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Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.
13/950,911 07/25/2013 Debashis Ghosh 21652-00284 7559

75564 7590 03/25/2019
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EXAMINER

TIBLIJAS, SHACOLE C

ART UNIT PAPER NUMBER

3695

NOTIFICATION DATE DELIVERY MODE

03/25/2019

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte DEBASHIS GHOSH and INA GOLDBERG

Appeal 2018-001799
Application 13/950,911
Technology Center 3600

Before JOHN A. JEFFERY, JOHN P. PINKERTON, and BETH Z. SHAW,
Administrative Patent Judges.

JEFFERY, *Administrative Patent Judge.*

DECISION ON APPEAL

Appellants¹ appeal under 35 U.S.C. § 134(a) from the Examiner's decision to reject claims 1–24. We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

STATEMENT OF THE CASE

Appellants' invention analyzes anonymous payment card data to associate ownership of multiple payment cards with a single owner. To this end, a table is used to compare financial transaction times associated with different anonymous payment card accounts, and determine their common

¹ Appellants identify the real party in interest as MasterCard International Incorporated. App. Br. 1.

ownership based on transactions made at different times. *See generally* Abstract; Spec. ¶¶ 1, 34–37. Claim 1 is illustrative:

1. A computer-based method for associating ownership of anonymous payment cards thereby linking ownership of multiple anonymous payment cards to one another, said method using a computer device including a processor in communication with a transaction database, said method comprising:

receiving, by the processor, financial transaction data of a plurality of payment card accounts from the transaction database wherein the financial transaction data includes anonymized data for identifying each payment card account;

identifying, by the processor, a target account for a payment card account from the transaction database, the target account having an anonymized target account number;

designating at least a portion of a remainder of the plurality of payment card accounts as candidate accounts each associated with a respective anonymized candidate account number;

generating a table data structure of transactions per segment of time, the table populated with transaction data from the target account and the plurality of candidate accounts;

identifying, by the processor, a set of transaction times associated with the anonymized target account number by performing a lookup within the generated table data structure; and

comparing, by the processor, a target set of transaction times associated with the target account to a candidate set of transaction times associated with each candidate account of the plurality of candidate accounts from the transaction database, wherein the comparing to each candidate account comprises:

identifying a first candidate set of transaction times associated with a first candidate account of the plurality of candidate accounts;

comparing the target set of transaction times to the first candidate set of transaction times; and

identifying the first candidate account as a match candidate if the target set of transaction times and the first candidate set of transaction times do not include overlapping transaction times; and

linking, by the processor, the target account and each matched candidate account having anonymized account numbers in the transaction database such that a common ownership of the target account and the matched candidate accounts is established.

THE REJECTION

The Examiner rejected claims 1–24 under 35 U.S.C. § 101 as directed to ineligible subject matter. Final Act. 2–6.²

FINDINGS, CONCLUSIONS, AND CONTENTIONS

The Examiner determines that the claims are directed to an abstract idea, namely analyzing anonymous payment card data with common ownership, which is said to organize human activity. Final Act. 3–4. The Examiner adds that the claims do not include elements that add significantly more than the abstract idea, but merely recite conventional generic computer functions. *Id.* 3–6. Based on these determinations, the Examiner concludes that the claims are ineligible under § 101. *Id.*

Appellants argue that the claimed invention is not directed to an abstract idea. App. Br. 5–8; Reply Br. 2–4. According to Appellants, the Examiner not only fails to discuss any claim limitations beyond those in the

² Throughout this opinion, we refer to (1) the Final Rejection mailed November 7, 2016 (“Final Act.”); (2) the Appeal Brief filed June 1, 2017 (“App. Br.”); (3) the Examiner’s Answer mailed October 4, 2017 (“Ans.”); and (4) the Reply Brief filed December 4, 2017 (“Reply Br.”).

preamble, but the claimed invention is said to yield a technological improvement by de-anonymizing anonymous data to link anonymous payment cards—a capability that is said to be realized by, among other things, a self-referential table. *See* App. Br. 5–8; Reply Br. 5–6. Appellants add that the claimed invention also provides an inventive concept in light of this technological solution. *See* App. Br. 8–12; Reply Br. 4–7.

ISSUE

Under § 101, has the Examiner erred in rejecting claims 1–24 as directed to ineligible subject matter? This issue turns on whether the claims are directed to an abstract idea and, if so, whether recited elements—considered individually and as an ordered combination—transform the nature of the claims into a patent-eligible application of that abstract idea.

PRINCIPLES OF LAW

An invention is patent-eligible if it claims a “new and useful process, machine, manufacture, or composition of matter.” 35 U.S.C. § 101. However, the Supreme Court has long interpreted 35 U.S.C. § 101 to include implicit exceptions: “[I]aws of nature, natural phenomena, and abstract ideas” are not patentable. *See, e.g., Alice Corp. Pty. Ltd. 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.”).

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, 192 (1981)); “tanning, dyeing, making water-proof cloth, vulcanizing India rubber, smelting ores” (*id.* at 184 n.7 (quoting *Corning v. Burden*, 56 U.S. (15 How.) 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 that “[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.”). That said, 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.”).

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 and citation 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.*

In January 2019, the USPTO published revised guidance on the application of § 101. *See 2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50 (Jan. 7, 2019) (“Guidance”). 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); and
- (2) additional elements that integrate the judicial exception into a practical application (*see* MANUAL OF PATENT EXAMINING PROCEDURE (MPEP) §§ 2106.05(a)–(c), (e)–(h) (9th ed. Rev. 08.2017, Jan. 2018)).

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 is not well-understood, routine, and conventional in the field (*see* MPEP § 2106.05(d)); or

(4) simply appends well-understood, routine, and conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.

See Guidance, 84 Fed. Reg. at 56.

ANALYSIS

Claims 1–24: Alice/Mayo Step One

Independent claim 1 recites a computer-based method for associating ownership of anonymous payment cards that links ownership of multiple anonymous payment cards to one another. To this end, a processor receives financial transaction data of plural payment card accounts from a transaction database, where the transaction data includes anonymized data for identifying each payment card account. The processor also identifies a target account for a payment card account from the database, where the target account has an anonymized target account number.

Claim 1 also recites that at least a portion of a remainder of the payment card accounts is designated as candidate accounts each associated with a respective anonymized candidate account number. The claim further recites generating a table data structure of transactions per segment of time, where the table is populated with transaction data from the target account and candidate accounts. Unlike other steps, the claim does not specify what

exactly performs these candidate account designation and table data structure generating steps, let alone that a processor is used to achieve those ends.

Claim 1, however, does specify that the processor also (1) identifies a set of transaction times associated with the anonymized target account number by performing a lookup within the generated table data structure, and (2) compares a target set of transaction times associated with the target account to a candidate set of transaction times associated with each candidate account.

The claim further recites that the comparing comprises (1) identifying a first candidate set of transaction times associated with a first candidate account; (2) comparing the target set of transaction times to the first candidate set of transaction times; and (3) identifying the first candidate account as a match candidate if the target set of transaction times and the first candidate set of transaction times do not include overlapping transaction times.

Lastly, the claim recites that the processor links the target account and the matched candidate account having anonymized account numbers in the transaction database such that a common ownership of the target account and matched candidate accounts is established.

As the Specification explains, the invention analyzes anonymous payment card data to associate ownership of multiple payment cards with a single owner. *See Spec.* ¶ 1. To this end, the invention filters encrypted payment card transaction data stored in transaction database 102. As shown in Figure 1, the database includes target account 106 with an encrypted Personal Account Number (PAN) of “AA.” The database is filtered to

restrict the target transaction set to only those transactions occurring during a particular time period which, in the example in Figure 1, is between 8:01 and 8:15 AM on June 23, 2012. Spec. ¶ 29.

As shown in Figure 2, the database is also filtered to produce a candidate set of transactions, namely those that are potential “candidates” to be associated with the consumer and the target account. Spec. ¶ 30. As with the filter in Figure 1, the filter in Figure 2 restricts transactions between 8:01 and 8:15 AM on June 23, 2012, but also includes transactions initiated in zip code “63101.” *Id.* ¶ 30. As shown in Figure 2, the filter yields four candidate accounts that satisfy these criteria, namely the accounts whose PANs are “AB,” “AC,” “AD,” and “AE,” respectively. *See id.* ¶ 33.

As shown below, Figure 3 tabulates the results from both filtering operations in Figures 1 and 2, where (1) each column represents a particular time segment (8:01, 8:02, etc.) within the filtered time interval from 8:01 to 8:15 AM; (2) the rows correspond to the target and candidate account (identified by their respective PANs (“AA,” “AB,” etc.)); and (3) an “X” in a cell indicates a transaction occurred during that particular time segment with respect to a given account. *See Spec.* ¶ 34.

	8:01	8:02	8:03	8:04	8:05	8:06	8:07	8:08	8:09	8:10	8:11	8:12	8:13	8:14	8:15
AA	x					x									x
AB			x					x		x					
AC	x	x	x					x			x			x	
AD		x	x	x				x	x	x		x		x	x
AE	x		x				x						x	x	

Table showing target and candidate account transactions from 8:01 to 8:15 AM in Appellants’ Figure 3

As shown above, the table enables comparing the transactions of the target account “AA” with those of the candidate accounts “AB” to “AE” during each one-minute segment from 8:01 to 8:15 AM. *See Spec. ¶¶ 35–38.* If a candidate account has no overlapping transactions with the target account (i.e., no transactions occur in the same time segment), the candidate account is identified as a match candidate with respect to the target account. *Id. ¶ 35.*

In Figure 3, for example, no candidate account “AB” transactions occur during the same time segments as the transactions for the “AA” target account. *Spec. ¶ 36.* Therefore, “AB” is identified as a potential match candidate to the “AA” target account. *Id.* But because the other candidate accounts “AC” to “AE” have one or more overlapping transactions conflicting with target account “AA,” these candidate accounts are not likely potential match candidates. *Id. ¶ 37.*

Turning to claim 1, we first note that the claim recites a method and, therefore, falls within the process category of § 101. But despite falling within this statutory category, we must still determine whether the claim is directed to a judicial exception, namely an abstract idea. *See Alice*, 573 U.S. at 217. To this end, we must determine whether (1) the claim recites a judicial exception, and (2) fails to integrate the exception into a practical application. *See Guidance*, 84 Fed. Reg. at 52–55. If both elements are satisfied, the claim is directed to a judicial exception under the first step of the *Alice/Mayo* test. *See id.*

In the rejection, the Examiner determines that claim 1 is directed to an abstract idea, namely analyzing anonymous payment card data, which is said to organize human activity. *See Final Act.* 3–4. To determine whether a claim recites an abstract idea, we (1) identify the claim’s specific limitations that recite an abstract idea, and (2) determine whether the identified limitations fall within certain subject matter groupings, namely (a)

mathematical concepts³; (b) certain methods of organizing human activity⁴; or (c) mental processes.⁵

Here, apart from the recited (1) computer device; (2) processor; (3) transaction database; and (4) data structure, every limitation of claim 1 recites an abstract idea, namely organizing human activity, by using a table to compare financial transaction times associated with different anonymous payment card accounts, and determine their common ownership based on transactions made at different times. This comparison-based determination to establish common ownership—a commercial activity—fits squarely within the human activity organization category of the agency’s guidelines. *See* Guidance, 84 Fed. Reg. at 52 (listing exemplary methods of organizing human activity, including fundamental economic practices and commercial interactions).

In addition, apart from their performance by a processor, every recited step can be performed entirely mentally by merely *thinking* about whether transactions associated with target and candidate anonymous payment card

³ Mathematical concepts include mathematical relationships, mathematical formulas or equations, and mathematical calculations. *See* Guidance, 84 Fed. Reg. at 52.

⁴ Certain methods of organizing human activity include 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). *See* Guidance, 84 Fed. Reg. at 52.

⁵ Mental processes are concepts performed in the human mind including an observation, evaluation, judgment, or opinion. *See* Guidance, 84 Fed. Reg. at 52.

accounts occur within the same time period and, if not, determining that the accounts are commonly owned. First, the recited steps calling for (1) “receiving . . . financial transaction data of a plurality of payment card accounts . . .”; (2) “identifying a target account . . .”; and (3) “designating at least a portion of a remainder of the accounts as candidate accounts . . .” can be performed by a human who merely (a) reads records associated with payment card accounts from a pre-existing database, and (b) designates the accounts as “target” and “candidate” based on that data. *Cf. CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1372 (Fed. Cir. 2011) (noting that limitation reciting obtaining information about transactions that have used an Internet address identified with a credit card transaction can be performed by a human who simply reads records of Internet credit card transactions from a pre-existing database).

Second, a person may (1) *generate a table of transactions per segment of time*, and (2) *populate the table with transaction data from the target and candidate accounts* as claimed either mentally or by pen and paper. *Cf. CyberSource*, 654 F.3d at 1372 (noting that a person may construct a map of credit card numbers by writing down a list of credit card transactions made from a particular IP address).

That a table is used to compare these transaction times as claimed does not change our conclusion, for such tables merely organize data in rows and columns, such that the intersection of a particular column and row identifies a corresponding cell with information pertaining to both the associated column and row, as in a spreadsheet. *See, e.g., Enfish LLC v. Microsoft Corp.*, 822 F.3d 1327, 1340 (Fed. Cir. 2016) (discussing data representing rows and columns in a table in Microsoft Excel 5.0—a version

of a well-known spreadsheet program). Such a table and its associated data can be visualized and processed mentally or with pen and paper despite Appellants' arguments to the contrary (Reply Br. 3). Leaving aside the fact that Appellants' assertion regarding the alleged impossibility of manually processing *billions* of payment card transactions (*see id.*) is unsubstantiated, the claim does not require a particular number of transactions, let alone *billions* of them. Nor does the claim specify a particular number of candidate accounts whose transaction times are compared with those of the target account to somehow preclude a mental comparison.

That is, apart from the processor and data structure, the limitations calling for (1) *generating a table populated with transaction data*; (2) *identifying a set of transaction times associated with the anonymized target account number*; (3) *comparing a target set of transaction times associated with the target account to a candidate set of transaction times associated with each candidate account, where the comparison includes identifying a first candidate set of transaction times associated with a first candidate account*; and (4) *identifying the first candidate account as a match candidate if the target set of transaction times and the first candidate set of transaction times do not include overlapping transaction times* can be performed entirely mentally or with pen and paper—both involving mere observation and logical reasoning. *Cf. CyberSource*, 654 F.3d at 1372 (noting that a recited step that utilized a map of map of credit card numbers to determine the validity of a credit card transaction could be performed entirely mentally by merely using *logical reasoning* to identify a likely instance of fraud by merely *observing* that numerous transactions using different credit cards all originated from the same IP address). Moreover, apart from the processor

and transaction database, the recited “linking the target account and each matched account . . .” could likewise be performed entirely mentally by merely associating the respective accounts mentally or with pen and paper to establish their common ownership. *Cf. id*; see also *Fort Properties, Inc. v. Am. Master Lease LLC*, 671 F.3d 1317, 1319–24 (Fed. Cir. 2012) (holding ineligible claims reciting that a master agreement provision for (1) *reaggregating* plural tenant-in-common deeds after a specified interval, and (2) *transferring ownership* of deedshares).

Therefore, in addition to organizing human activity, the recited steps, apart from their performance using a processor in communication with a transaction database, also fall within the mental processes category of the agency’s guidelines. See Guidance, 84 Fed. Reg. at 52 (listing exemplary mental processes including observations, evaluations, and judgments); see also *CyberSource*, 654 F.3d at 1372.

Although the claim recites an abstract idea based on these methods of organizing human activity and mental processes, we nevertheless must still determine whether the abstract idea is integrated into a practical application, namely whether the claim applies, relies on, or uses the abstract idea in a manner that imposes a meaningful limit on the abstract idea, such that the claim is more than a drafting effort designed to monopolize the abstract idea. See Guidance, 84 Fed. Reg. at 54–55. To this end, we (1) identify whether there are any additional recited elements beyond the abstract idea, and (2) evaluate those elements individually and collectively to determine whether they integrate the exception into a practical application. See *id.*

Here, the recited (1) “computer device”; (2) “processor”; (3) “transaction database”; and (4) “data structure” are the only recited elements

beyond the abstract idea, but those additional elements do not integrate the abstract idea into a practical application when reading claim 1 as a whole. First, we are not persuaded that the claimed invention improves the computer or its components' functionality or efficiency, or otherwise changes the way those devices function, at least in the sense contemplated by the Federal Circuit in *Enfish*, despite Appellants' arguments to the contrary (Reply Br. 5, 8). The claimed self-referential table in *Enfish* was a specific type of data structure designed to improve the way a computer stores and retrieves data in memory. *Enfish*, 822 F.3d at 1339. To the extent Appellants contend that the claimed invention uses such a data structure to improve a computer's functionality or efficiency, or otherwise change the way that device functions (*see* App. Br. 7), there is no persuasive evidence on this record to substantiate such a contention.

As the *Enfish* court emphasized, the claims were not directed to *any* form of storing *tabular* data, but were instead directed to a *self-referential* table for a computer database. *Enfish*, 822 F.3d at 1337. Notably, the court explained that the table stored information related to each column in rows of that very table, such that new columns can be added by creating new rows in the table. *Id.* at 1338. To the extent Appellants contend that the recited table is similar to the self-referential table in *Enfish* (*see* App. Br. 7), we disagree.

Unlike *Enfish*'s claimed invention, Appellants' claim 1 does not specify any particular type of table—let alone a self-referential table—but merely recites that it is a data structure populated with transaction data, and that transaction times are identified by performing a lookup within this data structure, where these times are compared with respect to the target and

candidate accounts. In short, the recited table can be nothing more than a standard table, such as that shown in Appellants' Figure 3, that merely organizes data in rows and columns, such that the intersection of a particular column and row identifies a corresponding cell with information pertaining to both the associated column and row, as in a spreadsheet. *See, e.g., Enfish*, 822 F.3d at 1340–41 (discussing data representing rows and columns in a table in Microsoft Excel 5.0—a version of a well-known spreadsheet program). *Accord* Ans. 3 (finding that the recited table can be a generic table that organizes data). That the data in a target account row, such as the first row corresponding to “AA” in the table in Appellants' Figure 3, can be *compared* to data in other rows, such as those associated with candidate accounts “AB” to “AE” in the table's last four rows, does not render the table *self-referential* in the sense contemplated by *Enfish*—a specific type of data structure that improved the way the computer stored and retrieved data in memory. *See Enfish*, 822 F.3d at 1339. To the extent Appellants contend otherwise (*see* App. Br. 7), we disagree.

That the data associated with this table pertains to anonymous accounts does not change our conclusion, for processing and using such anonymous data does render an abstract idea any less abstract. *Cf. Mortgage Grader Inc. v. First Choice Loan Services, Inc.*, 811 F.3d 1314, 1318, 1324 (Fed. Cir. 2016) (holding ineligible claims enabling borrowers to shop for loan packages anonymously using a computer). Therefore, to the extent that Appellants contend that the claimed invention somehow improves the computer or its components' functionality or efficiency, or otherwise changes the way those devices function by de-anonymizing anonymized data

to link otherwise anonymous payment cards using the recited table-based comparison (*see* Reply Br. 3, 5–7), we find such arguments unavailing.

As with the ineligible claimed invention in *BSG Tech LLC v. BuySeasons, Inc.*, 899 F.3d 1281, 1288 (Fed. Cir. 2018), these benefits are not improvements to the database’s functionality or its related table-based functionality, but rather the benefits flow from performing the abstract idea in conjunction with a well-known database and table structure. *See id.* (“While the presentation of summary comparison usage information to users improves the quality of the information added to the database, an improvement in the information stored by a database is not equivalent to an improvement in the database’s functionality.”).

To the extent that Appellants contend that the claimed invention is rooted in technology because it is ostensibly directed to a technical solution (*see* App. Br. 5–8; Reply Br. 2–4), we disagree. Even assuming, without deciding, that the claimed invention can link ownership of anonymous payment cards faster than doing so manually, any speed increase comes from the capabilities of the generic computer components—not the recited process itself. *See FairWarning IP, LLC v. Iatric Systems, Inc.*, 839 F.3d 1089, 1095 (Fed. Cir. 2016) (citing *Bancorp Services, LLC v. Sun Life Assurance Co.*, 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.”)); *see also Intellectual Ventures I LLC v. Erie Indemnity Co.*, 711 F. App’x 1012, 1017 (Fed. Cir. 2017) (unpublished) (“Though the claims purport to accelerate the process of finding errant files and to reduce error, we have held that speed and accuracy increases stemming from the ordinary

capabilities of a general-purpose computer do not materially alter the patent eligibility of the claimed subject matter.”). Like the claims in *FairWarning*, the focus of claim 1 is not on an improvement in computer processors as tools, but on certain independently abstract ideas that use generic computing components as tools. *See FairWarning*, 839 F.3d at 1095 (citations and quotation marks omitted).

Appellants’ reliance on *McRO, Inc. v. Bandai Namco Games America, Inc.*, 837 F.3d 1299 (Fed. Cir. 2016) (App. Br. 8–9) is likewise unavailing. There, the claimed process used a combined order of specific rules that rendered information in a specific format that was applied to create a sequence of synchronized, animated characters. *McRO*, 837 F.3d at 1315. Notably, the recited process *automatically animated characters* using particular information and techniques—an improvement over manual three-dimensional animation techniques that was not directed to an abstract idea. *Id.* at 1316.

But unlike the claimed invention in *McRO* that improved how the physical display operated to produce better quality images, the claimed invention here merely uses generic computing components to compare financial transaction times associated with different anonymous payment card accounts, and determine their common ownership based on transactions made at different times. This generic computer implementation is not only directed to fundamental human activity organization and mental processes, but also does not improve a display mechanism as was the case in *McRO*. *See SAP Am. v. InvestPic, LLC*, 898 F.3d 1161, 1167 (Fed. Cir. 2018) (distinguishing *McRO*).

Therefore, we determine that the claim does not recite additional elements improving (1) the computer itself, or (2) another technology or technical field. *See* Guidance, 84 Fed. Reg. at 55 (citing MPEP § 2106.05(a)). Rather, the above-noted additional elements merely (1) apply the abstract idea on a computer; (2) include instructions to implement the abstract idea on a computer; or (3) use the computer as a tool to perform the abstract idea. *See* Guidance, 84 Fed. Reg. at 55 (citing MPEP § 2106.05(f)).

We add that the step calling for “receiving financial transaction data of a plurality of payment card accounts . . .” in the claim’s first clause not only uses generic computing components to perform the abstract idea as noted above, but the data receiving function is also insignificant extra-solution activity that merely gathers data and, therefore, does not integrate the exception into a practical application for that additional reason. *See In re Bilski*, 545 F.3d 943, 963 (Fed. Cir. 2008) (en banc), *aff’d on other grounds*, 561 U.S. 593 (2010) (characterizing data gathering steps as insignificant extra-solution activity); *see also CyberSource*, 654 F.3d at 1371–72 (noting that even if some physical steps are required to obtain information from a database (e.g., entering a query via a keyboard, clicking a mouse), such data-gathering steps cannot alone confer patentability). *Accord* Guidance, 84 Fed. Reg. at 55 (citing MPEP § 2106.05(g)).

In conclusion, although the recited functions may be beneficial by comparing transaction times associated with anonymous target and candidate payment card accounts to link their ownership, a claim for a useful or beneficial abstract idea is still an abstract idea. *See Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379–80 (Fed. Cir. 2015).

We, therefore, agree with the Examiner that claim 1 is directed to an abstract idea.

Claims 1–24: Alice/Mayo Step Two

Turning to *Alice/Mayo* step two, claim 1’s additional recited elements, namely the recited (1) “computer device”; (2) “processor”; (3) “transaction database”; and (4) “data structure”—considered individually and as an ordered combination—do not provide an inventive concept such that these additional elements amount to significantly more than the abstract idea. *See Alice*, 573 U.S. at 221; *see also* Guidance, 84 Fed. Reg. at 56. As noted above, the claimed invention merely uses generic computing components to implement the recited abstract idea.

To the extent Appellants contend that the recited limitations, including the particular recited steps that use a table to compare financial transaction times associated with different anonymous payment card accounts, and determine their common ownership based on transactions made at different times, add significantly more to the abstract idea to provide an inventive concept under *Alice/Mayo* step two (*see* App. Br. 8–14; Reply Br. 4–7), these limitations are not *additional* elements *beyond* the abstract idea, but rather are directed to the abstract idea as noted previously. *See* Guidance, 84 Fed. Reg. at 56 (instructing that *additional* recited element(s) should be evaluated in *Alice/Mayo* step two to determine whether they (1) *add* specific limitation(s) that are not well-understood, routine, and conventional in the field, or (2) simply *append* well-understood, routine, and conventional activities previously known to the industry (citing MPEP § 2106.05(d)).

Rather, the recited (1) “computer device”; (2) “processor”; (3) “transaction database”; and (4) “data structure” are the additional recited elements whose generic computing functionality is well-understood, routine, and conventional. *Accord* Final Act. 3, 5 (finding that the claims’ additional recited *computer*-based elements provide conventional *computer* functionality that do not add meaningful limits to practicing the abstract idea). Appellants’ arguments in this regard (*see* App. Br. 8–14; Reply Br. 5–7) are, therefore, unpersuasive.

Appellants’ reliance on *BASCOM Global Internet Services, Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016) (App. Br. 8–10; Reply Br. 6) is unavailing. There, the court held eligible claims directed to a technology-based solution to filter Internet content that overcame existing problems with other Internet filtering systems by making a known filtering solution—namely a “one-size-fits-all” filter at an Internet Service Provider (ISP)—more dynamic and efficient via individualized filtering at the ISP. *BASCOM*, 827 F.3d at 1351. Notably, this customizable filtering solution improved the computer system’s performance and, therefore, was patent-eligible. *See id.*

But unlike the filtering system improvements in *BASCOM* that added significantly more to the abstract idea in that case, the claimed invention here uses generic computing components to implement an abstract idea as noted previously.

Despite Appellants’ arguments to the contrary (App. Br. 12), the fact that the Examiner did not reject the claims as obvious over prior art is not dispositive to patent eligibility—a separate statutory inquiry. *See Return Mail, Inc. v. United States Postal Service*, 868 F.3d 1350, 1370 (Fed. Cir.

2017). Although the second step in the *Alice* test is a search for an “inventive concept,” the analysis is not directed to novelty or nonobviousness, but rather searches for elements sufficient to ensure that the claimed invention is directed to more than a patent ineligible concept, such as an abstract idea. *See Alice*, 134 S. Ct. at 2355. “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); *see also Diamond v. Diehr*, 450 U.S. 175, 188–89 (1981) (“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.”); *Affinity Labs of Texas, LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1263 n.3 (Fed. Cir. 2016) (noting that an eligibility finding does not turn on the novelty of using a user-downloadable application for the particular purpose recited in the claims).

In conclusion, we determine that the additional recited elements—considered individually and as an ordered combination—do not add significantly more than the abstract idea to provide an inventive concept under *Alice/Mayo* step two. *See Alice*, 573 U.S. at 221; *see also Guidance*, 84 Fed. Reg. at 56.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 1, and claims 2–24 not argued separately with particularity.

CONCLUSION

The Examiner did not err in rejecting claims 1–24 under § 101.

Appeal 2018-001799
Application 13/950,911

DECISION

We affirm the Examiner's decision to reject claims 1–24.

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