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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/148,199	01/06/2014	Henry M. WEINBERGER	37537.0027U1-	1418
126944	7590	04/30/2019	EXAMINER	
MasterCard c/o Ballard Spahr LLP 999 Peachtree Street, Suite 1000 Atlanta, GA 30309			SADANANDA, ABHIJIT B	
			ART UNIT	PAPER NUMBER
			3624	
			NOTIFICATION DATE	DELIVERY MODE
			04/30/2019	ELECTRONIC

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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* HENRY M. WEINBERGER  
and  
BRUCE MACNAIR

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Appeal 2018-003060  
Application 14/148,199<sup>1</sup>  
Technology Center 3600

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Before JOSEPH L. DIXON, HUNG H. BUI, and JON M. JURGOVAN,  
*Administrative Patent Judges.*

JURGOVAN, *Administrative Patent Judge.*

DECISION ON APPEAL

Appellants seek review under 35 U.S.C. § 134(a) from a Final Rejection of claims 1–18, which are all the claims pending in the application. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.<sup>2</sup>

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<sup>1</sup> Appellants identify MasterCard International Incorporated, as the real party in interest. (Br. 2.)

<sup>2</sup> Our Decision refers to the Specification (“Spec.”) filed January 6, 2014, the Final Office Action (“Final Act.”) mailed February 7, 2017, the Appeal Brief (“Br.”) filed July 10, 2017, and the Examiner’s Answer (“Ans.”) mailed November 16, 2017.

### CLAIMED INVENTION

The claims are directed to a method and apparatus for modeling a virtual panel of consumer behavior from financial transactions that occur in a payment network. (Spec. ¶¶ 7, 12.) Appellants' method and apparatus "use a selected set of financial accounts to create a virtual panel which measures behavior from a sample of consumers that is representative of the overall consumer population across key geographic, demographic, and behavior dimensions." (Spec. ¶ 1.)

Claims 1, 7, and 13 are independent. Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A virtual panel modeling method comprising:

retrieving records of financial transactions from a specified time period, each record containing an account identification code, an amount of a transaction, and an industry segment;

filtering records with a processor using a behavior filter;  
assigning each account a home geographic code with the processor;

establishing, with the processor, percentage quotas for geo-demographic cells using geo-demographic data distributions;

selecting, with the processor, a number of accounts within each geo-demographic cell to match the geo-demographic data distributions;

scaling, with the processor, the number of accounts within each geo-demographic cell in a virtual panel to match the geo-demographic data distributions of the overall consumer universe;  
and

saving the resulting virtual panel to a non-transitory computer-readable storage medium.

(Br. 21–24 (Claims App'x).)

### REJECTIONS<sup>3</sup> & REFERENCES

(1) Claims 1–18 stand rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter. (Final Act. 14–15.)

(2) Claims 1–18 stand rejected under 35 U.S.C. § 103 based on Reed et al. (US 2004/0103017 A1, published May 27, 2004) (“Reed”) and William Mendenhall, Lyman Ott, and Richard L. Scheaffer, *Elementary Survey Sampling* (Duxbury Press 1971) (“Mendenhall”). (Final Act. 16–21.)

### ANALYSIS

#### *Rejection under 35 U.S.C. § 101*

Patent eligibility is a question of law that is reviewable *de novo*. *Dealertrack, Inc. v. Huber*, 674 F.3d 1315, 1333 (Fed. Cir. 2012). Accordingly, we review the Examiner’s § 101 determinations concerning patent eligibility under this standard.

Patentable subject matter is defined by 35 U.S.C. § 101, as follows:

[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

In interpreting this statute, the Supreme Court emphasizes that patent protection should not preempt “the basic tools of scientific and technological work.” *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972) (“*Benson*”); *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 71 (2012) (“*Mayo*”); *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S.Ct. 2347, 2354

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<sup>3</sup> Claims 1–18 were rejected under 35 U.S.C. § 112(a) as failing to comply with the written description requirement. (Final Act. 11–14.) However, this rejection was withdrawn in the Examiner’s Answer, and is no longer pending on appeal. (Ans. 3.)

(2014) (“*Alice*”). The rationale is that patents directed to basic building blocks of technology would not “promote the [p]rogress of [s]cience” under the U.S. Constitution, Article I, Section 8, Clause 8, but instead would impede it. Accordingly, laws of nature, natural phenomena, and abstract ideas, are not patent-eligible subject matter. *Thales Visionix Inc. v. U.S.*, 850 F.3d 1343, 1346 (Fed. Cir. 2017) (citing *Alice*, 134 S.Ct. at 2354).

The Supreme Court set forth a two-part test for subject matter eligibility in *Alice* (134 S.Ct. at 2355). The first step is to determine whether the claim is directed to a patent-ineligible concept. *Id.* (citing *Mayo*, 566 U.S. at 76–77). If so, then the eligibility analysis proceeds to the second step of the *Alice/Mayo* test in which we “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*, 134 S.Ct. at 2357 (quoting *Mayo*, 566 U.S. at 72, 79). There is no need to proceed to the second step, however, if the first step of the *Alice/Mayo* test yields a determination that the claim is directed to patent eligible subject matter.

The Patent Office has recently revised its guidance for how to apply the *Alice/Mayo* test in the *2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50–57 (January 7, 2019) (“the Revised Guidance”). Under the Revised Guidance, we first look to whether the claim recites:

- (1) any judicial exceptions, including certain groupings of abstract ideas (i.e., mathematical concepts, mental processes, or certain methods of organizing human activity such as a fundamental economic practice or managing personal behavior or relationships or interactions between people); 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)). 84 Fed. Reg. at 51–52, 55.

A claim that integrates a judicial exception into a practical application applies, relies on, or uses 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. 84 Fed. Reg. at 54. When the judicial exception is so integrated, then the claim is not directed to a judicial exception and is patent-eligible under § 101. 84 Fed. Reg. at 54. Only if a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, do we then evaluate whether the claim provides an inventive concept. 84 Fed. Reg. at 56; *Alice*, 134 S.Ct. at 2350, 2355.

*Alice/Mayo—Step 1 (Abstract Idea)*  
*Step 2A—Prongs 1 and 2 identified in the Revised Guidance*

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

Turning to the first step of the *Alice* inquiry (*Step 2A, Prong 1 of the Revised Guidance*), the Examiner finds independent claims 1, 7, and 13 “are directed to using categories and correlations to organize, store, and transmit information, which is an idea of itself” and is “similar to those [abstract ideas] identified in at least *Electric Power Group, LLC v. Alstom, SA, Content Extraction and Transmission, LLC v. Wells Fargo Bank*, and *CyberSource Corp. v. Retail Decisions Inc.*” (Final Act. 14–15 (citing *Cyberfone Sys., LLC v. CNN Interactive Grp., Inc.*, 558 F. App’x 988 (Fed. Cir. 2014)); Ans. 4–5 (citing *Electric Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350 (Fed. Cir. 2016); *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat’l Ass’n*, 776 F.3d 1343 (Fed. Cir. 2014);

*CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366 (Fed. Cir. 2011)).)

Appellants argue independent claims 1, 7, and 13 together. (Br. 9, 14.) We select claim 1 as representative. Claims 7 and 13 stand or fall with claim 1. *See* 37 C.F.R. § 41.37(c)(1)(iv)(2017).

Appellants argue the Examiner’s rejection “rests solely on conclusory statements” and over-generalizes the claims, as “the Examiner has not adequately explained and has provided no evidence. . . . [t]hat the claims are actually directed to an abstract idea.” (Br. 9, 13.) Appellants assert the claims are not directed to an abstract idea such as “a method of organizing human activity” or a “fundamental economic practice long prevalent in our system of commerce.” (Br. 10, 12–13.) Rather, Appellants argue the claims are directed to creating and modeling a virtual panel using a payment card infrastructure, and “creating a virtual panel on payment card infrastructure is not similar to any idea previously found to be abstract.” (Br. 11–12.) Appellants also assert the claimed panel modeling “is not just the computerization of some long-standing practice, but something that is fundamentally ‘rooted in computer technology’ like *DDR Holdings*.” (Br. 12–13.)

Appellants’ arguments are not persuasive. At the outset, we note Appellants’ Specification and representative claim 1 describe a method that “measures behavior from a sample of consumers that is representative of the overall consumer population” to construct a virtual panel of consumer purchase behavior. (*See* Spec. ¶¶ 1, 7, 12, 15, 36.) The Specification explains such “virtual panels may be used to create stable merchant benchmarking products” and “influence the development of products and

services from . . . companies.” (See Spec. ¶¶ 4, 13.) For example, representative claim 1 recites the following limitations: (1) “retrieving records of financial transactions from a specified time period, each record containing an account identification code, an amount of a transaction, and an industry segment”; (2) “filtering records . . . using a behavior filter”; (3) “assigning each account a home geographic code”; (4) “establishing . . . percentage quotas for geo-demographic cells using geo-demographic data distributions”; (5) “selecting . . . a number of accounts within each geo-demographic cell to match the geo-demographic data distributions”; (6) “scaling . . . the number of accounts within each geo-demographic cell in a virtual panel to match the geo-demographic data distributions of the overall consumer universe”; and (7) “saving the resulting virtual panel.” (Br. 21 (Claims App’x).) These limitations, under their broadest reasonable interpretation, recite conducting market research because the limitations all recite collecting and examining consumers’ transaction data, thereby describing operations that would ordinarily take place when market research is performed on target markets and customers.

For example, “retrieving records of financial transactions from a specified time period” and “filtering records . . . using a behavior filter” (limitations (1) and (2)) describe data collection activities for gathering consumer information, such as consumers’ purchasing preferences. Further, the geographic code “assigning,” “establishing . . . percentage quotas,” “selecting . . . a number of accounts,” and “scaling . . . the number of accounts within each geo-demographic cell” (limitations (3)–(6)) describe market research analysis for processing the collected consumer information to obtain samples that are representative of particular populations in

accordance with geo-demographic data distributions. Further, “saving the resulting virtual panel” (limitation (7)) describes saving results of the market research analysis.

Thus, Appellants’ method for sampling consumer data and performing market research is a known business activity and a fundamental economic practice in our system of commerce, similar to concepts identified by the courts as abstract ideas. That is, like the risk hedging in *Bilski*, the intermediated settlement in *Alice*, and the offer-based price optimization in *OIP Technologies*, the concept of market research is a fundamental business practice long prevalent in our system of commerce. *See Bilski v. Kappos*, 561 U.S. 593, 612 (2010); *Alice*, 134 S.Ct. at 2354–56; *OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362 (Fed. Cir. 2015). The use of market research is also a building block of market economies. We therefore conclude representative claim 1, and grouped claims 7 and 13, recite a fundamental economic practice, which is one of certain methods of organizing human activity identified in the Revised Guidance, and thus an abstract idea. *See Revised Guidance*, 84 Fed. Reg. at 52 (describing an abstract idea category of “[c]ertain methods of organizing human activity—fundamental economic principles or practices (including hedging, insurance, mitigating risk); commercial or legal interactions (including . . . advertising, marketing or sales activities or behaviors; business relations)”).

We are not persuaded by Appellants’ additional argument that *Alice* demonstrates that “support for an allegation that a claim is a method of organizing human activity requires proof, such as references to historical publications.” (Br. 13.) First, we do not read *Bilski* and *Alice* as establishing a rule that historical publications always are required to

demonstrate a claim is a method of organizing human activity. Second, the record in this case includes citations to publications showing market research is a fundamental economic practice. *See* W. Mendenhall et al., *ELEMENTARY SURVEY SAMPLING* (1971) (“Mendenhall”); David A. Aaker et al., *MARKETING RESEARCH* (7th ed. 2001) (both cited by the Examiner on June 17, 2016). Appellants do not address these publications in their argument. Thus, we do not find Appellants’ argument persuasive.

Step 2A—Prong 2 (Integration into Practical Application)

Under *Step 2A, Prong 2 of the Revised Guidance*, we discern no additional element (or combination of elements) recited in Appellants’ representative claim 1 that integrates the judicial exception into a practical application. *See* Revised Guidance, 84 Fed. Reg. at 54–55 (“Prong Two”). For example, Appellants’ claimed additional elements (e.g., “processor” and “computer-readable storage medium”) 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).

For business-centric inventions such as Appellants’ invention involving market research, the “integration into a practical application” prong of the Revised Guidance further requires consideration of whether the claims purport to provide “a technical solution to a technical problem” as required by the Federal Circuit’s precedential decisions in (1) *DDR*

*Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257 (Fed. Cir. 2014) and (2) *Amdocs (Isr.) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288 (Fed. Cir. 2016). See MPEP § 2106.05(a).

For example, the Federal Circuit found *DDR*'s claims are patent-eligible under section 101 because *DDR*'s claims: (1) do not merely recite “the performance of some business practice known from the pre-Internet world” previously disclosed in *Bilski* and *Alice*; but instead (2) provide a technical solution to a technical problem unique to the Internet, *i.e.*, a “solution . . . necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks.” *DDR*, 773 F.3d at 1257. Likewise, the Federal Circuit also found *Amdocs*' claims patent-eligible under section 101 because like *DDR*, *Amdocs*' claims “entail[] an unconventional technological solution (enhancing data in a distributed fashion) to a technological problem (massive record flows which previously required massive databases)” and “improve the performance of the system itself.” *Amdocs*, 841 F.3d at 1300, 1302.

Contrary to Appellants' argument that the claimed virtual panel modeling “is fundamentally ‘rooted in computer technology’ like *DDR Holdings*” (Br. 13), generating a virtual panel representative of particular consumer populations does not provide any “technical solution to a technical problem” as contemplated by the Federal Circuit in *DDR* and *Amdocs*. See MPEP § 2106.05(a). Generating a virtual panel from collected consumer data does not describe technological improvements, or improvements in computer-related technology. Appellants' abstract idea of sampling consumer data in a virtual panel for market research does not provide a technical solution to a technical problem unique to the Internet, *i.e.*, a

“solution . . . necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks.” *DDR*, 773 F.3d at 1257. Instead, the solution proposed by Appellants is simply to improve sample selection for market research that may guide business strategies.

Appellants also have not demonstrated that claim 1 recites a specific improvement to the way computers operate or to the way computers store and retrieve data in memory. *See Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1336, 1339 (Fed. Cir. 2016). Claim 1’s processor and computer-readable storage medium are recited in a general, generic, and functional manner that does not evince integration into a practical application pertaining to “computer technology” as argued (*see* Br. 13). *See In re TLI Commc’ns LLC Patent Litig.*, 823 F.3d 607, 612–13 (Fed. Cir. 2016) (claims reciting telephone units and a server “performing generic computer functions such as storing, receiving, and extracting data,” held to be an abstract idea).

As further recognized by the Examiner, claim 1 recites collecting, analyzing, and storing data, similar to other claims (involving data collection and analysis) identified by the courts as directed to abstract ideas. (Ans. 4–5; *see Electric Power Grp.*, 830 F.3d at 1353 (holding that “collecting information, analyzing it, and displaying certain results of the collection and analysis” are “a familiar class of claims ‘directed to’ a patent ineligible concept”); *Content Extraction*, 776 F.3d at 1347 (claims were “drawn to the abstract idea of 1) collecting data, 2) recognizing certain data within the collected data set, and 3) storing that recognized data in a memory”).) Appellants’ claim 1, unlike claims found non-abstract in prior cases, uses generic computer technology to perform data retrieval, analysis, and storage

and does not recite an improvement to a particular computer technology. *See, e.g., McRO, Inc. v. Bandai Namco Games America Inc.*, 837 F.3d 1299, 1314–15 (Fed. Cir. 2016) (finding claims not abstract because they “focused on a specific asserted improvement in computer animation”).

Additionally, the functions performed by the processor recited in claim 1 automate actions that can be performed by humans using pen and paper. (Ans. 6–7.) In particular, the records’ collection and analysis steps in claim 1—including “retrieving records of financial transactions from a specified time period,” “filtering records,” “assigning” home geographic codes, “establishing . . . percentage quotas for geo-demographic cells,” “selecting . . . a number of accounts within each geo-demographic cell to match the geo-demographic data distributions,” and “scaling . . . the number of accounts” to match geo-demographic data distributions—can be performed manually (e.g., by a market researcher) using pen and paper, without a computer or other machine. *See CyberSource*, 654 F.3d at 1372–73 (“[A] method that can be performed by human thought alone is merely an abstract idea and is not patent-eligible under § 101.”); *see also In re Comiskey*, 554 F.3d 967, 979 (Fed. Cir. 2009) (“[M]ental processes—or processes of human thinking—standing alone are not patentable even if they have practical application.”); *Benson*, 409 U.S. at 67 (“Phenomena of nature . . . , *mental processes*, and abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work” (emphasis added)). Additionally, mental processes remain unpatentable even when automated to reduce the burden on the user of what once could have been done with pen and paper. *CyberSource*, 654 F.3d at 1375 (“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*.”).

Thus, claim 1 does not integrate the judicial exception into a practical application.

For these reasons, we determine claim 1, and grouped claims 7 and 13, are directed to a judicial exception, namely, the abstract idea of sampling data for market research, which is a fundamental economic practice and method of organizing human activity identified as an abstract idea in the Revised Guidance.

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

In the second step of the *Alice* inquiry, Appellants argue claim 1 recites significantly more than a judicial exception for the reasons that: (1) the claimed invention “addresses the network-centric challenge of processing virtual prepaid cards at locations that can only process physical payment cards, by providing a solution that is necessarily rooted in computer technology” (Br. 14); (2) similar to the claims in *DDR Holdings*, Appellants’ claim is “necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of payment networks and specifying how interactions between computer components are manipulated to yield a desired result, which is non-routine and non-conventional” (Br. 15–16); and (3) the claimed processor is not a generic computer as it “require[s] specific programming” and has “*improved* functionality” (Br. 16 (citing *In re Alappat*, 33 F.3d 1526 (Fed. Cir. 1994))).

Appellants’ arguments are not persuasive. At the outset, we note Appellants’ arguments are not commensurate with the language of claims 1,

7, and 13. Neither claims 1, 7, and 13, nor Appellants' Specification describe "processing virtual prepaid cards at locations that can only process physical payment cards" (*see* Br. 14) or address a problem pertaining to "point of sales devices that can only process physical payment cards at payment networks" (*see* Br. 15). (Ans. 6.) Appellants also have not explained what "problem specifically arising in the realm of payment networks" is addressed by the claims. (*See* Br. 15–16.)

With respect to Appellants' technical solution arguments for the second step of the *Alice* inquiry, we note that under current Federal Circuit precedent, an "inventive concept" under *Alice* step 2 can be established by showing, for example, that the patent claims:

- (1) provide a technical solution to a technical problem unique to the Internet, e.g., a "solution . . . necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks" (*see DDR Holdings*, 773 F.3d at 1257);
- (2) transform the abstract idea into "a particular, practical application of that abstract idea," e.g., "installation of a filtering tool at a specific location, remote from the end-users, with customizable filtering features specific to each end user" (*see BASCOM Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1352, 1350 (Fed. Cir. 2016)); or
- (3) "entail[] an unconventional technological solution ([e.g.,] enhancing data in a distributed fashion) to a technological problem ([e.g.,] massive record flows [that] previously required massive databases)" and "improve the performance of the system itself" (*see Amdocs*, 841 F.3d at 1300, 1302).

Similarly, as recognized by the Revised Guidance, an “inventive concept” under *Alice* step 2 can also 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.

In this case, however, we find no element or combination of elements recited in Appellants’ claim 1 that contains any “inventive concept” or adds anything “significantly more” to transform the abstract concept into a patent-eligible application. *Alice*, 134 S.Ct. at 2357. For example, Appellants’ abstract idea of sampling consumer data for market research is not rooted in computer technology, as the claims in *DDR Holdings*. Nor does it provide any technical solution to a technical problem as required by *DDR*.

Appellants also have not demonstrated their claimed generic processor is able to perform *functions that are not merely generic*, as the claims in *DDR*. *See DDR Holdings*, 773 F.3d at 1258. Appellants’ claim 1 merely recites data processing steps performable by a conventional computer connected to storage or performable manually by market researchers. (Ans. 6–7.)

Appellants’ abstract idea of sampling consumer data for market research also does not provide any particular practical application as required by *BASCOM*, or entail an unconventional technological solution to a technological problem as required by *Amdocs*. Instead, Appellants’

invention uses generically-claimed computing elements to perform the abstract idea. (Ans. 7–8.) As our reviewing court has observed, “after *Alice*, there can remain no doubt: recitation of generic computer limitations does not make an otherwise ineligible claim patent-eligible.” *DDR Holdings*, 773 F.3d at 1256 (citing *Alice*, 134 S.Ct. at 2358).

We also are not persuaded the rejection provides no evidence that claim elements are “conventional or routine.” (See Br. 10, 14, 16.) The Examiner has identified conventional techniques for sampling consumer data for market research.<sup>4</sup> Further, the Examiner has identified that Appellants’ Specification describes generic processors and storage performing generic data manipulation functions. (Ans. 7–8 (citing Spec. ¶¶ 20, 30).) “[T]he use of generic computer elements like a microprocessor or user interface” to perform conventional computer functions “do not alone transform an otherwise abstract idea into patent-eligible subject matter.” *FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1096 (Fed. Cir. 2016) (citing *DDR Holdings*, 773 F.3d at 1256); see also *OIP Techs.*, 788 F.3d at 1363 (“relying on a computer to perform routine tasks more quickly or more accurately is insufficient to render a claim patent eligible”).

Appellants also argue claim 1 is patent eligible under § 101 because the claim’s elements achieve “useful results” and “*cannot* be separated from the computer-implemented environment (e.g., specific tangible parts programmed in specific ways to communicate very specific data) of the claims.” (Br. 16.) However, we do not see how the recitation of a

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<sup>4</sup> For example, the Examiner has identified Reed and Mendenhall as disclosing techniques for sampling consumer data for market research. (See Reed Abstract; Mendenhall 54–56.)

processor, even in conjunction with the recited functions, “ensure[s] ‘that the [claim] is more than a drafting effort designed to monopolize the [abstract idea].’” *Alice*, 134 S.Ct. at 2357 (brackets in original) (quoting *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. at 77). Claim 1 uses a generic “processor” as a tool to perform the abstract idea. (Ans. 7–8.) Additionally, as the Supreme Court emphasized in *Bilski*, “although the machine-or-transformation test is not the only test for patentability, this by no means indicates that anything which produces a ‘useful, concrete, and tangible result,’ *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368, 1373 ( Fed. Cir. 1998), is patentable.” *Bilski*, 561 U.S. at 658–660 (Breyer, J., concurring). Thus, “not every claim that recites concrete, tangible components escapes the reach of the abstract-idea inquiry.” *In re TLI Commc’ns*, 823 F.3d at 611. Here, Appellants’ processor merely automates data collection and analysis. *See Bancorp Services, L.L.C. v. Sun Life Assurance Co. of Canada (U.S.)*, 687 F.3d 1266, 1278 (Fed. Cir. 2012) (“the 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.”); and *Dealertrack*, 674 F.3d at 1333–34 (“Simply adding a ‘computer aided’ limitation to a claim covering an abstract concept, without more, is insufficient to render [a] claim patent eligible.”) (citation omitted).

Appellants further argue the claims recite significantly more than a judicial exception because the claims provide “a technical solution that is . . . novel and non-obvious.” (Br. 14.) Appellants’ argument is not persuasive because it improperly conflates the test for § 101 with the separate tests for §§ 102 and 103. *See, e.g., Genetic Techs. Ltd. v. Merial L.L.C.*, 818 F.3d

1369, 1376 (Fed. Cir. 2016) (“under the *Mayo/Alice* framework, a claim directed to a newly discovered law of nature (or natural phenomenon or abstract idea) cannot rely on the novelty of that discovery for the inventive concept necessary for patent eligibility”); *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.”). Although the second step in the *Alice/Mayo* framework is termed a search for an “inventive concept,” the analysis is not an evaluation of novelty or non-obviousness, but rather, 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 217–18 (quoting *Mayo* 566 U.S. 72–73).

Because Appellants’ representative claim 1 is directed to a patent-ineligible abstract concept, does not recite something “significantly more,” and simply appends well understood, routine, and conventional activities known in the industry under the second step of the *Alice* analysis, we sustain the Examiner’s rejection of representative claim 1, and grouped claims 7 and 13 under 35 U.S.C. § 101.

No separate arguments are presented for dependent claims 2–6, 8–12, and 14–18, which fall with independent claims 1, 7, and 13.

37 C.F.R. § 41.37(c)(1)(iv). We, therefore, sustain the rejection under 35 U.S.C. § 101 of claims 2–6, 8–12, and 14–18.

*Rejection under 35 U.S.C. § 103*

With respect to independent claims 1, 7, and 13, Appellants argue the claims together. (Br. 18.) Therefore, we select independent claim 1 as the representative claim for the group and will address Appellants' arguments presented in the Appeal Brief. *See* 37 C.F.R. § 41.37(c)(1)(iv).

Appellants contend Reed's customer and prospect analytic records (CARs and PARs) are not "records of financial transactions from a specified time period, each record containing an account identification code, an amount of a transaction, and an industry segment" as recited in claim 1. (Br. 18.) Appellants also argue Reed does not teach "assigning each account a home geographic code" as claimed. (Br. 19.) Appellants further assert a skilled artisan would not combine "adaptive marketing to market offers to customers based on their past interactions (Reed) with a stratified random sampling used to design a survey or public opinion poll over a large geographic area (Mendenhall) to result in a virtual panel modeling" because "[t]he objectives of these references are different from each other and the claimed invention." (Br. 17–18.) We do not agree.

We agree with and adopt the Examiner's findings as our own. (Ans. 9–15.) Particularly, we agree with the Examiner that Reed's customer analytic records (CARs) teach "records of financial transactions from a specified time period" as claimed. (Ans. 12–14.) Particularly, Reed teaches the customer records include "time series transaction data," "transaction activity," and "average value per transaction" between a customer and a company providing goods or services. (*See* Reed ¶¶ 36, 42, 56, 60, 64.) The transactions in Reed's customer records include data on loan and mortgage balances, "promotions redeemed by the customer," and "products and

services that a customer has previously purchased from [a] business.” (*See* Reed ¶¶ 38, 40, 64, Fig. 1B.) Thus, Reed’s customer records are commensurate with the description of “records of financial transactions” in Appellants’ Specification. (Spec. ¶¶ 12, 31, 36.)<sup>5</sup> Additionally, Reed’s records of financial transactions are retrieved “from a specified time period” as claimed. (Ans. 12–13 (citing Reed ¶ 36); Final Act. 16–17 (citing Reed ¶¶ 37–40, 64).)

We are also not persuaded by Appellants’ argument that “**nowhere in the Reed reference is CAR or PAR described as containing ‘an account identification code, an amount of a transaction, and an industry segment’**” as recited in claim 1. (Br. 18.) We agree with the Examiner that Reed’s customer records include an “account identification code” as claimed. (Ans. 13 (citing Reed ¶ 36); Final Act. 16–17 (citing Reed ¶¶ 27–30, 37–40).) Particularly, Reed’s customer records include “customer ids” for a company’s customers and for customer data “collected through internal, external, and/or business partner data sources,” “a household identifier . . . used to cross-reference a customer to a household,” and “household individual information such as name” (*see* Reed ¶¶ 27, 30, 36–37, 39), which is commensurate with the broad description of “account identification code” in Appellants’ Specification.<sup>6</sup>

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<sup>5</sup> Appellants’ Specification provides “[f]inancial transactions may include credit, debit, charge, prepaid payment card, checking, savings, balance-transfer transactions, and the like,” such as “grocery transactions” and “financial expenditures” in various merchant categories. (*See* Spec. ¶¶ 12, 31, 36.)

<sup>6</sup> Appellants’ Specification mentions an “account identification code” but does not particularly explain what the code is. (*See* Spec. ¶ 8.) The Appeal Brief’s “Summary of Claimed Subject Matter” further points to “element

Reed further teaches its customer records include “an amount of a transaction” as claimed. (Ans. 13 (citing Reed ¶¶ 36, 38, 40); *see* Reed ¶¶ 36 (“summarize transaction information”), 38 (“The CAR may also include. . . information related to . . . promotions redeemed by the customer”), 40 (“the CAR also preferably includes fields representing product ownership information. . . [including] products and services that a customer has previously purchased from the business”).) Additionally, Reed teaches its customer records include “an industry segment” as claimed. (Ans. 13–14 (citing Reed ¶¶ 37, 39); Final Act. 17 (citing Reed ¶¶ 64–65).) Reed’s information pertaining to a customer’s preferred brand and lifestyle products is commensurate with the broad description of “industry segment” in Appellants’ Specification.<sup>7</sup>

Thus, Reed teaches “retrieving records of financial transactions from a specified time period, each record containing an account identification code, an amount of a transaction, and an industry segment” as recited in claim 1. (Ans. 12–14.)

Appellants further argue “Reed does not teach ‘assigning each account a home geographic code’” as “[n]o assignment is occurring in these paragraphs [(¶¶ 36–40 of Reed)]—the paragraphs describe fields that already exist in a CAR record.” (Br. 19.) We agree with the Examiner, however, that Reed assigns geographic codes when Reed creates the customer records (CARs). (Ans. 14–15 (citing Reed ¶¶ 11, 36, 46–47, 55–

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3010 of FIG. 3, paragraph 0042,” which describe financial transaction accounts retrieved from a database. (Br. 4; *see* Spec. ¶ 42, Fig. 3.)

<sup>7</sup> Appellants’ Specification describes “transactions or spending . . . in a given merchant category” and “the type of industry a financial transaction is taking place at.” (*See* Spec. ¶¶ 31, 36.)

59, 68–69, 72–73); Final Act. 17.) Particularly, Reed creates customer records that associate customer data elements—including “identification fields . . . for household information such as a household identifier, address, and phone number”—with a customer’s account information. (*See* Reed ¶¶ 36, 46.) Reed’s household identifier and address are commensurate with the description of “home geographic code” in Appellants’ Specification.<sup>8</sup> Thus, Reed teaches “assigning each account a home geographic code” as recited in claim 1. (Ans. 14–15.)

Appellants further argue Reed and Mendenhall are non-analogous to one another and cannot logically be combined. (Br. 17–18.) Particularly, Appellants assert a skilled artisan would not combine “adaptive marketing to market offers to customers based on their past interactions (Reed) with a stratified random sampling used to design a survey or public opinion poll over a large geographic area (Mendenhall)” because “[t]he objectives of these references are different from each other and the claimed invention.” (Br. 17.) Appellants argue Reed’s objective is “to use market research to target advertising,” Mendenhall’s objective is “designing surveys from stratified random samplings,” and the invention’s objective is “to create a virtual panel, which measures behavior from a sample of consumers that is representative of overall consumer populations. . . . [which] is different from a market research process, in that it is not market research, nor directed

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<sup>8</sup> Appellants’ Specification provides “[e]ach financial transaction account is assigned a home geographic code, based on the location of the account holder. . . . For example, the home geographic code may be assigned via postal code (e.g., ‘ZIP code’).” (*See* Spec. ¶ 43.)

toward target advertising.” (Br. 17.) Appellants also argue the Examiner has not provided adequate reasoning to combine the references. (Br. 17–18.)

We disagree with Appellants, as the Examiner has provided a reasoned rationale to combine the teachings of Reed and Mendenhall, which Appellants have not addressed or rebutted in a Reply Brief. (*See* Ans. 11 (“one of ordinary skill would have recognized that applying the sampling technique of Mendenhall to the adaptive marketing system of Reed would result in an improved marketing system capable of acquiring a greater amount of information at a given cost” and “the results of such a combination are predictable because the level of ordinary skill demonstrated by the references, specifically Mendenhall, clearly sets forth the ability to apply the disclosed techniques in the field of invention”) (citing Mendenhall 53–54).) The Examiner also explains that Reed and Mendenhall “are analogous with respect to one another and with respect to the claimed invention because they all lie within the same field of endeavor—that is, modeling information regarding a consumer population.” (Ans. 9–10 (citing Reed ¶¶ 1–13, Abstract; Mendenhall 53; Spec. ¶¶ 1–6).) Appellants’ arguments have not addressed these specific findings by the Examiner. We agree with the Examiner that Reed (disclosing predictive modeling of consumer behavior, *see* Reed ¶¶ 1–13) and Mendenhall (disclosing market research methods for increasing the informational content of sampled data, *see* Mendenhall 53–55) would have logically commended themselves to the problem of modeling the financial behavior of a consumer population as addressed in the present application. (Ans. 9–10; *see* Spec. ¶¶ 1–6, 12–14.)

We also disagree with Appellants’ argument that their invention does not pertain to market research or target advertising. (*See* Br. 17.) Rather,

Appellants' Specification provides that panels may be constructed by market research companies to reveal consumer behavior and market trends, thereby "directly influenc[ing] the development of products and services from . . . companies." (*See Spec.* ¶¶ 2–6, 12–14.)

As Appellants' Brief has not shown error in the Examiner's proffered prima facie case of obviousness under § 103, we sustain the Examiner's decision in rejecting representative independent claim 1, grouped independent claims 7 and 13, and dependent claims 2–6, 8–12, and 14–18, not separately argued, under 35 U.S.C. § 103.

#### DECISION

The Examiner's rejection of claims 1–18 under 35 U.S.C. § 101 is affirmed.

The Examiner's rejection of claims 1–18 under 35 U.S.C. § 103 is affirmed.

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