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Mastercard International Incorporated c/o Buckley, Maschoff & Talwalkar LLC 50 Locust Avenue New Canaan, CT 06840			MACASIANO, MARILYN G	
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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* JUSTIN ZAVIER HOWE

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Appeal 2018-006624  
Application 14/521,759  
Technology Center 3600

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Before CAROLYN D. THOMAS, MICHAEL J. STRAUSS, and  
NABEEL U. KHAN, *Administrative Patent Judges*.

THOMAS, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant<sup>1</sup> appeals from the Examiner's decision to reject claims 2–8, 10–16, and 18–20. We have jurisdiction over the appeal 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. Appellant identifies the real party in interest as MasterCard International Incorporated. Appeal Br. 2.

The present invention relates generally to receiving personal characteristics data for a population of holders of payment card accounts.

*See* Abstr.

Independent claim 2, reproduced below, is representative of the appealed claims:

2. A method comprising:
  - receiving, in a computer, personal characteristic data for a population of holders of payment card accounts;
  - receiving, in the computer, payment card account transaction data associated with a merchant; and
  - analyzing, by the computer, said personal characteristic data and said payment card account transaction data to generate a time-based customer population profile for said merchant;wherein said time-based customer population profile indicates typical personal characteristics of customers of said merchant by time of day and/or by day of week and/or by day of year and/or on holidays and/or based on phases of the moon and/or by day of month according to times when said customers are physically present at the merchant's premises, said time-based customer population profile being a profile of varying characteristics of the customer population physically present from time to time at the merchant's premises.

Appellant appeals the following rejections:

R1. Claims 2–8, 10–16, and 18–20 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to patent-ineligible subject matter. Final Act. 2–6.; and

R2. Claims 2–8, 10–16, and 18–20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Strock (US 2004/0122736 A1, June 24, 2004) and Juang (US 8,335,720 B2, Dec. 18, 2012). Final Act. 6–12.

We review the appealed rejections for error based upon the issues identified by Appellant, and in light of the arguments and evidence produced thereon. *Ex parte Frye*, 94 USPQ2d 1072, 1075 (BPAI 2010) (precedential).

## ANALYSIS

### *Rejection under § 101*

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: “[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 the 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.”). For example, 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)).

Recently, the USPTO published revised guidance on the application of 35 U.S.C. § 101. USPTO’s 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) (“Revised Guidance”). Under the Revised Guidance “Step 2A,” the office first looks 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* MPEP § 2106.05(a)-(c), (e)-(h)). 84 Fed. Reg. at 51–52, 55.

Only if a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, does the Office then (pursuant to the Revised Guidance “Step 2B”) look to whether the claim:

(3) adds a specific limitation beyond the judicial exception that is not “well-understood, routine, conventional” in the field (*see* MPEP § 2106.05(d)); or

(4) simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception. 84 Fed. Reg. at 56.

Step 2A, Prong 1 (Does the Claim Recite a Judicial Exception?)

With respect to independent method claim 2, and similarly, apparatus claim 18 and non-transitory medium claim 10, the Examiner determines that the claims are directed to “a cardholder [] targeting and merchant profiling

using personal characteristic data” (Final Act. 3), and that “[t]hese concepts relate to ‘An Idea Of Itself’ as well as ‘Certain Methods of Organizing Human Activity’” (*id.* at 4), which are types of abstract idea.

As for the Examiner’s enumerated “an idea of itself, it is sufficient for the purposes of the present appeal that the claimed concepts reasonably can be characterized as falling within the recognized category of mental processes.” *See, e.g.*, MPEP § 2106.04(a)(2)(III):

The courts have used the phrase “an idea ‘of itself’” to describe an idea standing alone such as an uninstiated concept, plan or scheme, as well as a mental process (thinking) that “can be performed in the human mind, or by a human using a pen and paper.” *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1372 (Fed. Cir. 2011).

For at least the following reasons, we are persuaded that representative claim 2 recites plural abstract ideas, i.e., mental processes and certain methods of organizing human activity.

Specifically, claim 2 recites at least the following limitations:

- (1) “receiving . . . personal characteristic data for a population of holders,”
- (2) “receiving . . . transaction data associated with a merchant,” and
- (3) “analyzing . . . said personal characteristic data and . . . transaction data to generate a time-based customer population profile for said merchant.”

Claim 2. These limitations, under their broadest reasonable interpretation, recite both mental processes and commercial interactions akin to marketing activities.

For example, these limitations encompass acts people can perform using their minds or pen and paper because people can perform the

“receiving” steps by simply looking at the recited data and recognizing personal characteristics and merchant data. People can also perform the “analyzing” step by looking at all data and observing a time when particular transactions occurred.

As for the claims reciting commercial interactions, Appellant’s Specification supports this interpretation by disclosing:

In general, and for the purpose of introducing concepts of embodiments of the present invention, a data set may be received containing data indicative of transactions routed in a payment card network. The data set may be filtered to produce a narrower data set that contains only transactions for a particular merchant. Data may also be obtained that indicates personal characteristics of cardholders who participate in the payment card system. Based on the transaction data for the merchant, including the timing of the transactions and the account numbers contained in the transaction data, and also based on the personal characteristics of the corresponding cardholders, an analysis is performed to build a time-based customer population profile for the merchant. The profile may indicate the prevailing personal characteristics of the merchant’s customers according to the times when the customers transact with the merchant.

Spec. 2:7–18. In other words, the claimed invention examines commercial interactions that certain cardholders are performing during various times.

Appellant challenges the Examiner’s determinations by contending that the pending claims “are not such as can be practiced ‘entirely in the human mind.’ Rather, the quantities of data involved are so large, and the analytical processes are so complex and processing-intensive, that such practices are invariably performed by electronic computer systems.” Appeal Br. 8.

In response, the Examiner determines, and we agree, “*SmartGene* is applicable in that it identifies at least a portion of claim 2 as being directed

to an abstract idea.” Ans. 4. In other words, the *entirety* of claim 2 need not be practically performed mentally, as it is enough that only portions of claim 2 meet this criteria. Furthermore, claim 2 is not limited to very large quantities of data, as argued by Appellant, but could include a small population. In any case, even assuming *arguendo* that the entirety of claim 2 could not be practically performed mentally, Appellant fails to dispute that the claims recite the other highlighted abstract concept, i.e., certain methods of organizing human activity, e.g., commercial interactions such as marketing activities.

Furthermore, we agree with the Examiner that the dependent claims also recite the aforementioned abstract concepts. *See* Ans. 5. The dependent claims contain only limitations that recite the identified abstract idea, and do not create any additional elements beyond this abstract idea. Therefore, we disagree with the argument that the Office Action fails to address the dependent claims.

Therefore, for at least the aforementioned reasons, we agree with the Examiner that representative claim 2 recites an abstract idea, which we conclude are “mental processes” and “certain method of organizing human activity.”

Step 2A—Prong 2 (integration into Practical Application)<sup>2</sup>

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<sup>2</sup> We acknowledge that some of the considerations at Step 2A, Prong 2, properly may be evaluated under Step 2 of *Alice* (Step 2B of the Office revised guidance). For purposes of maintaining consistent treatment within the Office, we evaluate them under Step 1 of *Alice* (Step 2A of the Office revised guidance). *See* Revised Guidance, 84 Fed. Reg. at 55 n.25, 27–32.

Under the Revised Guidance, we now must determine if additional elements in the claims integrate the judicial exception into a **practical application** (*see* MPEP § 2106.05(a)–(c), (e)–(h)).

We discern no additional element (or combination of elements) recited in Appellant’s representative claim 1 that integrates the judicial exception into a practical application. *See* Revised Guidance, 84 Fed. Reg. at 54–55 (“Prong 2”). For example, Appellant’s claimed additional elements (e.g., “a computer,” “a processor,” and “a memory”) do not: (1) improve the functioning of a computer or other technology; (2) are not applied with any particular machine (except for a generic computer); (3) do not effect a transformation of a particular article to a different state; and (4) are not applied in any meaningful way beyond generally linking the use of the judicial exception to a particular technological environment, such that the claim as a whole is more than a drafting effort designed to monopolize the exception. *See* MPEP §§ 2106.05(a)–(c), (e)–(h).

Here, Appellant does not direct our attention to anything in the Specification to indicate that the invention provides an improvement in the computer’s technical functionality. Instead, the arguably innovative technique of the appealed claims is inextricably a part of the abstract idea of cardholder targeting and merchant profiling. Moreover, nothing in the claims, understood in light of the Specification, requires anything other than an off-the-shelf, conventional computer used for collecting and analyzing various information/data. *See* Spec. 2:27-29; 4:1–7. Therefore, the claims are directed not to improvement in computer capabilities, but to the results of applying an abstract idea.

The claimed “receiving” steps do not integrate the judicial exceptions described above into a patent-eligible practical application. For example, receiving personal characteristic data and transaction data is no more than pre-solution activity.

These pre-solution steps—even when performed over a computer network—are insufficient to integrate the judicially excepted steps into a practical application. *See Alice*, 573 U.S. at 224 (“use of a computer to create electronic records, track multiple transactions, and issue simultaneous instructions” is not an inventive concept).

Furthermore, although the claimed process generates a time-based customer population profile, the claimed process fails to improve the functioning of the computer, the processor, or the memory. Rather, the computer, the processor, and the memory merely link the underlying abstract idea (i.e., the mental processes and/or commercial interactions) to a particular technological environment, i.e., targeted marketing campaigns. That is, as stated in the Specification, the claimed process simply “recognized additional opportunities for targeted marketing techniques based on analysis of payment card account transaction data.” Spec. 1:10–12.

Thus, the claimed process uses conventional computers and computer networks to automate tasks that would have otherwise been performed by a marketing personnel. Such claims are not patent eligible. *See OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1363 (Fed. Cir. 2015) (“relying on a computer to perform routine tasks more quickly or more accurately is insufficient to render a claim patent eligible”).

For at least the reason noted *supra*, we determine that claim 2 (1) recites a judicial exception and (2) does not integrate that exception into a practical application. Thus, representative claim 2 is directed to the aforementioned abstract idea.

*Alice/Mayo—Step 2 (Inventive Concept)*  
*Step 2B identified in the Revised Guidance*

Turning to the second step of the *Alice* inquiry, we now look to whether claim 1 contains any “inventive concept” or adds anything “significantly more” to transform the abstract concept into a patent-eligible application. *Alice*, 573 U.S. at 216. As recognized by the Revised Guidance, an “inventive concept” under *Alice* step 2 can be evaluated based on 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* Revised Guidance, 84 Fed. Reg. at 56; *see* MPEP § 2106.05(d).

Appellant contends “the Examiner has provided no evidence of considering specific aspects of claim 2, including the exact nature of the time-based population profile” (Appeal Br. 9) and “the process of claim 2 allows a merchant to know what kinds of individuals are physically present in the merchant’s store at particular times.” *Id.* at 10. Appellant emphasizes that “[t]his point turns on the novel, unobvious features of claim 2 . . . [and] the Examiner could not properly conclude that claim 2 relates to ‘well-

understood, routine, conventional activity.’” *Id.* Appellant makes a similar argument for claim 4. *Id.* at 11.

As evidence, the Examiner points out that the present invention is merely receiving and analyzing data, i.e., obtains and compares intangible data. Ans. 4 (citing *CyberSoure*). Additionally, in *Cyberfone*, the Court held that “using categories to organize, store, and transmit information is well-established,” and “the well-known concept of categorical data storage, i.e., the idea of collecting information in classified form, then separating and transmitting that information according to its classification, is an abstract idea that is not patent-eligible.” *Cyberfone Sys., LLC v. CNN Interactive Grp., Inc.*, 558 Fed. App’x. 988, 992 (Fed. Cir. 2014).

Here, as in *Cyberfone*, Appellant classifies personal characteristic information into time-based categories to better organize marketing efforts. Furthermore, the Examiner points out that “generic computer functions routinely used in computer applications” are being applied here. *See* Ans. 5.

Such an analysis is a factual determination. *See Berkheimer v. HP Inc.*, 881 F.3d 1360, 1369 (Fed. Cir. 2018) (“Whether something is well-understood, routine, and conventional to a skilled artisan at the time of the patent is a factual determination.”). We find the Examiner’s noting of generic nature of the component parts recited in the claims provides sufficient evidence of a generic computer system used to implement the abstraction. *See Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1342 (Fed. Cir. 2017) (explaining that “[o]ur law demands more” than claim language that “provides only a result-oriented solution, with insufficient detail for how a computer accomplishes it”).

We find no element or combination of elements recited in Appellant’s claim 2 that contains any “inventive concept” or adds anything “significantly more” to transform the abstract concept into a patent-eligible application. Also, Appellant has not adequately explained how claim 2 is performed such that it is not a routine and conventional function of a generic computer. Furthermore, we note that a finding of novelty or non-obviousness does not require the conclusion that the claimed subject matter is patent-eligible. Although the second step in the *Mayo/Alice* framework is termed a search for an “inventive concept,” the analysis is not an evaluation of novelty or nonobviousness, but, rather, is a search for “an element or combination of elements that is ‘sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.’” *Alice*, 573 U.S. at 216. “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). A novel and non-obvious claim directed to a purely abstract idea is, nonetheless, patent-ineligible. *See Mayo*, 566 U.S. at 90. *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.”).

Because Appellant’s independent claim 2 is directed to a patent-ineligible abstract concept, does not include additional elements that integrate the judicial exception into a practical application, and does not add a specific limitation beyond the judicial exception that is not “well-understood, routine, and conventional,” we sustain the Examiner’s rejection

of the claims 1–20 under 35 U.S.C. § 101 as being directed to non-statutory subject matter in light of *Alice*, its’ progeny, and the Revised Guidance.

*Rejection under § 103(a)*

Appellant contends that “Juang does not consider or pinpoint the customers being present at the premises of a particular merchant.” Appeal Br. 13.

Although we agree with the Examiner that Juang teaches customizing discounts based on cardholder shopping patterns, including travel patterns (*see* Ans. 5–6, *citing* Juang col. 10:59 to 11:10), we agree with Appellant that such teachings fail to illustrate “customers are physically present at the merchant’s premises,” as required by claim 2.

For instance, Juang merely discloses:

Using the consumer groups identified by the consumer algorithm, the merchant can determine which consumer groups should be targeted. In a practical example, of the concentric circles algorithm, a classical music store merchant may need to target customers for weekday morning low-demands periods. . . . Of that group, only 5,000 cardmembers shop in the same area as the classical music store. Of that group, only 500 cardmembers regularly shop on weekday mornings.

Col. 10:59 to col. 11:5. In other words, Juang, at best, teaches how to target customers during low-demand periods at a particular merchant, i.e., by targeting customers “in the same area” as the merchant in an effort to get them to visit the merchant premises, as opposed to indicating which customers are actually physically present at the merchant’s premises during these times.

Thus, we disagree with the Examiner’s finding that Juang teaches customers are physically present at the merchant’s premises, as recited in

each of the independent claims. The Examiner also has not found that Stroock teaches this feature. Since we agree with at least one of the arguments advanced by Appellant, we need not reach the merits of Appellant's other arguments. Accordingly, we will not sustain the Examiner's obviousness rejection of claims 2-8, 10-16, and 18-20.

### CONCLUSION

In summary:

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
2-8, 10-16, 18-20	101	Eligibility	2-8, 10- 16, 18-20	
2-8, 10-16, 18-20	103	Stroock, Juang		2-8, 10- 16, 18-20
<b>Overall Outcome</b>			2-8, 10- 16, 18-20	

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

AFFIRMED