MICHAEL L. HOELTER, JAMES P. CALVE, and LISA M. GUIJT,
Administrative Patent Judges.

CALVE, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from the decision of the Examiner to reject claims 5, 12, and 19. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM and enter a NEW GROUND OF REJECTION.

¹ “Appellant” refers to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies State Farm Mutual Automobile Insurance Company as the real party in interest. Appeal Br. 2.

CLAIMED SUBJECT MATTER

Claim 5, the sole independent claim, is reproduced below.

5. A data structure in a tangible computer-readable medium comprising:

two or more comparable insurance policy segment records of existing insurance policy information, wherein each comparable insurance policy segment record represents a segment of customers that have purchased insurance policies in a particular window of time;

two or more prospective insurance customer policy records, wherein each prospective insurance customer policy record comprises a set of criteria for mapping prospective insurance customer criteria to a key value that identifies a specific comparable insurance policy segment record; and

a scoring and premium estimation model, wherein the scoring and premium estimation model uses the key value that identifies a specific comparable insurance policy segment record to determine peer group policy information.

REJECTION

Claims 5, 9, and 12 are rejected as directed to patent-ineligible subject matter under a judicial exception to 35 U.S.C. § 101.

ANALYSIS

Section 101 of the Patent Act defines patent-eligible-subject matter as:

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.

35 U.S.C. § 101 (2012). However, “[l]aws of nature, natural phenomena, and abstract ideas are not patentable.” *Alice Corp. Pty. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014) (citation omitted).

To distinguish patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications, we first determine whether the claims are directed to a patent-ineligible concept. *Id.* at 217. If they are, we consider the elements of each claim, individually and as an ordered combination, to determine if additional elements transform the claim into a patent-eligible application, e.g., by providing an “inventive concept” that ensures the patent amounts to significantly more than a patent on the ineligible concept. *Id.* at 217–218.

The USPTO has issued guidance about this framework. *2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50 (Jan. 7, 2019) (“Revised Guidance”). Under the Revised Guidance, to determine whether a claim is “directed to” an abstract idea, we evaluate whether the claim recites (1) any judicial exceptions, including certain groupings of abstract ideas listed in the Revised Guidance (i.e., mathematical concepts, certain methods of organizing human activities 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)). *See* Revised Guidance, 84 Fed. Reg. at 51.

Only if a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, do we then consider 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. *Id.* at 56.

Step 1: Are the Claims Within a Statutory Category?

We disagree with the Examiner’s determination that “[a] data structure in a tangible computer-readable medium” recites statutory subject matter under 35 U.S.C. § 101. *See* Final Act. 2. A broadest reasonable interpretation of “computer-readable medium” encompasses transitory signals, which are non-statutory subject matter, absent a disclaimer or an express definition in the Specification excluding such signals and transitory matter. *See Ex parte Mewherter*, 107 USPQ2d 1857, 1859–60 (PTAB May 8, 2013) (precedential); *In re Nuijten*, 500 F.3d 1346, 1357 (Fed. Cir. 2007).

Reciting a “*tangible* computer-readable medium” without expressly disclaiming transitory signals and other transitory media, e.g., by reciting a “*non-transitory* computer-readable medium,” does not make claim 5 patent eligible. *See* U.S. Patent & Trademark Office, *Subject Matter Eligibility of Computer Readable Media*, 1351 Off. Gaz. Pat. Office 212 (Feb. 23, 2010) (“A claim drawn to such a computer readable medium that covers both transitory and non-transitory embodiments may be amended to narrow the claim to cover only statutory embodiments to avoid a rejection under 35 U.S.C. § 101 by adding the limitation ‘non-transitory’ to the claim.”); *see also* U.S. Patent & Trademark Office, *Evaluating Subject Matter Eligibility Under 35 USC § 101* (August 2012 Update) (pp. 11–14), available at http://www.uspto.gov/patents/law/exam/101_training_aug2012.pdf (noting that while “non-transitory” is a viable option for overcoming the presumption the media encompass signals or carrier waves, merely indicating such media are “physical” or “tangible” will not overcome such presumption); *Nuijten*, 500 F.3d at 1353, 1357 (physical properties of signal with tangible causes and effects are not directed to statutory subject matter).

The Specification does not define “computer-readable medium” or “tangible computer-readable medium” to exclude or disclaim transitory signals. Instead, the Specification discloses that memory 103 “may be any form or combination of volatile and/or non-volatile *tangible computer-readable medium* including semiconductor memory . . ., magnetic memory . . ., optical memory . . ., as well as other storage technologies.” Spec. 21. As discussed above, merely describing a computer-readable medium as *tangible* does not exclude transitory signals because signals have physical properties with “tangible causes and effects.” *Nuijten*, 500 F.3d at 1356. The inclusion of “other storage technologies” also leaves open a possibility that memory 103 encompasses transitory signals per se given the understanding in the art that a computer readable medium (even a tangible one) is understood in the art to include transitory signals. *Mewherter*, 107 USPQ2d at 1860. Indeed, the Specification indicates that “[m]emory 103 provides *transient* and/or persistent storage of internal data 106 and application software modules 107.” Spec. 21 (emphasis added). Because “a tangible computer-readable medium,” may be “volatile,” may provide “transient storage,” may include other storage technologies, and does not exclude transitory signals per se, a “data structure” in such a transient, volatile medium also is directed to non-statutory subject matter and encompasses memory in the form of transient signals. *See Mewherter*, 107 USPQ2d at 1860; *Ex Parte Menendez*, Appeal 2015-002835, 2017 WL 475994, *3 (PTAB, Jan. 31, 2017).

Accordingly, we determine claim 5, and its dependent claims 12 and 13, are directed to non-statutory subject matter under 35 U.S.C. § 101. We designate our determination as a New Ground of Rejection to give Appellant an opportunity to respond.

Revised Step 2A, Prong One: Are Judicial Exceptions Recited?

Although the claims are directed to *non*-statutory subject matter, we consider whether they fall under a judicial exception. *See* MPEP §§ 2106 (flowchart), 2106.04 Section II (policy). We select claim 5 as representative of Appellant’s argument of the claims as a group. Appeal Br. 3–8. The Examiner finds claim 5 recites concepts of managing a peer group insurance policy, which are similar to concepts considered to be abstract by the courts. Final Act. 3. The Examiner finds segment records, prospective insurance customer policy records, and a scoring and premium estimation model do not improve technology or computers. Ans. 4.

Appellant argues that the “scoring and premium estimation model” “is an inventive concept that allows efficient and accurate identification of ‘a specific comparable insurance policy segment record to determine peer group policy information’” much like the “static price index” that improved existing graphical user interfaces in *Trading Technologies*. Appeal Br. 3–5. Appellant also argues that claim 5 is patent eligible based on the holding in *Classen Immunotherapies v. Biogen IDEC*, 659 F.3d 1057 (Fed. Cir. 2011) because “the claims of the present application are directed to a specific data structure in a tangible computer-readable medium that comprises groups of information for comparison.” *Id.* 5–7.

Under the 2019 Revised Guidance, claim 5 recites certain methods of organizing human activity, including commercial or legal interactions such as agreements in the form of contracts, legal obligations, advertising, marketing, or sales activities or behaviors and business relations. *See* 2019 Revised Guidance, 84 Fed. Reg. at 52. Claim 5 also recites mental processes as concepts performed in the human mind, e.g., by evaluation. *Id.*

The first two limitations of claim 5 organize data of the data structure as “two or more comparable insurance policy segment records of existing insurance policy information, wherein each comparable insurance policy segment record represents a segment of customers that have purchased insurance policies in a particular window of time” and “two or more prospective insurance customer policy records, wherein each prospective insurance customer policy record comprises a set of criteria for mapping prospective insurance customer criteria to a key value that identifies a specific comparable insurance policy segment record.” Appeal Br. 13 (Claims App.). They organize information of insurance policies of current segmented customers contained in records and information of prospective insurance policy customers contained in records.

The Specification describes this organization as leveraging a business entity’s existing peer customer base to reduce the amount of self-reported information that a prospective customer has to provide to get an insurance estimate for a policy. Spec. 14. Because the existing practice of providing an estimate is intrusive and time-consuming for prospective customers who provide a lot of information, claim 5 uses existing customer data to match a prospective customer and estimate a likely premium based on the existing peer customer policy database. *Id.* at 3, 14; *see Mortgage Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d 1314, 1324 (Fed. Cir. 2016) (claims to anonymous loan shopping and credit grading recited an abstract idea); *Clarilogic Inc. v. FormFree Holdings Corp.*, 681 F. App’x 950, 954 (Fed. Cir. 2017) (non-precedential) (claims to providing certified financial data indicating financial risk about an individual recited an abstract idea of gathering financial information of potential borrowers).

The “scoring and premium estimation model . . . uses the key value that identifies a specific comparable insurance policy segment record to determine peer group policy information” also recites the same abstract idea and a mental process of using a *key value* to identify comparable insurance policy segment records. Appeal Br. 13 (Claims App.). The Specification provides very little information about this feature. The “mapping criteria” includes a range of geographic rating group values, a range of vehicle rating factor values, and a range of age values that are compared to a “key value” to identify specific comparable segment records of existing (peer) customers to compare to the prospective customer records. Spec. 32. A “segment” of customer records is illustrated in Appellant’s Figure 10, reproduced below.

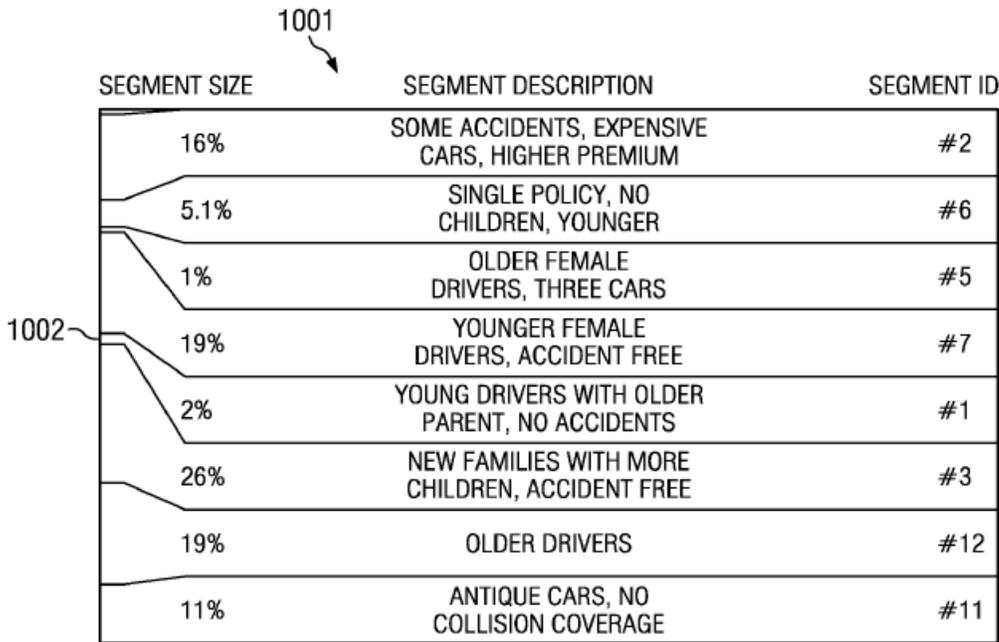


FIG. 10

Figure 10 above illustrates an exemplary segmentation model with eight segments derived from a data set of auto insurance customers. Spec. 32. Axis 1002 represents all existing insured customers or entries in a database of households by size. *Id.*

In sum, claim 5 recites the abstract idea of using a “set of criteria” to map prospective insurance customer criteria to a “key value” that identifies a specific comparable insurance policy segment record so an insurance policy premium estimate can be provided to the prospective customer. It organizes information of prospective customers to identify comparable insurance records of current customers to use to estimate a policy premium based on premiums of the existing customers. *Id.* at 27–30; *see Bridge and Post, Inc. v. Verizon Commc’ns, Inc.*, 778 F. App’x 882, 887 (Fed. Cir. 2019) (non-precedential) (“Targeted marketing is a form of ‘tailoring information based on [provided] data,’ which we have previously held is an abstract idea. . . . The concept is a ‘fundamental practice’ that dates back to newspaper advertisements.”) (citation omitted). Thus, we determine claim 5 recites a judicial exception.

Alice Step 1, Revised Step 2A, Prong Two: Is There an Integration?

We next consider whether claim 5 recites any additional elements that integrate the abstract ideas into a practical application. Revised Guidance, 84 Fed. Reg. at 54 (Revised Step 2A, Prong Two). Appellant’s reliance on the holding in *Classen* is not persuasive. Indeed, *Classen* demonstrates that claim 5 does not integrate the abstract ideas recited therein into a practical application. Appellant is correct that some claims were held to be patent eligible because those claims were directed to a specific, tangible application of lowering the risk of chronic immune-mediated disorder that included the physical step of immunization on a determined schedule. *Classen*, 659 F.3d at 1066. Unlike the claims found to be patent eligible in *Classen*, claim 5 lacks a tangible, physical step comparable to the physical immunizing step as the Appeal Brief points out. *See* Appeal Br. 6–7.

More pertinent to claim 5 in this appeal is *Classen*'s holding that one of the patents in suit (US 5,723,283) did not traverse the § 101 filter because it recited “methods that simply collect and compare data, without applying the data in a step of the overall method.” *Classen*, 659 F.3d at 1067 (“The distinction between a concrete, physical step of a process claim, as compared with data gathering or insignificant extra-solution activity, warrants specific consideration in the context of evolving technologies.”).

Claim 5 does not recite additional elements that improve computer functions or any technology. Nor does it implement the abstract ideas in a particular machine or manufacture integral to the claim or that transforms an article to a different state or thing beyond merely linking the recited abstract ideas to a particular technological environment. 2019 Revised Guidance, 84 Fed. Reg. at 55. Claim 5 analyzes data without claiming any tangible result.

Data Engine, which is cited by Appellant (Reply Br. 2–5), illustrates the distinction.

The Tab Patents solved this known technological problem in computers in a particular way—by providing a highly intuitive, user-friendly interface with familiar notebook tabs for navigating the three-dimensional worksheet environment. . . . The improvement allowed computers, for the first time, to provide rapid access to and processing of information in different spreadsheets, as well as easy navigation in three-dimensional spreadsheets.

Data Engine Techs. LLC v. Google LLC, 906 F.3d 999, 1008 (Fed. Cir. 2018). Claim 5 recites no comparable improvement. The “scoring and premium estimation model” uses a “key value” to identify comparable segmented peer policies in an undefined manner without any technological improvement as Appellant’s Figure 11 reproduced below shows. Spec. 32.

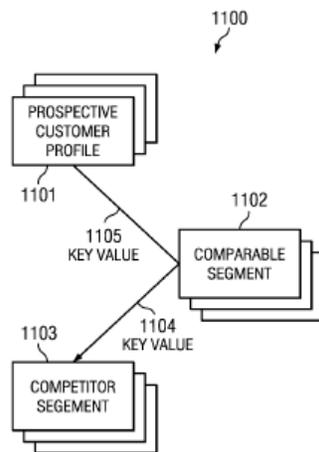


FIG. 11

Appellant's Figure 11 illustrates a data structure 1100 comprising prospective customer profile record 1101 that includes criteria for mapping information gathered from a prospective customer to key value 1105, which identifies a specific comparable segment record 1102. Spec. 32.

The portions of Appellant's Specification cited in the Summary of Claimed Subject Matter provide no other details about the key value and the scoring and premium estimation model. Appeal Br. 3 (citing Spec. 28:25–29:8, 31:7–9, 31:15–19, 32:26–33:25). Even if we were permitted to read features from the Specification into the claims, we find no such features or technical improvements in the Specification for the model or key value. The features are recited at a high level of generality and perform generic functions to organize human activity as discussed above. *See Audatex N. Am., Inc. v. Mitchell Int'l, Inc.*, 703 F. App'x 986, 989 (Fed. Cir. 2017) (non-precedential) (holding that the claims recite an abstract idea of providing a vehicle valuation through the collection and use of vehicle information and merely use a computer and generic components as tools to collect vehicle information and generate valuation reports for a damaged vehicle with the use of well-known technology).

Merely customizing information for a user is not an integration. *See Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1369–70 (Fed. Cir. 2015) (tailoring content for a user based on information known about the user is an abstract idea); *Affinity Labs of Texas, LLC v. Amazon.com, Inc.*, 838 F.3d 1266, 1271 (Fed. Cir. 2016) (providing targeted advertising based on user demographic information is an abstract idea).

In *Core Wireless*, the claims were directed to an improved interface for a mobile device that displayed an application summary of applications in an unlaunched state so users could quickly navigate to desired applications to find the data of interest in three steps from startup as compared to known devices that required a user to scroll around and switch views many times to find the right data/functionality. *Core Wireless Licensing S.A.R.L. v. LG Electronics, Inc.*, 880 F.3d 1356, 1362–63 (Fed. Cir. 2018). The improved user interface for electronic devices with small screens improved efficiency by providing “a limited list of common functions and commonly accessed stored data” that is accessible directly from the main menu rather than requiring users to “drill down through many layers to get to the desired data or functionality.” *Id.* at 1363.

Here, the limitation of mapping prospective insurance customer criteria to a key value is recited at such a high level of generality as a generic data organizing and processing function not tied to any particular machine or technical improvement that it fails to integrate the abstract ideas of claim 5 into a practical application. *See* 2019 Revised Guidance, 84 Fed. Reg. at 55.

Accordingly, we determine that claim 5 does not recite any additional elements that integrate the abstract ideas recited therein into a practical application that is patent-eligible.

Alice Step 2, Revised Step 2B — Inventive Concept

We next consider whether claim 5 recites any elements, individually or as an ordered combination, that provide an inventive concept. *Alice*, 573 U.S. at 217–18. “The second step of the *Alice* test is satisfied when the claim limitations involve more than performance of well-understood, routine [and] conventional activities previously known to the industry.” *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1367 (Fed. Cir. 2018) (internal quotations and citation omitted); *see also* Revised Guidance, 84 Fed. Reg. at 56 (explaining that the second step of the *Alice* analysis considers whether a claim adds a specific limitation beyond a judicial exception that is not a “well-understood, routine, conventional” activity in the field).

We agree with the Examiner that claim 5 recites a business/financial solution to how to determine peer group policy information and provide customized pricing more efficiently to inform prospective customers about a product. Ans. 5. However, using computers to automate manual activities or perform activities more quickly is not an inventive step. *OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1363 (Fed. Cir. 2015) (“[R]elying on a computer to perform routine tasks more quickly or more accurately is insufficient to render a claim patent eligible.”); *Bancorp Servs., L.L.C. v. Sun Life Assur. Co. of Can. (US.)*, 687 F.3d 1266, 1278 (Fed. Cir. 2012) (“[T]he fact that the required calculations could be performed more efficiently via a computer does not materially alter the patent eligibility of the claimed subject matter.”); *In re Salwan*, 681 F. App’x 938, 941 (Fed. Cir. 2017) (non-precedential) (holding claims to organizing patient health information recited little more than automation of a method of organizing human activity with respect to medical information).

Considered individually, the limitations of claim 5 recite the abstract ideas discussed above without integrating them into a practical application. *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1151 (Fed. Cir. 2016) (“a claim for a *new* abstract idea is still an abstract idea.”); *Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1335 (Fed. Cir. 2015) (claims that improved an abstract idea, but not a computer’s performance, were held unpatentable). As an ordered combination, claim 5 recites a data structure containing records (data or information as such) that is organized and analyzed at a high level of generality and using “a scoring and premium estimation model . . . [that] uses the “key value” that identifies a specific comparable insurance policy segment record to determine peer group policy information.” If some technical improvement in databases, data mining, or data manipulation is employed in this process, those details are not recited in claim 5. Instead, claim 5 uses a “key value” to identify a specific segment of insurance policies of existing customers in an unspecified way “to determine peer group policy information.” Claiming data manipulation as such at such a high level of generality without any technical improvement to computers or other technology is not an inventive step. *See SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1611, 1170 (Fed. Cir. 2018) (“this court has ruled many times that ‘such invocations of computers and networks that are not even arguably inventive are insufficient to pass the test of an inventive concept in the application of an abstract idea’ Indeed, we think it fair to say that an invocation of already-available computers that are not themselves plausibly asserted to be an advance, for use in carrying out improved mathematical calculations, amounts to a recitation of what is ‘well-understood, routine, [and] conventional.’”) (citations omitted).

Accordingly, we sustain the rejection of claim 5 and claims 12 and 13, which are not argued separately. *See* Appeal Br. 3–8; *see also* 37 C.F.R. § 41.37(c)(1)(iv).

CONCLUSION

Claims Rejected	35 U.S.C. §	Reference/Basis	Affirmed	Reversed	New Ground
5,12, 13	101	Non-statutory subject matter			5, 12, 13
5, 12, 13	101	Judicial exception	5, 12, 13		
Overall Outcome			5, 12, 13		5, 12, 13

This decision contains a new ground of rejection entered pursuant to 37 C.F.R. § 41.50(b). Section 41.50(b) provides that “[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review.” Section 41.50(b) also provides:

When the Board enters such a non-final decision, the appellant, within two months from the date of the decision, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

(1) *Reopen prosecution.* Submit an appropriate amendment of the claims so rejected or new Evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the prosecution will be remanded to the examiner. The new ground of rejection is binding upon the examiner unless an amendment or new Evidence not previously of Record is made which, in the opinion of the examiner, overcomes the new ground of rejection designated in the decision. Should the examiner reject the claims, appellant may again appeal to the Board pursuant to this subpart.

(2) *Request rehearing.* Request that the proceeding be reheard under § 41.52 by the Board upon the same Record. The

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request for rehearing must address any new ground of rejection and state with particularity the points believed to have been misapprehended or overlooked in entering the new ground of rejection and also state all other grounds upon which rehearing is sought.

Further guidance on responding to a new ground of rejection can be found in the MANUAL OF PATENT EXAMINING PROCEDURE § 1214.01 (9th Ed., Rev. 08.2017, Jan. 2018).

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; 37 C.F.R. § 41.50(b)