UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/801,712	03/13/2013	Biswajit Pal	36MK-255225	8747

145169 7590 11/08/2018

SHEPPARD, MULLIN, RICHTER & HAMPTON LLP (DXC)
379 Lytton Avenue
Palo Alto, CA 94301

EXAMINER
WHITAKER, JONATHAN J

ART UNIT	PAPER NUMBER
3622	

NOTIFICATION DATE	DELIVERY MODE
11/08/2018	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

svpatents@sheppardmullin.com
SheppardMullin_Pair@firsttofile.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte BISWAJIT PAL, SUBHASISH MISRA, and ABHISEK SAHA

Appeal 2017-005649
Application 13/801,712
Technology Center 3600

Before NINA L. MEDLOCK, SCOTT C. MOORE, and AMEE A. SHAH, *Administrative Patent Judges.*

SHAH, *Administrative Patent Judge.*

DECISION ON APPEAL[1]

The Appellants[2] appeal under 35 U.S.C. § 134(a) from the Examiner's final decision rejecting claims 1–4, 6, 7, 10–15, and 17–19.[3] We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

---

[1] Throughout this Decision, we refer to the Appellants' Appeal Brief ("Appeal Br.," filed Aug. 9, 2016), Reply Brief ("Reply Br.," filed Feb. 15, 2017), and Specification ("Spec.," filed Mar. 13, 2013), and to the Examiner's Answer ("Ans.," mailed Dec. 15, 2016) and Final Office Action ("Final Act.," mailed Feb. 10, 2016).

[2] According to the Appellants, the real party in interest is "Hewlett Packard Enterprise Development LP." Appeal Br. 3.

[3] Claims 22–24 have been cancelled. *See* Advisory Action mailed June 5, 2016.

STATEMENT OF THE CASE

The Appellants' invention relates to "determin[ing] target customer[s] based on the likelihood they will make a future purchase in [a] future period of time." Spec. ¶ 8.

Claims 1, 11, and 19 are the independent claims on appeal. Claim 1 (Appeal Br. 27–28 (Claims App.)) is illustrative of the subject matter on appeal and is reproduced below (with added bracketing for reference):

> 1. A method of scalably estimating probability of future purchases based on customer database records, the method, comprising:
>
> [(a)] receiving records from a customer database, wherein the records include transaction data for a plurality of customers;
>
> [(b)] estimating, by at least one hardware processor, parameters from inputs of sample customers and providing an approximation model for each of the estimated parameters;
>
> for each customer of a plurality of customers:
>
> [(c)] determining, by the at least one hardware processor, corresponding explanatory variables from the transaction data, wherein the explanatory variables include a timing of a first purchase by the customer, a timing of a last purchase by the customer, and a number of purchases by the customer from the first purchase to the last purchase;
>
> [(d)] applying, by the at least one hardware processor, the explanatory variables to the approximation models to determine a dropout probability and a transaction rate, wherein the dropout probability is a probability that the customer is inactive; and
>
> [(e)] determining, by the at least one hardware processor, a likelihood of a repeat purchase during a selected time period based on the dropout probability and the transaction rate, wherein the determining of the

likelihood of the repeat purchase during the selected time period includes, for each customer,:

determining a likelihood the customer remains active during the selected time period based on the dropout probability for the customer;

determining a likelihood the customer will make a purchase during the selected time period based on the transaction rate; and

determining the likelihood of the repeat purchase during the selected time period from the likelihood the customer remains active and the likelihood the customer will make a purchase during the selected time period; and

[(f)] scoring, by the at least one hardware processor, each of the plurality of customers based on the corresponding likelihood of repeat purchase.

REJECTIONS

Claims 1–4, 6, 7, 10–15, and 17–19 stand rejected under 35 U.S.C. § 101 as being directed to a judicial exception without significantly more.

Claims 1, 2, 6, 7, 10–13, and 17–19 stand rejected under pre-AIA 35 U.S.C. § 102(b) as being anticipated by Davis (US 2010/0070346 A1, pub. Mar. 18, 2010).

Claims 3, 4, 14, and 15 stand rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Davis in view of Chiang et al. (US 2014/0006166 A1, pub. Jan. 2, 2014) ("Chiang").

ANALYSIS

35 U.S.C. § 101 — Non-Statutory Subject Matter

The Appellants argue the claims as a group for this rejection. *See* Appeal Br. 9, 11, 15, 16. We select claim 1 as representative of the group; claims 2–4, 6, 7, 10–15, and 17–19 stand or fall therewith. *See* 37 C.F.R. § 41.37(c)(1)(iv).

The Supreme Court in *Alice* reiterated the two-step framework, set forth previously in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66, 78–79 (2012), "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. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2355 (2014). The first step in that analysis is to "determine whether the claims at issue are *directed to* one of those patent-ineligible concepts." *Id.* (citing *Mayo*, 566 U.S. at 79) (emphasis added). 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*, 566 U.S. at 78, 79).

The First Step

The step-one analysis requires us to consider the claims "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). The Court acknowledged in *Mayo*, that "all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas." *Mayo*, 566 U.S. at 71. The question is whether the claim as a whole "focus[es] on a specific means

or method that improves the relevant technology" or is "directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery." *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314 (Fed. Cir. 2016). We, therefore, look to "whether the focus of the claims is on [a] specific asserted improvement in computer capabilities . . . or, instead, on a process that qualifies as an 'abstract idea' for which computers are invoked merely as a tool." *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335–36 (Fed. Cir. 2016).

Under the first step of the *Mayo/Alice* framework, the Examiner determines that the claim is "directed to the abstract idea of estimating scores for customers based on the likelihood of repeat purchase, which is a fundamental economic practice and/or a method of organizing human activities." Final Act. 7; *see also* Ans. 22–26.

The Appellants do not ostensibly disagree that the claim is directed to estimating scores for customers based on the likelihood of repeat purchase. Rather, the Appellants argue that "[t]he claims of the present application are not directed to an abstract idea that is similar to what the courts have identified as abstract ideas, and thus the rejection should be reversed." Appeal Br. 11; *see also* Reply Br. 4. The Appellants also argue that "the claims of the present application are not directed to an abstract idea that is similar to *Cyberfone* and *SmartGene*." Appeal Br. 11. (citing *Cyberfone Syst., LLC v. CNN Interactive Grp., Inc.*, 558 F. Appx 988 (Fed. Cir. 2014); *SmartGene, Inc. v. Advanced Biological Labs., SA*, 555 F. Appx 950 (Fed. Cir. 2014)); *see also id.* at 12–13; Reply Br. 5. The Appellants further argue that "the claims of the present application are directed to an improvement in computer-related technology, which demonstrates the

claims do not recite a concept similar to previously identified abstract ideas." Appeal Br. 13; Reply Br. 5–6.

We disagree. Here, claim 1 recites "[a] method of scalably estimating probability of future purchases based on customer database records, the method comprising:" (a) receiving, from a database, records including transaction data; (b) estimating, by a processor, parameters from inputs and providing an approximation model; for each customer: (c) determining, by the processor, corresponding variables including timing and number of purchases, (d) applying the variable to the models to determine a probability and rate, and (e) determining, by the processor, a likelihood of repeat purchase based on the probability and rate, including determining likelihoods of remaining active, making a purchase, and repeat purchases; and (f) scoring, by the processor, each customer based on the likelihood of repeat purchases. *See* Appeal Br. 27–28. The Appellants cite to Figure 2 and paragraphs 8, 10–16, 19, 23, 27, 28, 33, and 34 of the Specification as support for these limitations. Appeal Br. 3–7. These cited paragraphs provide that the method is performed by computing device 300 that, "[i]n a basic hardware configuration, . . . typically includes a processor system 302 having one or more processing units, i.e., processors 304, and memory 306." Spec. ¶ 33.

Claim 1 does not recite the specifics for how, i.e., by what process or algorithm, steps (b) through (f) of estimating, determining, and scoring are performed. The Specification provides that step (b) of estimating parameters can be performed by using statistical models such as the "Bayesian Hierarchal model and MCMC [Markov Chain Monte Carlo] algorithm." Spec. ¶ 23; *see also* claim 3. The Appellants cite to paragraphs 19 and 28 as

support for determining variables, dropout probability, and transaction rate, as recited in steps (c) and (d). Appeal Br. 4. These paragraphs provide that these determinations are performed by using approximation models and calculations using a formula. Similarly, the Specification, at paragraphs 10 through 16 and 28, relied on by the Appellants (Appeal Br. 4–5), describes the determinations of likelihood, as recited in limitation (e), as being performed by using mathematical expressions and formulas to calculate probabilities. Paragraphs 8 and 27, relied on by the Appellants (*id.* at 5), provide that customers can be scored or ranked to provide an output, such as by filtering the results of the probability of future purchases. As such, claim 1 provides for a method of estimating probability of future purchases by receiving data, determining data using mathematical expressions, models, and formulas, and scoring the results of the determinations.

This is similar to those claims deemed to be abstract ideas in *Electric Power Group, LLC v. Alstom S.A.*, 830 F.3d 1350, 1354 (Fed. Cir. 2016) (claims were directed to a process of gathering and analyzing information of a specified content and displaying the result), *SAP America, Inc. v. Investpic, LLC*, 898 F.3d 1161, 1167 (Fed. Cir. 2018) (claims were directed to performing certain statistical analysis comprising "selecting certain information, analyzing it using mathematical techniques, and reporting or displaying the results of the analysis"), *Digitech Image Technologies, LLC v. Electronics for Imaging, Inc.*, 758 F.3d 1344, 1350–51 (Fed. Cir. 2014) (claims of the challenged patent were directed to the abstract idea of organizing information through mathematical correlations), *Cyberfone*, 558 F. App'x at 992 (claims directed collecting, separating, and transmitting information), and *SmartGene*, 555 F. App'x at 955 (claims directed to

comparing new and stored information and using rules to identify options). Here, claim 1 involves nothing more than estimating scores by receiving and determining data, and scoring the results of the determinations without any particular inventive technology — an abstract idea. *See Electric Power*, 830 F.3d at 1354; *SAP America*, 898 F.3d at 1167. As such, we find unpersuasive the Appellants' arguments that the claim is not similar to what the courts have identified as abstract ideas and is not similar to *Cyberfone, SmartGene,* and *Electric Power*. *See* Appeal Br. 11–13; Reply Br. 4–5.

We also find unpersuasive the Appellants' argument that claim 1 is not abstract because it is "directed to an improvement in computer-related technology." Appeal Br. 13; *see also* Reply Br. 5–6. As discussed above, the processor used to perform the steps of the method is a conventional processor. Estimating probabilities is an analysis, not a computer-related technology. *See SAP America*, 898 F.3d at 1169 ("the focus of the claims is not any improved computer network, but the improved mathematical analysis; and indeed the Specification makes clear that off-the-shelf computer technology is usable to carry out the analysis."). And, we agree with the Examiner that paragraphs 29 and 30 of the Specification do not show that computer technology itself is improved. *See* Ans. 27–28. Paragraph 29 provides that hypotheses were formed about the speed with which the process can be executed in big databases, and the hypothesis considered was "whether the process is so fast that it can be applied on large data bases." "Random targeting of a given percentage of customers can be expected to result in the given percentage of repeat buyers. . . . Process 200 outperformed random targeting for every percentage of customers targeted from at least 10% to almost 100%." Spec ¶ 29. "Process 200 is also more

efficient than the [sic] over the Bayesian Hierarchal model and MCMC algorithm. The deployed approximation model was demonstrated to be about 180 times faster over the Bayesian Hierarchal model and MCMC algorithm." *Id.* ¶ 30. At best, these paragraphs show that the efficiency of the computer's conventional function of calculating happens to be improved as a result of a faster mathematical method of calculating. Although these paragraphs show that the claimed process may lead to a faster calculating processes, they do not show how the technology itself is improved.

Thus, we are not persuaded of error in the Examiner's determination that claim 1 is directed to an abstract idea.

The Second Step

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.'" *Alice Corp.*, 134 S. Ct. at 2355 (alteration in original) (quoting *Mayo*, 566 U.S. at 72–73). The Court acknowledged in *Mayo*, that "all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas." *Mayo*, 566 U.S. at 71. We, therefore, look to whether the claims focus on a specific means or method that improves the relevant technology or are instead directed to a result or effect that itself is the abstract idea, and merely invoke generic processes and machinery. *See Enfish*, 822 F.3d at 1336.

We agree with and find supported the Examiner's determination that the elements of claim 1, individually or as an ordered combination, do not amount to significantly more than the abstract idea. *See* Final Act. 9–11; Ans. 29–32. We do not agree with the Appellants' contention that claim 1

"recite[s] features that are 'significantly more' than the alleged abstract idea of 'estimating scores for customers based on the likelihood of repeat purchase.'" Appeal Br. 14; *see also id.* 15–18; Reply Br. 4–6.

We are not persuaded by the Appellants' argument that the claim is "directed to a technical solution to a technical problem that is significantly more than the abstract idea." The Appellants do not state what problem the invention addresses; rather, the Appellants state "[p]aragraph 22 of the present application describes efficiently and accurately scoring customer lists of any size and scalably meeting the features of big data." Appeal Br. 14. Although paragraph 22 states "Figure 2 illustrates a method 200 for use with scoring engine 104 to efficiently and accurately score customer lists of any size and is scalable to meet the features of big data," there is no discussion of the problems of the prior art that the invention addresses. And, as discussed above, paragraphs 29 and 30 simply describe a faster calculating process. The Background section of the Specification discusses that firms collect information and use that information for a number of reasons including projections, and "[s]ophisticated statisticians" can apply the information to create models to guess the likelihood and timing of future purchases. Spec. ¶ 1. Making mathematical/statistical models or guesses more effective is not a technical problem. *See DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257 (Fed. Cir. 2014) (the claims were directed to statutory subject matter because they claim a solution "necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks").

Further, the purported technical solution comprises the use of a generic processer operating in its routine and conventional way to receive,

estimate, and analyze data. *See* Spec. ¶ 33. There is no further technology for performing the recited steps. *See Affinity Labs of Texas, LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1263 (Fed. Cir. 2016); *see also Enfish*, 822 F.3d at 1336 (focusing on whether the claim is "an improvement to [the] computer functionality itself, not on economic or other tasks for which a computer is used in its ordinary capacity"). We do not see where the claimed subject matter provides for an improvement in the technology of the processor. As discussed above, although the claim limitations may result in a faster calculating processes, they do not show how the technology itself is improved. "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." *Versata Develop. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1335 (Fed. Cir. 2015) (quoting *SiRF Tech., Inc. v. Int'l Trade Comm'n*, 601 F.3d 1319, 1333 (Fed. Cir. 2010)). As discussed above, there is no indication in the Specification that any novel technology or inventive hardware is used. "[A]n 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." *SAP America*, 898 F.3d at 1170. And, receiving, estimating, and analyzing data are well-understood, routine, and conventional functions of a generic computer. *See Electric Power*, 830 F.3d at 1354–55; *cf.* Appeal Br. 16.

The claim recites an invention that is merely the routine or conventional use of a processor to perform an abstract business/economic practice. *DDR Holdings*, 773 F.3d at 1258–59. The Appellants provide no further argument such as why its particular arrangement and/or integration of elements is a technical improvement to the field of estimating scores. *See BASCOM Globs. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1350 (Fed. Cir. 2016).

In response to the Appellants' argument that "[a]s explained in detail below with respect to the prior art rejections, multiple claim features are not taught by the prior art and are not believed to be well-understood, routine, and conventional" (Appeal Br. 16), we note that an abstract idea does not transform into an inventive concept just because the prior art does not disclose or suggest it. *See Mayo*, 566 U.S. at 89–90. "Groundbreaking, innovative, or even brilliant discovery does not by itself satisfy the § 101 inquiry." *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 591 (2013). Indeed, "[t]he '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 Mayo*, 566 U.S. at 91 (rejecting "the Government's invitation to substitute §§ 102, 103, and 112 inquiries for the better established inquiry under § 101").

We are also not persuaded by the Appellants' argument that "the ordered combination of elements in each of the independent claims of the present application must be considered simply more than organizing human activities or a fundamental economic practice similar to claim 2 of

example 21." Appeal Br. 18; *see also id.* at 17 (citing July 2015 Update on Subject Matter Eligibility, 80 Fed. Reg. 146, 45429, Examples[4] (July 30, 2015) ("July 2015 Update")). In that hypothetical example, the limitations related to "transmitting an alert over a wireless communication channel to activate the stock viewer application, which causes the alert to display and enables the connection of the remote computer to the data source over the Internet when the remote subscriber computer comes online" were considered by the USPTO to "add more than generally linking the use of the abstract idea (the general concept of organizing and comparing data) to the Internet, because they solve an Internet-centric problem with a claimed solution that is necessarily rooted in computer technology, similar to the additional elements in *DDR Holdings*." July 2015 Update, Appendix I, 4. In contrast, here, as discussed above, the limitations do not solve an Internet-centric problem with a solution necessarily rooted in computer technology.

In response to the Appellants' argument that "customer scoring can be done any number of ways, and the above-recited features confine the claims to very specific application that does not preempt all targeted marketing" (Appeal Br. 16), we note that although the Supreme Court has described "the concern that drives this exclusionary principle[, i.e., the exclusion of abstract ideas from patent eligible subject matter,] as one of preemption" (*Alice*, 134 S. Ct. at 2354), characterizing preemption as a driving concern for patent eligibility is not the same as characterizing preemption as the sole test for patent eligibility. "The Supreme Court has made clear that the principle of preemption is the basis for the judicial exceptions to patentability" and

[4] Available at https://www.uspto.gov/sites/default/files/ documents/ieg-july-2015-update.pdf.

"[f]or this reason, questions on preemption are inherent in and resolved by the § 101 analysis." *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015) (citing *Alice*, 134 S. Ct. at 2354). Although "preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility." *Id.*

Thus, we are not persuaded of error in the Examiner's determination that claim 1 does not contain an inventive concept under the second part of the *Mayo/Alice* framework.

Based on the foregoing, we sustain the Examiner's rejection under 35 U.S.C. § 101, of claim 1 and of claims 2–4, 6, 7, 10–15, and 17–19, which fall with claim 7.

35 U.S.C. § 102(b) — Anticipation

We agree with the Appellants' contention that the Examiner's rejection of independent claims 1, 11, and 19 is in error because the Examiner does not adequately show that Davis discloses determining step (e) of independent claim 1 and similarly recited in independent claims 11 and 19. *See* Appeal Br. 23–24. Specifically, we agree that the Examiner does not adequately show how Davis discloses determining the likelihood that the customer will make a repeat purchase during the period based on the likelihoods of remaining active and willingness to make a future purchase. *See id.*

The Examiner finds, in relevant part, that Davis discloses determining a likelihood the customer remains active during a time period at paragraphs 37, 38, 42–44, 70, 78, 85, and 128. Final Act. 14. The Examiner relies on Davis's paragraphs 28, 34, 36–38, 78, 83–85, 98, and 99 for

disclosing determining the likelihood the customer will make a purchase during the time period. *Id.* And the Examiner cites to Davis's paragraphs 21–23, 34, 36–38, 70, 84, 98, and 99 as disclosing determining the likelihood of a repeat purchase during the time period from the likelihoods of remaining active and willing to make a purchase. *Id.* Specifically, the Examiner finds that

> Davis explicitly teaches the input of collected transactional data as variables into mathematical formulas, algorithms, and functions for predictive modeling in order to determine probabilities of a consumer entering or not entering into transactions ([0036]-[0038]; [0080]; [0084]; [0095]). All of the variables and calculated probabilities described in the applicant's claims are taught by the Davis reference. The Davis reference discloses determining the likelihood of repeat purchase during a selected time period for a customer from the likelihood the customer remains active and the likelihood the customer will make a purchase during the selected time period ([0021]-[0023]; [0034]; [0036]-[0038]; [0070]; [0084]; [0098]-[0099]).

Id. at 32–33.

We agree with the Examiner that Davis discloses determining a likelihood that the customer remains active in disclosing generating a probability of lapsing. *See* Davis ¶¶ 38, 44, 45, 85. We also agree with the Examiner that Davis discloses determining a likelihood that the customer will make a purchase in disclosing generating a probability of purchasing items in a specific class. *See id.* ¶¶ 38, 44, 85. However, even if we were to agree that Davis discloses determining a likelihood of a repeat purchase in determining a likelihood of the consumer performing a specified transaction (*see id.* ¶¶ 34, 38, 98), we do not see where or how Davis discloses that the likelihood of a repeat purchase is determined from the likelihoods of lapsing and purchasing items in a specific class. We find unsupported the

Examiner's finding that "[d]etermining the likelihood of a customer making a repeat purchase during a selected time period necessarily includes determining the likelihood the customer will make a purchase during the selected time period and determining the likelihood the customer remains active in a selected time period." Ans. 40. We also find unsupported the Examiner's finding that Davis discloses the intermediate determinations of likelihoods of activeness and willingness that are used in the "mathematical formulas, algorithms, and functions for predictive modeling in order to determine probabilities of a consumer entering or not entering into transactions," i.e., probability of a repeat purchase. Ans. 41–42. Rather, as the Examiner finds (*id.*), Davis discloses determining a probability of a repeat purchase based on transaction data and "demographic data, loyalty quotient dat[a], and block data in the consumer's record" (Davis ¶ 98). Davis is silent as to whether the probability of lapsing is factored into the determination of a repeat transaction.

And, we disagree that "'determining a likelihood a customer remains active in a selected time period', 'determining a likelihood the customer will make a purchase during the selected time period', and 'determining the likelihood of the customer making a repeat purchase during the selected time period" are all "the same generalized concept with different wording." Ans. 40. Although they are all mathematical correlations, they rely on different factors in their algorithms to reach the desired results. Thus, we agree with the Appellants that Davis does not anticipate determining a likelihood of a repeat purchase as claimed.

Based on the foregoing, we do not sustain the Examiner's rejection under 35 U.S.C. § 102(b) of independent claims 1, 11, and 19, and dependent claims 2, 6, 7, 10, 12, 13, 17, 18, and 22–24.

35 U.S.C. § 103(a) — Obviousness

For the rejection of dependent claims 3, 4, 14, and 15, the Examiner relies on the same findings regarding Davis as relied upon for independent claims 1 and 11. *See* Final Act. 22, 24. Thus, we also do not sustain the Examiner's rejection under 35 U.S.C. § 103(a) of dependent claims 3, 4, 14, and 15 for the same reasons we do not sustain the rejection of independent claims 1 and 11.

DECISION

The Examiner's rejection of claims 1–4, 6, 7, 10–15, and 17–19 under 35 U.S.C. § 101 is AFFIRMED.

The Examiner's rejection of claims 1, 2, 6, 7, 10–13, and 17–19 under pre-AIA 35 U.S.C. § 102(b) is REVERSED.

The Examiner's rejection of claims 3, 4, 14, and 15 under pre-AIA 35 U.S.C. § 103(a) 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