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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* TARA CHAND SINGHAL

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Appeal 2019-006579  
Application 14/176,258  
Technology Center 3600

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Before MELISSA A. HAAPALA, MICHAEL M. BARRY, and  
DAVID J. CUTITTA II, *Administrative Patent Judges*.

CUTITTA, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant<sup>1</sup> appeals from the Examiner's decision to reject claims 1–20, which are all the claims pending in this application. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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<sup>1</sup> We use the word Appellant to refer to “applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as the applicant/inventor Tara Chand Singhal. Appeal Br. 4.

## CLAIMED SUBJECT MATTER

### *Invention*

Appellant's claimed subject matter relates generally to "facilitating payment transactions to merchants using existing bankcards and bank accounts of a customer." Spec. 1.<sup>2</sup> The invention "stores private data of the customer that is not directly recognizable and traceable to the customer" thereby providing "a level of security to the customer because the payment card does not identify the customer. Further, the card number and/or the expiration date of the payment card is not disclosed to the merchant." *Id.* at 3.

### *Exemplary Claim*

Claims 1 and 11 are independent. Independent claim 11 is exemplary of the claims on appeal and is reproduced below:

11. A method for a system of security for a payment card system that facilitates, bankcard payment transactions to merchants, the system of security comprising the steps of:

a. providing by the system of security a database server that stores pre-existing bankcard data of customers from bankcards issued from card-issuing banks with at least one or more pre-stored bankcard data of the customer and wherein referencing the customer bankcard data in the database server by a unique customer identifier, wherein not identifying by the unique customer identifier the customer and the card-issuing bank;

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<sup>2</sup> We refer to: (1) the originally filed Specification filed February 10, 2014 ("Spec."); (2) the Final Office Action mailed October 5, 2017 ("Final Act."); (3) the Appeal Brief filed April 10, 2018 ("Appeal Br."); (4) the Examiner's Answer mailed July 1, 2019 ("Ans."); and (3) the Reply Brief filed September 3, 2019 ("Reply Br.").

b. providing a payment card, wherein the payment card has a substrate and wherein the payment card is not a bankcard, not having been issued by a card-issuing bank and wherein having by the payment card on the substrate an identification that references the unique customer identifier in the database server;

c. receiving by the database server over a global computer network from merchants merchant point of sale originated payment transaction request records using the payment card, wherein the payment transaction request records having the unique customer identifier from the payment card;

d. mapping by the database server the unique customer identifier in the payment transaction request record received from the merchant to the card-issuing bank's bankcard data pre-stored in the database server and substituting the unique customer identifier with the bankcard data from the card-issuing bank to create an original payment transaction request record and sending the original payment transaction request record for routing to a card-issuing bank for payment processing, thereby for merchants be able to process bankcard payment transactions without receiving bankcard data and thus avoid security risk inherent in safeguarding others' bankcard data.

Appeal Br. 47–48.

#### REJECTION

The Examiner rejects claims 1–20 under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter. Final Act. 2–5.

#### OPINION

We review the appealed rejection for error based upon the issues identified by Appellant and in light of Appellant's arguments and evidence. *Ex parte Frye*, 94 USPQ2d 1072, 1075 (BPAI 2010) (precedential). Arguments not made are waived. *See* 37 C.F.R. § 41.37(c)(1)(iv) (2017).

Appellant appeals the Examiner’s rejection of claims 1–20 as ineligible subject matter under § 101. Appeal Br. 10–29; Reply Br. 3–25. Appellant argues claims 1–20 as a group with respect to the § 101 rejection. Appeal Br. 16. We, thus, select independent claim 11 as exemplary of the group. *See* 37 C.F.R. § 41.37(c)(1)(iv).

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 held that § 101 includes implicit exceptions—laws of nature, natural phenomena, and abstract ideas—which are not patent-eligible. *See Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014). In January 2019, the Office issued the 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) (“Guidance”), which addresses the manner in which § 101 case law is to be applied by the Office. In October 2019, the Office issued an update to explain further the manner in which the Guidance should be implemented. *See* October 2019 Patent Eligibility Guidance Update, 84 Fed. Reg. 55,942 (Oct. 18, 2019); October 2019 Update: Subject Matter Eligibility, *available at* [https://www.uspto.gov/sites/default/files/documents/peg\\_oct\\_2019\\_update.pdf](https://www.uspto.gov/sites/default/files/documents/peg_oct_2019_update.pdf) (“October 2019 Update”). The Board is required to adhere to these guidance documents as a matter of Office policy. Guidance 51. The Guidance sets forth a four-part analysis for determining whether a claim is eligible subject matter under § 101; the four parts are labeled Step 1, Step 2A Prong 1, Step 2A Prong 2, and Step 2B. *Id.* 53–56.

*Guidance Step 1*

First, under “Step 1,” we consider whether the claimed subject matter falls within the four statutory categories set forth in § 101, namely “[p]rocess, machine, manufacture, or composition of matter.” Guidance 53–54; *see* 35 U.S.C. § 101. Appellant’s independent claim 1 recites a system (i.e., a “machine”) and independent claim 11 recites a method (i.e., a “process”). As such, the claims are directed to a statutory class of invention within § 101 and we proceed to the next step.

*Guidance Step 2A Prong 1 (Alice/Mayo–Step 1) (Judicial Exceptions)*

Second, under “Step 2A Prong 1,” we evaluate “whether the claim recites a judicial exception, i.e., an abstract idea, a law of nature, or a natural phenomenon.” Guidance 54; *see Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 216–17 (2014).

The Examiner determines that claim 11 recites and is directed to a judicial exception—specifically, an abstract idea. Final Act. 3–4. According to the Examiner, “claim 11 is directed to . . . facilitating bankcard payment transactions to merchants using existing bankcard and bank accounts of a customer.” *Id.* at 3. As a result, the Examiner determines that such payment transaction steps may be categorized as “business interaction/sale activity that falls within the enumerated group of ‘certain methods of organizing human activity.’” Ans. 7. The Examiner further determines claim 11 is “directed to [a] fundamental economic practice.” Final Act. 13. Both commercial interactions and fundamental economic practices are groupings of abstract ideas identified by the Guidance as “certain methods of organizing human activity.” Guidance 52.

Appellant argues that “[u]nder *Alice*, an Abstract Subject Matter (ASM) has been defined as those matters that are for ‘hedging risk’ as in *Bilski* and for ‘intermediated settlement’ as in *Alice*” and claim 11 is not abstract because it “is neither hedging risk, nor directed to intermediated settlement.” Appeal Br. 15; Reply Br. 12. Appellant further argues that “*Alice* has defined ‘fundamental economic practice’ as a practice that uses ‘building block of human ingenuity’ and a practice that has long been prevalent in our system of commerce” and “the claimed subject matter, in any shape and form, does not claim building blocks of human ingenuity, as had been identified above and are not a ‘fundamental economic practice long used in commerce.’” Appeal Br. 16; Reply Br. 13.

We are not persuaded of reversible Examiner error. Rather, we agree with the Examiner’s determination that claim 11 recites an abstract idea. Apart from additional elements discussed separately below, limitations b, c, and d of claim 11, under a broadest reasonable interpretation, recite steps focused on “commercial or business or transactional activities/interactions,” (Ans. 7) or on a fundamental economic activity, or both. According to the Guidance, certain methods of organizing human activity that qualify as abstract ideas may include claims that relate to “fundamental economic principles or practices” and “commercial or legal interactions (including agreements in the form of contracts; legal obligations; advertising, marketing or sales activities or behaviors; business relations).” Guidance 52.

Specifically, limitation b recites providing a non-bank payment card with a substrate that references a unique customer identifier in a database server and limitation c recites “receiving by the database server over a global

computer network merchant point of sale originated payment transaction request records using the payment card, wherein the payment transaction request records having the unique customer identifier from the payment card.” Apart from the additional limitations of the payment card with a substrate (the database server and the global computer network) limitations b and c recite a long-standing commercial practice and fundamental economic practice of “facilitating bankcard payment transactions to merchants using existing bankcard and bank accounts of a customer.” Final Act. 3; *cf. Inventor Holdings, LLC v. Bed Bath & Beyond, Inc.*, 876 F.3d 1372, 1378–79 (Fed. Cir. 2017) (holding that concept of “local processing of payments for remotely purchased goods” is “a fundamental economic practice” (citation omitted)). Limitations b and c also involve commercial activity and behavior, as these limitations recite providing a payment card for purchase of retail items and receiving merchant point of sale originated payment transaction request records that use the payment card. Guidance 52; October 2019 Update 5–6. Accordingly, we agree with the Examiner that limitations b and c recite certain methods of organizing human activity consistent with the Guidance.

Limitation d recites “mapping . . . the unique customer identifier in the payment transaction request record received from the merchant to the card-issuing bank’s bankcard data” and “substituting the unique customer identifier with the bankcard data from the card-issuing bank to create an original payment transaction request record and sending the original payment transaction request record for routing to a card-issuing bank for payment processing.” Apart from the additional limitations of the database server, limitation d recites a long-standing commercial practice and

fundamental economic practice of mapping a unique customer identifier to bankcard data. Final Act. 3; *cf. Dealertrack, Inc. v. Huber*, 674 F.3d 1315, 1333 (Fed. Cir. 2012) (finding abstract the concept of an automated clearing house that manages transactions between financial institutions and merchants.); *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1370 (Fed. Cir. 2011) (finding abstract a method for verifying the validity of a credit card transaction “comprising the steps of: a) obtaining information about other transactions . . . identified with the [] credit card transaction; b) constructing a map of credit card numbers based upon the other transactions and; c) utilizing the map of credit card numbers to determine if the credit card transaction is valid.” (alteration in original)).

We also determine claim 11 recites a mental process because the claim recites steps that can be practically carried out by humans without the use of a computer. *Id.* In particular, limitation a recites “providing . . . a database server that stores pre-existing bankcard data of customers from bankcards issued from card-issuing banks with at least one or more pre-stored bankcard data of the customer” and “referencing the customer bankcard data in the database server by a unique customer identifier.” Apart from the additional limitation of the database server, which is generic hardware as discussed below, a person can perform practically the functions of “providing . . . pre-existing bankcard data of customers from bankcards issued from card-issuing banks with at least one or more pre-stored bankcard data of the customer” and “referencing the customer bankcard data . . . by a unique customer identifier” by reviewing and compiling the information mentally or by using pen and paper. Guidance 52.

We further determine that the additional recited step in limitation a of storing the pre-existing bankcard data amounts to data collection that is part of the mental process. As our reviewing court has held, even if an analysis requires one to access and gather data from a database or to utilize a pen and paper in the analysis, such analysis may still be an abstract mental process. *See, e.g., CyberSource*, 654 F.3d at 1372 (“[E]ven if some physical steps are required to obtain information from the database . . . such data-gathering steps cannot alone confer patentability.”); *see also SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1165, 1167–68 (Fed. Cir. 2018) (claims reciting “[a] method for providing statistical analysis” were determined to be “directed to an abstract idea;” noting that “even if a process of collecting and analyzing information is limited to particular content or a particular source, that limitation does not make the collection and analysis other than abstract”).

In addition, we find limitation d, like the claimed steps in *Cybersource* discussed above, also recites a mental process. Similar to *Cybersource*, limitation d’s mapping of data could be performed practically in the human mind, or by a human using a pen and paper. For example, a person could perform mapping of a unique customer identifier to bankcard data and then manually substitute the unique customer identifier with the bankcard data to create an original payment transaction request record. Moreover, the limitation’s scope is not limited to any particular mapping algorithm, and no algorithms are disclosed in Appellant’s Specification. Rather, the broad scope of limitation d extends to essentially any mapping of a unique customer identifier received from a merchant to bankcard data.

We note that whether claim 11 recites plural abstract ideas versus one abstract idea does not affect the inquiry of whether the claim is directed to patent-eligible subject matter. As our reviewing court has held, 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 . . . to another abstract idea . . . does not render the claim non-abstract.”); *see also FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1093–94 (Fed. Cir. 2016) (patent-ineligible claims were directed to a combination of abstract ideas).

Thus, we agree with the Examiner that claim 11 *recites* at least one abstract idea under the Guidance, and we discern no error in that part of the Examiner’s rejection.

*Guidance Step 2A Prong 2 (Practical Application)*

Having determined that claim 11 recites an abstract idea, we proceed to “Step 2A Prong 2” of the Guidance, which requires that we evaluate whether “the claim as a whole integrates the recited judicial exception into a practical application of the exception.” Guidance 54. “A claim that integrates a judicial exception into a practical application will apply, rely on, or use the judicial exception in a manner that imposes a meaningful limit on the judicial exception, such that the claim is more than a drafting effort designed to monopolize the judicial exception.” *Id.*; *see Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 78 (2012). The Guidance specifies that this evaluation is conducted by first “[i]dentifying whether there are any additional elements recited in the claim beyond the judicial exception(s),” and then “evaluating those additional elements individually

and in combination to determine whether they integrate the exception into a practical application.” Guidance 54–55.

The Examiner finds claim 11 recites additional elements including “a database server, a merchant point of sale and a global computer network.” Ans. 7. The Examiner determines the additional elements do not integrate the exception into a practical application because the additional elements are generic computer components “recited at a high level of generality” and “[a]ccordingly, these additional elements do not integrate the abstract idea into a practical application because they do not impose any meaningful limits on practicing the abstract idea.” *Id.*

Appellant argues that claim 11 is integrated into a practical application because “the claimed subject matter is necessarily rooted in a system of security for a payment card system using computer technology and computer networks to overcome a problem[,] specifically security of payment transactions using bankcards, where bankcard data is hacked from merchant systems.” Appeal Br. 21. Appellant further argues “[t]he database servers all have CPUs, memory, display, communication interfaces, and peripherals both for input of data and output of data and a display screen and thus is a digital machine.” *Id.* at 25.

We determine that the additional limitations identified by the Examiner are insufficient to integrate the recited judicial exception into a practical application. Each of these limitations merely recites the use of generic computer technology to implement the otherwise abstract process on a computer server, to store customer bankcard data, and to transmit and receive transaction data. Appellant’s invention, fairly categorized as facilitating secure payment transactions to merchants by using a payment

card that does not identify the customer, is focused on improving merchant sales transactions. Spec. 3. Thus, the purported improvement identified by Appellant is not an improvement to technology. Instead, any improvement provided by these steps improves the abstract idea itself. It is well-established, however, that improvements in the abstract idea are insufficient to confer eligibility on an otherwise ineligible claim. *SAP Am. Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1168 (Fed. Cir. 2018); *Customedia Techs., LLC v. Dish Network Corp.*, 951 F.3d 1359, 1363–65 (Fed. Cir. 2020).

Furthermore, the Specification does not provide additional details that would distinguish the claimed additional limitations from a generic implementation. *See* Ans. 10 (“Nothing in the claims, understood in light of the specification, requires anything other than off-the-shelf, conventional computer, network, and database technology”); Final Act. 3 (citing Spec. 6). We agree with the Examiner that there is no indication that the components used in the invention are anything other than general purpose computer components. *See* Fig. 1D, Spec. 7 (“[G]ateway 23 is a computer system that routes the data for payment authorization to the bank card authorization network 21 . . . . The bankcard authorization network 21 is computer systems that process data from an existing bankcard 31.”). Thus, rather than improving computer technology, claim 11 uses the generic computer components as tools to implement the improved abstract idea. Using generic computer components as tools to perform an abstract idea does not integrate the judicial exception into a practical application or otherwise confer patent-eligibility. Guidance 55.

Additionally, none of the remaining indicia of integration identified by the Guidance are present in the claim. Guidance 55; *see* MPEP § 2106.05(a)–(c), (e)–(h). For example, the claim does not recite a particular machine and, instead, generically recites a database server, a global computer network, and other generic computer components. Ans. 7. Nor does the claim recite the “[t]ransformation and reduction of an article ‘to a different state or thing.’” *Bilski*, 561 U.S. 593, 604 (2010); MPEP § 2106.05(c). The claimed additional elements do not transform an article, i.e., some type of tangible or physical object, but instead transform an intangible concept, i.e., information, from one form to another. That is, claim 11 simply collects and manipulates data, thereby “sending the original payment transaction request record for routing to a card-issuing bank for payment processing.” *See* MPEP § 2106.05(c); *see also* *Gottschalk v. Benson*, 409 U.S. 63, 71–72 (1972) (holding that a computer based algorithm that merely transforms data from one form to another is not patent-eligible). As such, claim 11 has no other meaningful limitations (*see* MPEP § 2106.05(e)), and merely recites instructions to execute an abstract idea on generic computer hardware (*see* MPEP § 2106.05(f)).

In summary, the additional elements of claim 11 are not applied in any meaningful way beyond generally linking the use of the judicial exception to a particular technological environment, i.e., generic computer components, such that the claim as a whole is more than a drafting effort designed to monopolize the judicial exception. We, therefore, determine claim 11 is not directed to a specific asserted improvement in computer-related technology or otherwise integrated into a practical application and thus is *directed to* a judicial exception.

*Guidance Step 2B (Alice/Mayo, Step 2) (Inventive Concept)*

Finally, having concluded that claim 11 is “directed to” an abstract idea, we turn to whether the claims provide an “inventive concept,” i.e., whether the additional elements, individually and as an ordered combination, amount to “significantly more” than the exceptions themselves. Guidance 56. To determine whether the claim provides an inventive concept, the additional elements are considered—individually and in combination—to determine whether they (1) add a specific limitation beyond the judicial exception that is not “well-understood, routine, conventional” in the field or (2) simply append well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception. Guidance 56.

The Examiner determines that the “claim does not include additional elements that are sufficient to amount to significantly more than the judicial exception because the additional elements are simply a generic recitation of a processor performing its generic computer functions.” Final Act. 3 (citing Spec. 6). Additionally, the Examiner determines that “[v]iewing the limitations as an ordered combination does not add anything further than looking at the limitations individually.” Ans. 8.

Appellant argues that “assuming for the moment, for the sake of the argument, that someone, without any logic that could be fathomed by any rational person, would characterize the claims as directed to a fundamental economic practice, the claims, when elements are considered individually . . . do have ‘something significantly more.’” Appeal Br. 18; Reply Br. 15.

We agree with the Examiner, however, that the additional elements are conventional “computer components performing well-understood,

routine, conventional activities.” Final Act. 3–4. As discussed above, the only “additional elements” identified by the Examiner in claim 11 beyond the recited abstract idea are “a database server, a merchant point of sale and a global computer network,” and these elements are merely used in a conventional manner for performing each step of the claimed abstract process for facilitating bankcard payment transactions. Ans. 7. As the Examiner notes, claim 11 uses “generic computer components claimed to perform their basic functions.” *Id.* at 5. We also agree with the Examiner’s finding that, according to Appellant’s Specification, “the additional elements are simply a generic recitation of a processor performing its generic computer functions.” Final Act. 3 (citing Spec. 6). We, therefore, agree with the Examiner’s determination that the “claim does not include additional elements that are sufficient to amount to significantly more than the judicial exception.” *Id.* The recited hardware adds nothing more than well-understood, routine, conventional activities, specified at a high level of generality, to the abstract mental process. *See* MPEP § 2106.05(d)(II)(ii).

Appellant next argues that the additional limitations of claim 11, “as an ordered combination of the elements do teach ‘something significantly more.’” Appeal Br. 19.

We are not persuaded. Appellant provides no evidence from the Specification to support any assertion that the claimed combination of additional elements is non-conventional. Mere conclusory statements unsupported by factual evidence are entitled to little probative value. *In re Geisler*, 116 F.3d 1465, 1470 (Fed. Cir. 1997). Appellant’s claims and Specification describe an abstract idea implemented by generic hardware. There is no evidence in the record to support the argument that Appellant’s

claimed method is provided with any non-conventional and non-generic arrangement of known, conventional components. Likewise, there is no combination of elements recited in Appellant’s claim 11 that contain any “inventive concept” or add anything “significantly more” to transform the abstract concept into a patent-eligible application. *Alice*, 573 U.S. 208 at 221.

In summary, we conclude that claim 11 does not set forth an inventive concept because the additional elements recited in the claims do not provide significantly more than the recited judicial exception, whether the claim elements are considered individually or as an ordered combination.

Accordingly, we are not persuaded that claim 11 recites patent-eligible subject matter. Nor has Appellant proffered sufficient evidence or argument to persuade us that any of the limitations in the remaining claims provide a meaningful limitation that transform the claims into a patent-eligible application.

### CONCLUSION

In Summary:

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>References/Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
1–20	101	Patent eligibility	1–20	

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED