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EXAMINER
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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* MARC DEL BENE, PO HU, ANANT NAMBIAR,  
and DANIEL G. SALAZAR

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Appeal 2017-009185  
Application 12/342,925<sup>1</sup>  
Technology Center 3600

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Before ELENI MANTIS MERCADER, LARRY J. HUME, and  
BETH Z. SHAW, *Administrative Patent Judges*.

HUME, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) of the Final Rejection of claims 1–22, which are all claims pending in the application. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

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<sup>1</sup> According to Appellants, the real party in interest is MasterCard International Inc. App. Br. 1.

STATEMENT OF THE CASE<sup>2</sup>

*The Invention*

Appellants' disclosed embodiments and claimed invention relate "to predicting consumer behavior from transaction card purchases and, more particularly, to network-based methods and systems for predicting whether a consumer will experience a life event, and predicting future purchases of the consumer based on the predicted life event." Spec. ¶ 1.

*Exemplary Claim*

Claim 1, reproduced below, is illustrative of the subject matter on appeal:

1. A computer-based method for predicting consumer behavior within a predetermined time period, said method performed using a payment processor computer device coupled to a database, said method comprising:

recording, by the payment processor computer device, electronic consumer data in the database for each consumer of a global population of consumers including historical purchases made by each consumer, including at least one electronic transaction initiated by a consumer using a transaction card at a point-of-sale (POS) device;

defining, by the payment processor computer device, a life event by assigning spending variables to the life event, wherein a spending variable represents a quantity of consumer spending associated with one or more of (i) a particular merchant and (ii) a particular type of good or service;

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<sup>2</sup> Our decision relies upon Appellants' Appeal Brief ("App. Br.," filed Feb. 28, 2017); Reply Brief ("Reply Br.," filed June 13, 2017); Examiner's Answer ("Ans.," mailed Apr. 14, 2017); Final Office Action ("Final Act.," mailed Sept. 15, 2016); and the original Specification ("Spec.," filed Dec. 23, 2008).

generating an anticipated spend for each spending variable assigned to the life event by extrapolating a historical actual spend based on the historical purchases, wherein the anticipated spend represents anticipated spending in each spending variable assigned to the life event;

calculating a residual value of a determined variance between the anticipated spend and an actual spend for each consumer by calculating a quotient of (i) the difference between the anticipated spend and the actual spend and (ii) the anticipated spend;

determining that a residual value of a determined variance between the anticipated spend and the actual spend for each consumer exceeds a predefined threshold;

assigning, by the payment processor computer device, the consumer to a sample group, wherein the sample group represents consumers that are experiencing the life event;

generating, by the payment processor computer device, a predictive model based on historical purchases made by consumers within the sample group;

applying, by the payment processor computer device, the predictive model to predict each consumer within the global population and outside of the sample group that will experience the life event; and

outputting, by the payment processor computer device, a list of consumers outside of the sample group that are predicted to experience the life event within the predetermined time period.

*Rejection on Appeal*<sup>3</sup>

Claims 1–22 stand rejected under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter. Final Act. 3.

CLAIM GROUPING

Based on Appellants’ arguments (App. Br. 6–13) and our discretion under 37 C.F.R. § 41.37(c)(1)(iv), we decide the appeal of patent-ineligible subject matter Rejection R1 of claims 1–22 on the basis of illustrative claim 1.

ISSUE

Appellants argue (App. Br. 6–13; Reply Br. 1–4) the Examiner’s rejection of claim 1 under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter is in error. These contentions present us with the following issue:

Under the USPTO’s Revised Guidance, informed by our governing case law concerning 35 U.S.C. § 101, is claim 1 patent-ineligible under § 101?

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<sup>3</sup> We note the Examiner withdrew the rejection of claims 1, 4–12, 14–19, 21, and 22 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Hyder, Lazarus, Hoerl, and Decotiis, and also withdrew the rejection of claims 2, 3, 13, and 20 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Hyder, Lazarus, Hoerl, and Decotiis. Ans. 2.

PRINCIPLES OF LAW

A. 35 U.S.C. § 101

We first note “[w]hether a claim is drawn to patent-eligible subject matter is an issue of law that we review de novo.” *SiRF Tech., Inc. v. Int’l Trade Comm’n*, 601 F.3d 1319, 1331 (Fed. Cir. 2010).

An invention is patent-eligible if it claims a “new and useful process, machine, manufacture, or composition of matter.” 35 U.S.C. § 101.<sup>4</sup> However, the Supreme Court has long interpreted 35 U.S.C. § 101 to include implicit exceptions: “[l]aws of nature, natural phenomena, and abstract ideas” are not patentable. *E.g., Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014).

In determining whether a claim falls within an excluded category, we are guided by the Supreme Court’s two-step framework, described in *Mayo* and *Alice*. *Id.* at 217–18 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 75–77 (2012)). In accordance with that framework, we first determine what concept the claim is “directed to.” *See Alice*, 573 U.S. at 219 (“On their face, the claims before us are drawn to the concept of intermediated settlement, *i.e.*, the use of a third party to mitigate settlement risk.”); *see also Bilski v. Kappos*, 561 U.S. 593, 611 (2010) (“Claims 1 and 4 in petitioners’ application explain the basic concept of hedging, or protecting against risk.”).

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<sup>4</sup> This threshold analysis of whether a claim is directed to one of the four statutory categories of invention, *i.e.*, a process, machine, manufacture, or composition of matter, is referred to as “*Step 1*” in the patent-eligibility inquiry under § 101.

Concepts determined to be abstract ideas, and thus patent ineligible, include certain methods of organizing human activity, such as fundamental economic practices (*Alice*, 573 U.S. at 219–20; *Bilski*, 561 U.S. at 611); mathematical formulas (*Parker v. Flook*, 437 U.S. 584, 594–95 (1978)); and mental processes (*Gottschalk v. Benson*, 409 U.S. 63, 69 (1972)). Concepts determined to be patent eligible include physical and chemical processes, such as “molding rubber products” (*Diamond v. Diehr*, 450 U.S. 175, 191 (1981)); “tanning, dyeing, making water-proof cloth, vulcanizing India rubber, smelting ores” (*id.* at 182 n.7 (quoting *Corning v. Burden*, 56 U.S. 252, 267–68 (1854))); and manufacturing flour (*Benson*, 409 U.S. at 69 (citing *Cochrane v. Deener*, 94 U.S. 780, 785 (1876))).

In *Diehr*, the claim at issue recited a mathematical formula, but the Supreme Court held “[a] claim drawn to subject matter otherwise statutory does not become nonstatutory simply because it uses a mathematical formula.” *Diehr*, 450 U.S. at 176; *see also id.* at 191 (“We view respondents’ claims as nothing more than a process for molding rubber products and not as an attempt to patent a mathematical formula.”). Having said that, the Supreme Court also indicated that a claim “seeking patent protection for that formula in the abstract . . . is not accorded the protection of our patent laws, . . . and this principle cannot be circumvented by attempting to limit the use of the formula to a particular technological environment.” *Id.* (citing *Benson* and *Flook*); *see, e.g., id.* at 187 (“It is now commonplace that an *application* of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection.”).

However, the Federal Circuit has held claims ineligible as directed to an abstract idea when they merely collect electronic information, display information, or embody mental processes that could be performed by humans. *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1353–54 (Fed. Cir. 2016) (collecting cases). At the same time, “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. Abstract ideas may include, but are not limited to, fundamental economic practices, methods of organizing human activities, and mathematical formulas or relationships. *Alice* 134 S. Ct. at 2355–57. Under this guidance, we must therefore ensure at step one that we articulate what the claims are directed to with enough specificity to ensure the step one inquiry is meaningful. *Id.* at 2354 (“[W]e tread carefully in construing this exclusionary principle lest it swallow all of patent law.”).

If the claim is “directed to” an abstract idea, we turn to the second step of the *Alice* and *Mayo* framework, where “we must examine the elements of the claim to determine whether it contains an ‘inventive concept’ sufficient to ‘transform’ the claimed abstract idea into a patent-eligible application.” *Alice*, 573 U.S. at 221 (quotation marks omitted). “A claim that recites an abstract idea must include ‘additional features’ to ensure ‘that the [claim] is more than a drafting effort designed to monopolize the [abstract idea].’” *Id.* (quoting *Mayo*, 566 U.S. at 77). “[M]erely requir[ing] generic computer implementation[] fail[s] to transform that abstract idea into a patent-eligible invention.” *Id.*

B. USPTO Guidance

The PTO recently published revised guidance in the Federal Register concerning the application of § 101. *2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50 (January 7, 2019) (hereinafter “Guidance”) (<https://www.govinfo.gov/content/pkg/FR-2019-01-07/pdf/2018-28282.pdf>).

Under that Guidance, we first look to whether the claim recites:

(1) any judicial exceptions, including certain groupings of abstract ideas (i.e., mathematical concepts, certain methods of organizing human activity such as a fundamental economic practice, or mental processes);<sup>5</sup> and

(2) additional elements that integrate the judicial exception into a practical application (*see* MPEP § 2106.05(a)–(c), (e)–(h)).<sup>6</sup>

Only if a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, do we then look to whether the claim:

(3) adds a specific limitation beyond the judicial exception that are 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.<sup>7</sup>

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<sup>5</sup> Referred to as “*Revised Step 2A, Prong 1*” in the Guidance (hereinafter “*Step 2A(i)*”).

<sup>6</sup> Referred to as “*Revised Step 2A, Prong 2*” in the Guidance (hereinafter “*Step 2A(ii)*”).

<sup>7</sup> Items (3) and (4) continue to be collectively referred to as “*Step 2B*” of the Supreme Court’s two-step framework, described in *Mayo* and *Alice*.

*See* Guidance.

*Step 2A(i) – Abstract Idea*

Informed by our judicial precedent, the recent Guidance extracts and synthesizes key concepts identified by the courts as abstract ideas to explain that the abstract idea exception includes the following groupings of subject matter, when recited as such in a claim limitation:

(a) Mathematical concepts—mathematical relationships, mathematical formulas or equations, mathematical calculations;

(b) Certain methods of organizing human activity — fundamental economic principles or practices (including hedging, insurance, mitigating risk); commercial or legal interactions (including agreements in the form of contracts; legal obligations; advertising, marketing or sales activities or behaviors; business relations); managing personal behavior or relationships or interactions between people (including social activities, teaching, and following rules or instructions); and

(c) Mental processes—concepts performed in the human mind (including an observation, evaluation, judgment, opinion).

Under the Guidance, if the claim does not recite a judicial exception (a law of nature, natural phenomenon, or subject matter within the enumerated groupings of abstract ideas above), then the claim is patent-eligible at *Step 2A(i)*. This determination concludes the eligibility analysis, except in situations identified in the Guidance.<sup>8</sup>

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<sup>8</sup> In the rare circumstance in which an examiner believes a claim limitation that does not fall within the enumerated groupings of abstract ideas should nonetheless be treated as reciting an abstract idea, the procedure described in of the Guidance for analyzing the claim should be followed. *See* Guidance, Section III.C.

However, if the claim recites a judicial exception (i.e., an abstract idea enumerated above, a law of nature, or a natural phenomenon), the claim requires further analysis for a practical application of the judicial exception in *Step 2A(ii)*.

*Step 2A(ii) – Practical Application*

If a claim recites a judicial exception in *Step 2A(i)*, we determine whether the recited judicial exception is integrated into a practical application of that exception in *Step 2A(ii)* by: (a) identifying whether there are any additional elements recited in the claim beyond the judicial exception(s); and (b) evaluating those additional elements individually and in combination to determine whether they integrate the exception into a practical application.

The seven identified “practical application” sections of the MPEP,<sup>9</sup> cited in the Guidance under *Step 2A(ii)*, are:

- (1) MPEP § 2106.05(a) Improvements to the Functioning of a Computer or To Any Other Technology or Technical Field
- (2) MPEP § 2106.05(b) Particular Machine
- (3) MPEP § 2106.05(c) Particular Transformation
- (4) MPEP § 2106.05(e) Other Meaningful Limitations
- (5) MPEP § 2106.05(f) Mere Instructions To Apply An Exception
- (6) MPEP § 2106.05(g) Insignificant Extra-Solution Activity

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<sup>9</sup> See MPEP § 2106.05(a)–(c), (e)–(h). Citations to the MPEP herein refer to revision [R-08.2017].

(7) MPEP § 2106.05(h) Field of Use and Technological Environment

If the recited judicial exception is integrated into a practical application as determined under one or more of the MPEP sections cited above, then the claim is not directed to the judicial exception, and the patent-eligibility inquiry ends. If not, then analysis proceeds to *Step 2B*.

*Step 2B – “Inventive Concept” or “Significantly More”*

Under our precedent, it is possible that a claim that does not “integrate” a recited judicial exception under *Step 2A(ii)* is nonetheless patent eligible. For example, the claim may recite additional elements that render the claim patent eligible even though a judicial exception is recited in a separate claim element.<sup>10</sup> The Federal Circuit has held claims eligible at the second step of the *Alice/Mayo* test (USPTO *Step 2B*) because the additional elements recited in the claims provided “significantly more” than the recited judicial exception (e.g., because the additional elements were unconventional in combination).<sup>11</sup> Therefore, if a claim has been determined to be directed to a judicial exception under *Revised Step 2A*, we must evaluate the additional elements individually and in combination under *Step 2B* to determine whether they provide an inventive concept (i.e.,

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<sup>10</sup> See, e.g., *Diehr*, 450 U.S. at 187.

<sup>11</sup> See, e.g., *Amdocs (Israel), Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1300, 1304 (Fed. Cir. 2016); *BASCOM Global Internet Services, Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1349–52 (Fed. Cir. 2016); *DDR Holdings v. Hotels.com*, 773 F.3d 1245, 1257–59 (Fed. Cir. 2014).

whether the additional elements amount to significantly more than the exception itself).<sup>12</sup>

Under the Guidance, we must consider in *Step 2B* whether an additional element or combination of elements: (1) “Adds a specific limitation or combination of limitations that are not well-understood, routine, conventional activity in the field, which is indicative that an inventive concept may be present;” or (2) “simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception, which is indicative that an inventive concept may not be present.” *See* Guidance, III.B.<sup>13</sup>

In the *Step 2B* analysis, an additional element (or combination of elements) is not well-understood, routine or conventional unless the examiner finds an evidentiary basis, and expressly supports a rejection in writing with, one or more of the following:

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<sup>12</sup> We note the patent eligibility inquiry may contain underlying issues of fact. *Mortg. Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d 1314, 1325 (Fed. Cir. 2016). In particular, “[t]he question of whether a claim element or combination of elements is well-understood, routine and conventional to a skilled artisan in the relevant field is a question of fact.” *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1368 (Fed. Cir. 2018).

<sup>13</sup> In accordance with existing *Step 2B* guidance, an Examiner’s conclusion that an additional element (or combination of elements) is well understood, routine, conventional activity must be supported with a factual determination. For more information concerning evaluation of well-understood, routine, conventional activity, *see* MPEP § 2106.05(d), as modified by the USPTO *Berkheimer* Memorandum (USPTO Commissioner for Patents Memorandum dated Apr. 9, 2018, “Changes in Examination Procedure Pertaining to Subject Matter Eligibility, Recent Subject Matter Eligibility Decision (*Berkheimer v. HP, Inc.*)” (hereinafter “*Berkheimer Memo*”).

1. A citation to an express statement in the specification or to a statement made by an applicant during prosecution that demonstrates the well-understood, routine, conventional nature of the additional element(s).
2. A citation to one or more of the court decisions discussed in MPEP § 2106.05(d)(II) as noting the well-understood, routine, conventional nature of the additional element(s).
3. A citation to a publication that demonstrates the well-understood, routine, conventional nature of the additional element(s).
4. A statement that the examiner is taking official notice of the well-understood, routine, conventional nature of the additional element(s).

*See Berkheimer Memo.*

The analysis in *Step 2B* further determines whether an additional element or combination of elements:

- (a) Adds a specific limitation or combination of limitations that are not well-understood, routine, conventional activity in the field, which is indicative that an inventive concept may be present; or
- (b) simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception, which is indicative that an inventive concept may not be present.

Guidance, *and see Berkheimer Memo.*

If the Examiner or the Board determines under *Step 2B* that the element (or combination of elements) amounts to significantly more than the exception itself, the claim is eligible, thereby concluding the eligibility analysis.

However, if a determination is made that the element and combination of elements does not amount to significantly more than the exception itself, the claim is ineligible under *Step 2B*, and the claim should be rejected for lack of subject matter eligibility.

## ANALYSIS

### *Step 1*

Claim 1, as a method claim, recites one of the enumerated categories of eligible subject matter in 35 U.S.C. § 101. Therefore, the issue before us is whether it is directed to a judicial exception without significantly more.

#### *Step 2A(i): Does the Claim Recite a Judicial Exception?*

The Examiner generally determined “the claims describe collecting and analyzing data.” Final Act. 4.

In particular, recording and defining data as in the first two limitations represent steps for collecting and labeling/ categorizing intangible data. The steps of performing a residual analysis and generating a predictive model each relate to performing a mathematical analysis or an algorithm on the data. The steps of assigning the consumer to a sample group based on the result of the residual analysis and applying the predictive model relate to using categories to store information. Finally, outputting a list of consumers outside the sample group is an insignificant post-solution activity that does not add significantly more than the idea itself.

*Id.* The Examiner further concludes Appellants’ claimed invention is a business improvement rather than a technical improvement. Ans. 3.

From this we see that claim 1 does not recite the judicial exceptions of either natural phenomena or laws of nature. However, in view of the revised

Guidance, we reevaluate whether an abstract idea is recited by claim 1. We conduct our review for abstractness de novo.

We agree with the Examiner that claim 1 recites a number of abstract ideas, including mathematical concepts and mental processes that can be performed in the human mind and/or by pen and paper. Final Act. 4–5.

Specifically, we conclude at least the following limitations of claim 1 may be considered as directed to abstract ideas under the Guidance:

(a) “defining, by the payment processor computer device, a life event by assigning spending variables to the life event, wherein a spending variable represents a quantity of consumer spending associated with one or more of (i) a particular merchant and (ii) a particular type of good or service;”

(b) “determining that a residual value of a determined variance between the anticipated spend and the actual spend for each consumer exceeds a predefined threshold;”

(c) “assigning, by the payment processor computer device, the consumer to a sample group, wherein the sample group represents consumers that are experiencing the life event.”

Limitations (a) through (c), as drafted, are processes that under their broadest reasonable interpretation, cover performance of the limitations in the mind, but for the recitation of generic computer components.

(d) “generating an anticipated spend for each spending variable assigned to the life event by extrapolating a historical actual spend based on the historical purchases, wherein the anticipated spend represents anticipated spending in each spending variable assigned to the life event;”

(e) “calculating a residual value of a determined variance between the anticipated spend and an actual spend for each consumer by calculating a quotient of (i) the difference between

the anticipated spend and the actual spend and (ii) the anticipated spend;”

(f) “generating, by the payment processor computer device, a predictive model based on historical purchases made by consumers within the sample group.”

Even considering that the precise relationships or formulae are not explicitly recited in limitations (d) and (f), and notwithstanding the recitation of generic computer components, under the broadest reasonable interpretation, these limitations are directed to mathematical concepts such as mathematical relationships, mathematical formulae or equations, and mathematical calculations. Similarly, limitation (e) is likewise directed to mathematical formulae, i.e., a “quotient” (division) and a “difference” (subtraction).

This type of activity, i.e., using mathematical relationships and mental processes to compare information and rules to make a determination, includes longstanding conduct that existed well before the advent of computers and the Internet, and could be carried out by a human with pen and paper. *See CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1375 (Fed. Cir. 2011) (“That purely mental processes can be unpatentable, even when performed by a computer, was precisely the holding of the Supreme Court in *Gottschalk v. Benson.*”).<sup>14</sup> Further, merely combining several abstract ideas does not render the combination any less abstract. *RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d 1322, 1327 (Fed. Cir. 2017) (“Adding one abstract idea (math) to another abstract idea . . . does not

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<sup>14</sup> *CyberSource* further guides that “a method that can be performed by human thought alone is merely an abstract idea and is not patent-eligible under § 101.” *CyberSource*, 654 F.3d at 1373.

render the claim non-abstract.”); *see also FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1093–94 (Fed. Cir. 2016) (determining the pending claims were directed to a combination of abstract ideas).

Our reviewing court has previously held other patent claims ineligible for reciting similar abstract concepts. For example, while the Supreme Court has enhanced the § 101 analysis since *CyberSource* in cases like *Mayo* and *Alice*, the Federal Circuit continues to “treat[ ] analyzing information by steps people go through in their minds, . . . without more, as essentially mental processes within the abstract-idea category.” *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1146–47 (Fed. Cir. 2016) (quoting *Elec. Power Grp. v. Alstom S.A.*, 830 F.3d 1350, 1354 (Fed. Cir. 2016)).

In addition, our reviewing court has concluded that abstract ideas include the concepts of collecting data, recognizing certain data within the collected data set, and storing the data in memory. *Content Extraction & Transmission LLC v. Wells Fargo Bank, N.A.*, 776 F.3d 1343, 1347 (Fed. Cir. 2014). Additionally, the collection of information and analysis of information (e.g., recognizing certain data within the dataset) are also abstract ideas. *Elec. Power*, 830 F.3d at 1353–54 (collecting information and “analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, [are] essentially mental processes within the abstract-idea category”). Similarly, “collecting, displaying, and manipulating data” is an abstract idea. *Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1340 (Fed. Cir. 2017). Also, collecting and comparing known information has been determined to be an abstract idea. *Classen Immunotherapies, Inc. v. Biogen IDEC*, 659 F.3d 1057, 1067 (Fed. Cir. 2011) (“Claim 1 of the ’283 patent states the idea of

collecting and comparing known information”). Also, more recently, our reviewing court has also concluded that acts of parsing, comparing, storing, and editing data are abstract ideas. *Berkheimer*, 881 F.3d at 1366.<sup>15</sup>

Moreover, the Specification provides evidence as to what the claimed invention is directed. In this case, the Specification discloses that the invention “relates generally to predicting consumer behavior from transaction card purchases and, more particularly, to network-based methods and systems for predicting whether a consumer will experience a life event, and predicting future purchases of the consumer based on the predicted life event.” Spec. ¶ 1.<sup>16</sup>

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<sup>15</sup> Our reviewing court recognizes that “[a]n abstract idea can generally be described at different levels of abstraction.” *Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1240 (Fed. Cir. 2016). That need not and, in this case does not, “impact the patentability analysis.” *Id.* at 1241.

<sup>16</sup> The Abstract describes:

A computer-based method for predicting consumer behavior is provided. The method is performed using a computer system coupled to a database. The method includes recording consumer data in the database for each consumer of a global population of consumers including historical purchases made by each consumer using a transaction card, defining a life event by assigning spending variables to the life event, determining a sample group of consumers that are experiencing the life event based on the consumer data stored within the database with respect to the spending variables, generating a predictive model based on historical purchases made by consumers within the sample group, and applying the predictive model to predict each consumer within the global population that will experience the life event. The predictive model is applied using the computer system. A list of consumers predicted to experience the life event within a predetermined time period is output.

Thus, under *Step 2A(i)*, we conclude claim 1 recites a combination of abstract ideas including reliance upon mathematical relationships and mental processes, as discussed above.

*Step 2A(ii): Judicial Exception Integrated into a Practical Application?*

If the claims are directed to a patent-ineligible concept, as we conclude above, we proceed to the “practical application” *Step 2A(ii)* in which we determine whether the recited judicial exception is integrated into a practical application of that exception by: (a) identifying whether there are any additional elements recited in the claim beyond the judicial exception(s); and (b) evaluating those additional elements individually and in combination to determine whether they integrate the exception into a practical application.

In addition to the abstract limitations (a) through (f) identified in *Step 2A(i)*, *supra*, claim 1 recites (1) “recording, by the payment processor computer device, electronic consumer data in the database for each consumer of a global population of consumers including historical purchases made by each consumer, including at least one electronic transaction initiated by a consumer using a transaction card at a point-of-sale (POS) device;” and (2) “outputting, by the payment processor computer device, a list of consumers outside of the sample group that are predicted to experience the life event within the predetermined time period.”

As to the specific limitations, limitation (1) recites insignificant data gathering. *See* MPEP § 2106.05(g). Data gathering, as performed by the step or function in Appellants’ claims, is a classic example of insignificant

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Spec. 41.

extra-solution activity. *See, e.g., In re Bilski*, 545 F.3d 943, 963 (Fed. Cir. 2008) (en banc), *aff'd sub nom, Bilski v. Kappas*, 561 U.S. 593 (2010).

Limitation (2) recites insignificant post-solution activity by “outputting . . . a list.” The Supreme Court guides that the “prohibition against patenting abstract ideas ‘cannot be circumvented’ [by] adding ‘insignificant postsolution activity.’” *Bilski*, 561 U.S. at 610–11 (quoting *Diehr*, 450 U.S. at 191–92).

On this record, Appellants’ claims do not operate the recited generic computer components in an unconventional manner to achieve an improvement in computer functionality. *See* MPEP § 2106.05(a).

However, Appellants argue, and we agree, “the innovation recited in Claim 1 is based on much more than the mere use of a computer — it is the specific, claimed features of the ordered combination.” App. Br. 9. Further, we find Appellants Specification supports this argument. *See* Spec. ¶ 15.<sup>17</sup>

In particular, we find that the previously-unaddressed limitation “applying, by the payment processor computer device, the predictive model to predict each consumer within the global population and outside of the sample group that will experience the life event” integrates the previously identified abstract ideas into a practical application. Even though this limitation does not improve the underlying *computer system* functionality,

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<sup>17</sup> “The embodiments described herein facilitate achieving higher lifts as compared to other known targeting methods and system. For example, the embodiments described herein achieve lifts of approximately 2.4 times to approximately 4.3 times, as compared to the lifts of 1.3 times to 1.6 times for known targeting methods for a large population. In other words, the methods and systems described herein provide better accuracy in predicting future purchases of a consumer.” Spec. ¶ 15.

e.g., improved processor or memory performance, in agreement with Appellants, it does improve the underlying consumer behavior prediction technology. *See* MPEP § 2106.05(a) (“Improvements to the Functioning of a Computer or To Any Other Technology or Technical Field”) (emphasis added).

Accordingly, we conclude the recited judicial exception is integrated into a practical application as determined under one or more of the MPEP sections cited above, such that the claim is not directed to the judicial exception, and is thus patent-eligible under our governing case law and the Guidance, thus ending the patent-eligibility inquiry.<sup>18</sup>

Therefore, we do not sustain the § 101 rejection of claim 1, and grouped claims 2–22, which stand therewith. *See* Claim Grouping, *supra*.

#### CONCLUSION

We do not sustain the rejection of claims 1–22 under 35 U.S.C. § 101.

#### DECISION

We reverse the Examiner’s decision rejecting claims 1–22.

#### REVERSED

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<sup>18</sup> Because we agree with at least one of the dispositive arguments advanced by Appellant, we need not reach the merits of Appellant’s other arguments. *See Beloit Corp. v. Valmet Oy*, 742 F.2d 1421, 1423 (Fed. Cir. 1984) (finding an administrative agency is at liberty to reach a decision based on “a single dispositive issue”).