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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte DAVID WEIS, GARY SOFKO,
and GARY KEARNS

Appeal 2019-005188
Application 13/951,215¹
Technology Center 3600

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

BUI, *Administrative Patent Judge.*

DECISION ON APPEAL

Appellants seek our review under 35 U.S.C. § 134(a) from the Examiner’s Final Rejection of claims 1, 2, 4, 5, 7–13, 15, 17, 18, and 20, which are all the claims pending in the application. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.²

¹ According to Appellants, the real party in interest is MasterCard International Incorporated. App. Br. 1.

² Our Decision refers to Appellants’ Appeal Brief (“App. Br.”) filed March 11, 2019; Reply Brief (“Reply Br.”) filed June 24, 2019; Examiner’s Answer (“Ans.”) mailed April 22, 2019; Final Office Action (“Final Act.”) mailed October 11, 2018; and original Specification (“Spec.”) filed July 25, 2013.

STATEMENT OF THE CASE

Appellants' invention is directed to a method and system "for recommending merchants to a potential consumer based at least in part on the potential consumer's search location and payment transaction histories of local payment cardholders" by "determin[ing] a total number of transactions and a number of local and unique cardholders for each merchant identifier [associated with each transaction of payment cardholders] based, at least in part, on the transaction information and/or the cardholder residential zip codes," and "[b]ased on the total number of transactions and the number of local and unique cardholders . . . generat[ing] a list of recommended merchants." Spec. ¶ 1; Abstract.

Claims 1, 12, and 18 are independent. Independent claim 1, reproduced below, is exemplary of the subject matter on appeal.

1. A merchant analyzer (MA) computer system for recommending a merchant to a candidate consumer, said MA computer system is in communication with a payment processor computer device and a plurality of user computer devices, said payment processor computer device being part of a payment processor network for processing payment card transactions between a plurality of cardholders and a plurality of merchants, said MA computer system comprising:

a memory device for storing data;

a database including a first data structure and a second data structure, the database communicatively coupled to the plurality of user computer devices, the first data structure configured to receive and store payment card transaction information including a merchant identifier, a type of merchant, a zip code of each merchant involved in a payment card transaction, an amount of purchase, a date of purchase, a cardholder identifier, and a zip code of each cardholder involved in the payment card transaction, the second data structure configured to include recommendation information

including a list of recommended merchants including merchant information, each merchant of the list of recommended merchants being linked to a total number of transactions for the corresponding merchant, a number of local cardholders associated with the corresponding merchant, and a number of unique cardholders for the corresponding merchant; and

a processor in communication with said memory device and the database, said processor programmed to:

collect payment card transaction information, from the payment processor computer device associated with the payment processor network configured to process payment card transactions, for transactions between a plurality of cardholders and a plurality of merchants during a predetermined time period, the payment card transaction information including a merchant identifier associated with each transaction;

analyze the payment card transaction information to identify a residential zip code associated with each cardholder included in the plurality of cardholders, each cardholder identified by a cardholder identifier;

analyze the payment card transaction information to identify a merchant zip code associated with each merchant included in the plurality of merchants, wherein the plurality of merchants includes brick and mortar merchant locations;

store, within the first data structure of the database for each payment card transaction included in the payment card transaction information, the identified residential zip code along with the corresponding cardholder identifier and the merchant zip code along with the corresponding merchant identifier;

determine the total number of transactions for each merchant identifier based, at least in part, on the payment card transaction information;

determine the number of local cardholders from the plurality of cardholders associated with each merchant identifier, wherein the number of local cardholders is determined by comparing the residential zip code stored in the

first data structure to the merchant zip code of each merchant identifier stored in the first data structure;

determine the number of unique cardholders from the plurality of cardholders associated with each merchant identifier based, at least in part, on the payment card transaction information, wherein the number of unique cardholders represent a number of cardholders engaged in at least one transaction with the corresponding merchant, wherein a cardholder is unique when the cardholder has not previously transacted with a particular merchant during the predetermined time period, and wherein the at least one transaction was performed after a predetermined time period;

generate a list of recommended merchants, wherein the list of recommended merchants reflects the total number of transactions for each merchant identifier, the number of local cardholders associated with each merchant identifier, and the number of unique cardholders associated with each merchant identifier;

store, in the second data structure of the database, the list of recommended merchants, wherein each merchant of the list of recommended merchants is linked to the total number of transactions for the corresponding merchant, the number of local cardholders associated with the corresponding merchant, and the number of unique cardholders for the corresponding merchant;

receive, from a user computer device of the plurality of user computer devices, in response to user inputs made using a merchant recommender computer application running on the user computer device, a geographic location to search for recommended merchants, wherein the user computer device is associated with the candidate consumer;

sort, based on i) the geographic location to search, ii) the total number of transactions for each merchant identifier, iii) the number of local cardholders associated with each merchant identifier, and iv) the number of unique cardholders associated with each merchant identifier, the list of recommended merchants previously stored in the second data structure to

generate a part of the list of recommended merchants to provide to the candidate consumer; and

transmit, to the user computer device, the generated part of the list of recommended merchants, wherein the user computer device is configured to display the part of the list of recommended merchants to the candidate consumer.

App. Br. 16–25 (Claims App.).

Examiner's Rejection

Claims 1, 2, 4, 5, 7–13, 15, 17, 18, and 20 stand rejected under 35 U.S.C. § 101 because the claimed invention is directed to an abstract idea without significantly more. Final Act. 2–14.

ANALYSIS

In support of the § 101 rejection of claims 1, 2, 4, 5, 7–13, 15, 17, 18, and 20, the Examiner determines Appellants' claims are "directed to a method of recommending merchants to a candidate consumer, which is an abstract idea in the field of [a] fundamental economic practice," the method "fall[ing] under certain methods of organizing human activity, and specifically under 'commercial or legal interactions', which . . . include 'advertising, marketing or sales activities or behaviors.'" Final Act. 2–3, 16; Ans. 15–16, 22 (citing USPTO, *2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50, 50–57 (Jan. 7, 2019) ("2019 Revised Guidance")).

The Examiner then determines the claim elements, when analyzed individually and as an ordered combination, do not amount to significantly more than the abstract idea. Final Act. 3, 8.

Legal Framework

To determine whether claims are patent eligible under § 101, we apply the Supreme Court’s two-step framework articulated in *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208 (2014). First, we determine whether the claims are directed to a patent-ineligible concept: laws of nature, natural phenomena, and abstract ideas. *Id.* at 216. If so, we then proceed to the second step to consider the elements of the claims “individually and ‘as an ordered combination’” to determine whether there are additional elements that “‘transform the nature of the claim’ into a patent-eligible application.” *Id.* at 217. In other words, the second step is to “search for an ‘inventive concept’—*i.e.*, 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.’” *Id.* at 218 (alteration in original).

The Federal Circuit has described the *Alice* step-one inquiry as looking at the “focus” of the claims, their “character as a whole,” and the *Alice* step-two inquiry as looking more precisely at what the claim elements add—whether they identify an “inventive concept” in the application of the ineligible matter to which the claim is directed. *See Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016); *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335–36 (Fed. Cir. 2016); *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015).

In an effort to achieve clarity and consistency in how the U.S. Patent and Trademark Office (the “Office”) applies the Supreme Court’s two-step framework, the Office recently published revised guidance interpreting governing case law and establishing a framework to govern all patent-

eligibility analysis under *Alice* and § 101, effective as of January 7, 2019.
Revised Guidance, 84 Fed. Reg. at 50–57.

2019 Revised Guidance

Under the Revised Guidance, we first look under *Alice* step 1 or “Step 2A” to whether the claim recites:

- (1) Prong One: any judicial exceptions, including certain groupings of abstract ideas (i.e., [i] mathematical concepts, [ii] mental processes, or [iii] certain methods of organizing human activity such as a fundamental economic practice or managing personal behavior or relationships or interactions between people); and
- (2) Prong Two: additional elements that integrate the judicial exception into a practical application (*see* Manual of Patent Examining Procedure (“MPEP”) §§ 2106.05(a)–(c), (e)–(h)).³

See 2019 Revised Guidance, 84 Fed. Reg. at 51–52, 55, Revised Step 2A, Prong One (Abstract Idea) and Prong Two (Integration into A Practical Application). 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” under *Alice* step 2 or “Step 2B.” *See* 2019 Revised Guidance at 56; *Alice*, 573 U.S. at 217–18.

For example, we look to whether the claim:

- 1) adds a specific limitation beyond the judicial exception that is not “well-understood, routine, conventional” in the field (*see* MPEP § 2106.05(d)); or
- 2) simply appends well-understood, routine, and conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.

³ All references to the MPEP are to the Ninth Edition, Revision 08.2017 (rev. Jan. 2018).

See 2019 Revised Guidance, 84 Fed. Reg. at 56.

Alice/Mayo—Step 1 (Abstract Idea)

Step 2A—Prongs 1 and 2 identified in the Revised Guidance

Step 2A—Prong 1

Appellants argue claims 1, 12, and 18 are not directed to an abstract idea. App. Br. 9, 11–13; Reply Br. 1–5. Appellants assert “[p]erforming data manipulations at th[e] level of specificity [recited in claims 1, 12, and 18] is not reasonably construed as a mere method of organizing human activity” because “the claim limitations themselves are narrowly focused on a particular sequence of actions performed by a computer device to analyze and aggregate actual payment card transaction data to determine which merchants are most visited by local and unique cardholders,” such actions being “technical limitations that involve specific data manipulations.” App. Br. 11; *see also* Reply Br. 2–3. Appellants further argue the claimed “collecting payment card transaction information is ‘not a mathematical concept, an identified method of organizing human activity, or a mental process’ for at least the same reasons that ‘collecting usage information’ [in Appeal No. 2017-002898]” was found not to be “a mathematical concept, an identified method of organizing human activity, or a mental process.” App. Br. 11.

Appellants’ arguments are not persuasive. At the outset, we note Appellants argue independent claims 1, 12, and 18 together, further providing specific arguments for claim 1. *See* App. Br. 9, 11; Reply Br. 5. Therefore, we select independent claim 1 as the representative claim for the group and address Appellants’ arguments thereto. *See* 37 C.F.R. § 41.37(c)(1)(iv) (2017).

Here, representative claim 1 recites a merchant analyzer (MA) computer system that performs a method resulting in a list of recommended merchants for an interested consumer. *See* Spec. ¶¶ 17 (describing “methods and systems for providing cardholders objective and reputable information for making entertainment decisions among numerous available merchants”), 96 (describing “a method and system of ranking merchants according to purchasing behaviors of local cardholders provid[ing] a cost-effective and reliable means for maintaining contact with a customer by merchants and a network interchange provider” to “engage cardholders and merchants in an enhanced purchasing experience in a cost-effective and reliable manner”).

More specifically, representative claim 1 recites the following limitations: (1) “receive and store payment card transaction information” including “a merchant identifier, a type of merchant, a zip code of each merchant involved in a payment card transaction, an amount of purchase, a date of purchase, a cardholder identifier, and a zip code of each cardholder involved in the payment card transaction,” store “recommendation information” including “a list of recommended merchants including merchant information, each merchant of the list of recommended merchants being linked to a total number of transactions for the corresponding merchant, a number of local cardholders associated with the corresponding merchant, and a number of unique cardholders for the corresponding merchant,” “store . . . for each payment card transaction included in the payment card transaction information, the identified residential zip code along with the corresponding cardholder identifier and the merchant zip code along with the corresponding merchant identifier,” and “store . . . the list of recommended merchants” with “each merchant of the list of

recommended merchants . . . [being] linked to the total number of transactions for the corresponding merchant, the number of local cardholders associated with the corresponding merchant, and the number of unique cardholders for the corresponding merchant”; (2) “collect payment card transaction information . . . for transactions between a plurality of cardholders and a plurality of merchants during a predetermined time period, the payment card transaction information including a merchant identifier associated with each transaction”; (3) “analyze the payment card transaction information to identify a residential zip code associated with each cardholder included in the plurality of cardholders, each cardholder identified by a cardholder identifier,” “analyze the payment card transaction information to identify a merchant zip code associated with each merchant included in the plurality of merchants, wherein the plurality of merchants includes brick and mortar merchant locations,” “determine the total number of transactions for each merchant identifier based, at least in part, on the payment card transaction information,” “determine the number of local cardholders from the plurality of cardholders associated with each merchant identifier, wherein the number of local cardholders is determined by comparing the residential zip code . . . to the merchant zip code of each merchant identifier,” “determine the number of unique cardholders from the plurality of cardholders associated with each merchant identifier based, at least in part, on the payment card transaction information” wherein “the number of unique cardholders represent a number of cardholders engaged in at least one transaction with the corresponding merchant” and “a cardholder is unique when the cardholder has not previously transacted with a particular merchant during the predetermined time period, and wherein the at least one

transaction was performed after a predetermined time period”; (4) “generate a list of recommended merchants, wherein the list of recommended merchants reflects the total number of transactions for each merchant identifier, the number of local cardholders associated with each merchant identifier, and the number of unique cardholders associated with each merchant identifier”; (5) “receive [from a candidate consumer’s device] . . . a geographic location to search for recommended merchants,” “sort, based on i) the geographic location to search, ii) the total number of transactions for each merchant identifier, iii) the number of local cardholders associated with each merchant identifier, and iv) the number of unique cardholders associated with each merchant identifier, the list of recommended merchants” to “generate a part of the list of recommended merchants to provide to the candidate consumer,” and “transmit, to the user computer device, the generated part of the list of recommended merchants”; and (6) “display the part of the list of recommended merchants to the candidate consumer.” App. Br. 16–18 (Claim 1). These limitations, under their broadest reasonable interpretation, recite ranking and recommending merchants to potential consumers to improve consumer experience and increase the merchants’ sales, which is a fundamental economic practice that is common in the financial and commercial industry. *See* Spec. ¶¶ 2–3; *Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1370 (Fed. Cir. 2015) (“An advertisement taking into account the time of day and tailoring the information presented to the user based on that information is a[] ‘fundamental . . . practice long prevalent in our system,’” and “the fact that the web site returns the pre-designed ad more quickly than a newspaper could send the user a location-specific advertisement insert

does not confer patent eligibility”); *OIP Technologies, Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362 (Fed. Cir. 2015) (the “concept of ‘offer based pricing’ is similar to other ‘fundamental economic concepts’ found to be abstract ideas by the Supreme Court and this court”).

For example, limitation (1) in claim 1 describes accessing and storing payment card transaction information, merchant data including merchant locations, consumer data including merchants frequented by the consumers, and merchant recommendations, which is an activity ordinarily performed by business entities (such as market research entities) that cumulate merchant data, and by payment processing networks and credit card networks that cumulate consumer transaction data. Limitation (2) in claim 1 describes collecting payment transaction data including cardholders’ transaction information and merchants associated with the transactions, which is an activity ordinarily performed by businesses and other entities associated with (or working with) a payment or card network to study consumer interests and market segmentation. *See* Spec. ¶¶ 25, 27, 29, 33, 61. Limitation (3) in claim 1 describes an analysis of consumers’ transaction information to determine consumers’ shopping locations and shopping activity at street stores and other merchants having physical locations identified by zip codes—activities ordinarily performed by market research entities when cumulating and analyzing consumer data to determine consumers’ interests and shopping behavior. Limitation (4) in claim 1 describes ranking merchants based on consumer interest, which are activities ordinarily performed by marketing entities and services that analyze commercial and retail activity to provide retail and shopping recommendations to potential customers. Limitation (5) in claim 1 describes

providing merchant lists to consumers based on consumers' geographic locations, which is an activity ordinarily performed by marketing entities providing targeted shopping (and other commercial) recommendations based on location (e.g., zip code, town, or city). *See* Spec. ¶ 66. Limitation (6) in claim 1 describes displaying merchant recommendations to a consumer—an activity ordinarily performed by a marketing service providing shopping information to potential consumers.

Thus, limitations (1)–(6) in claim 1 recite ranking merchants and recommending merchants to potential consumers to improve consumer experience and increase the merchants' sales, which is a known business activity and a fundamental economic practice in our system of commerce, similar to other concepts identified by the courts as abstract ideas. For example, like the risk hedging in *Bilski*, the intermediated settlement in *Alice*, and customizing of information based on information known about a user in *Intellectual Ventures*, ranking merchants and recommending them to consumers is a fundamental business practice long prevalent in our system of commerce. *Ans.* 15–16; *see Bilski v. Kappos*, 561 U.S. 593, 599, 611–12 (2010) (risk hedging); *Alice*, 573 U.S. at 215–19 (intermediated settlement of traded or exchanged financial obligations to mitigate the risk that one party will not perform); *Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1369 (Fed. Cir. 2015) (“tailoring content based on the viewer’s location or address. . . . is ‘a fundamental . . . practice long prevalent in our system,’” similar to using “newspaper inserts [that] had often been tailored based on information known about the customer—for example, a newspaper might advertise based on the customer’s location”); *Affinity Labs of Texas, LLC v. Amazon.com*, 838 F.3d 1266, 1269, 1271

(Fed. Cir. 2016) (“[T]he concept of delivering user-selected media content to portable devices [(in a method for targeted advertising in which an advertisement is selected for delivery to the user of a portable device based on at least one piece of demographic information about the user)] is an abstract idea,” and “customizing information based on . . . information known about the user’ is an abstract idea” (citing *Intellectual Ventures*, 792 F.3d at 1369).); *Morsa v. Facebook, Inc.*, 77 F. Supp. 3d 1007, 1013 (C.D. Cal. 2014), *aff’d*, 622 F. App’x 915 (Fed. Cir. 2015) (“The concept of gathering information about one’s intended market and attempting to customize the information then provided is as old as the saying, ‘know your audience.’” (quoting *OpenTV, Inc. v. Netflix Inc.*, 76 F. Supp. 3d 886, 893 (N.D. Cal. 2014))).

Ranking merchants and recommending them to consumers is also a building block of a market economy and, like content customization and ad targeting in *Intellectual Ventures I* and *Affinity Labs*, is an “abstract idea” beyond the scope of § 101. *See Alice*, 573 U.S. at 219. Thus, similar to the concept of intermediated settlement in *Alice*, the concept of hedging in *Bilski*, and customizing information based on information known about users in *Intellectual Ventures*, the concept of ranking merchants and recommending them to consumers (as in Appellants’ claim 1) “[is] a fundamental economic practice long prevalent in our system of commerce.” *See Alice*, 573 U.S. at 219; *Bilski*, 561 U.S. at 611–12 (“Claims 1 and 4 in petitioners’ application explain the basic concept of hedging, or protecting against risk.”).

We, therefore, conclude limitations (1)–(6) in representative claim 1, and similar limitations in grouped claims 12 and 18, recite ranking and

recommending merchants to consumers, which is a fundamental economic practice and one of the certain methods of organizing human activity identified in the Revised Guidance, and therefore, an abstract idea. Ans. 15–16; *see* 2019 Revised Guidance (*Revised Step 2A, Prong One*), 84 Fed. Reg. at 52 (describing an abstract idea category of “[c]ertain methods of organizing human activity—fundamental economic principles or practices . . . commercial or legal interactions (including . . . advertising, marketing or sales activities or behaviors; business relations)”), 54.

Appellants argue the claimed “collecting payment card transaction information is ‘not . . . an identified method of organizing human activity . . .’ for at least the same reasons that ‘collecting usage information’ [in Appeal No. 2017-002898]” was found not to be “an identified method of organizing human activity.” App. Br. 11. We disagree because (1) Appeal No. 2017-002898 does not have any precedential value relative to the instant application; (2) as recognized by the Examiner, Appellants’ claimed collection of payment card transaction information is “not fully analogous” to the “collecting” in Appeal No. 2017-002898 (Ans. 19–20); and (3) the claims in Appeal No. 2017-002898 were found patent eligible not because of the “collecting usage information” but because “the claims are directed to a technological solution to a technical problem.” *See Ex Parte Fanaru*, Appeal No. 2017-002898, 2019 WL 325946, at *5 (PTAB Jan. 17, 2019). “[C]ollecting information” alone, without more, is “within the realm of abstract ideas.” *Elec. Power Grp.*, 830 F.3d at 1353–54; *see also Internet Patents Corp.*, 790 F.3d at 1349; *Digitech Image Techs., LLC v. Elecs. for Imaging, Inc.*, 758 F.3d 1344, 1351 (Fed. Cir. 2014); *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1370 (Fed. Cir. 2011); *Smart Systems*

Innovations v. Chicago Transit Auth., 873 F.3d 1364, 1371–72 (Fed. Cir. 2017) (claims to “acquiring identification data from a bankcard, using the data to verify the validity of the bankcard, and denying access to a transit system if the bankcard is invalid” are “directed to the formation of financial transactions in a particular field (i.e., mass transit) and data collection related to such transactions,” thereby “directed to the collection, storage, and recognition of data” and thus “directed to an abstract idea”).

In conclusion, representative claim 1, and grouped independent claims 12 and 18, recite a fundamental economic practice.

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

Under *Revised Step 2A, Prong Two* of the Revised Guidance, Appellants argue the “claims provide a specific improvement over prior systems and are directed to a practical application, such that the present claims are not directed to an abstract idea under the Second Prong of Step 2A.” App. Br. 12; Reply Br. 3–5. In particular, Appellants argue the claims “recite a specific manner of electronically analyzing and aggregating actual payment card transaction data to determine which merchants are most visited by local and unique cardholders, providing a specific improvement over prior systems.” App. Br. 12. Appellants assert the claims recite “technical limitations that involve specific data manipulations” and “provide an improvement to a specific technology”—particularly, to “*merchant recommendation system technology*”—similar to technological improvements provided by the claims in *McRO* and *Enfish*. App. Br. 11–13 (citing *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299 (Fed. Cir. 2016); *Enfish*, 822 F.3d 1327); Reply Br. 4–5. According to Appellants, “instead of relying on user-submitted scores and reviews, the systems and

methods recited in the present claims aggregate and analyze *actual payment card transaction data* to determine which merchants are most visited by local cardholders and unique cardholders,” providing “improved and more accurate merchant recommendations” and “*an improvement to the technical field of merchant recommendation systems.*” App. Br. 12; *see also* Reply Br. 3–4.

However, we discern no additional element (or combination of elements) recited in Appellants’ claims 1, 12, and 18 that may have integrated the judicial exception into a practical application. *See* 2019 Revised Guidance, 84 Fed. Reg. at 54–55. For example, Appellants’ claimed additional elements (e.g., “MA computer system,” “payment processor computer device,” “payment processor network,” “user computer devices,” “memory device,” “database including a first data structure and a second data structure,” “processor,” and “computer-readable storage media”) 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); Ans. 16, 19, 21.

Here, Appellants’ claim 1 merely links the use of a judicial exception to a particular technological environment. That is, although Appellants’ claim recites hardware components (generic processors and computer devices, a memory, database, and storage media), the processors, computer

devices, memory, database, and storage media are configured to perform numerous real-world functions and operations that computer components would normally be expected to perform, adding nothing of substance to the underlying abstract idea. Ans. 16. It is clear from the claims and the Specification (describing “a Windows® environment” or a “system . . . run on a mainframe environment and a UNIX® server environment” with an “application [that] is flexible and designed to run in various different environments without compromising any major functionality,” “[c]lient systems 114 [that] could be any device capable of interconnecting to the Internet including a web-based phone, PDA, or other web-based connectable equipment,” “a generic computing device 800 and a generic mobile computing device 850, which may be used with the techniques described here,” the “[c]omputing device 800 . . . intended to represent various forms of digital computers, such as laptops, desktops, workstations, personal digital assistants, servers, blade servers, mainframes, and other appropriate computers,” “a standard server 820,” a “processor . . . [that] refers to central processing units, microprocessors, microcontrollers, reduced instruction set circuits (RISC), application specific integrated circuits (ASIC), logic circuits, and any other circuit or processor capable of executing the functions described herein,” “a transaction card system, such as a credit card payment system using the MasterCard® interchange network,” a “memory 804 [that] is a volatile memory unit or units” or “a non-volatile memory unit or units . . . [or] another form of computer-readable medium, such as a magnetic or optical disk,” and “a single database having separated sections or partitions” or “multiple databases, each being separate from each other”), these limitations require no improved processor, computer device, memory,

database, or storage medium. *See* Spec. ¶¶ 26, 29, 37, 40, 55, 75–78, 80, 85, 92–94; Ans. 19, 21, 23. Thus, the claims’ limitations are **not** indicative of “integration into a practical application.” Rather, the processors and computer devices, memory, and database are readily available computing elements using their already available basic functions as tools in executing the claimed ranking and recommending merchants. *See SAP Am., Inc. v. InvestPic LLC*, 898 F.3d 1161 (Fed. Cir. 2018). Contrary to Appellants’ arguments (*see* App. Br. 11–13), claim 1 does not recite “technical limitations” or technical improvements of electronic data manipulation and aggregation techniques.

We are also unpersuaded by Appellants’ arguments that the claims are “directed to a practical application” under the Step 2A, Prong Two of the Revised Guidance because the claims improve the technical field of merchant recommendation systems. *See* App. Br. 12; Reply Br. 4. For business-centric inventions such as Appellants’ invention involving ranking and recommending merchants to consumers, the “integration into a practical application” prong 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’ arguments (*see* App. Br. 12; Reply Br. 4), providing “improved and more accurate merchant recommendations” to consumers 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). Providing improved merchant recommendations to consumers is neither technology nor a technical solution to a technological problem. Ans. 16, 20–21. Instead, limitations of Appellants’ claims 1, 12, and 18 recite the abstract idea, and thus, are not “additional elements recited in the claim *beyond* the judicial exception.” 2019 Revised Guidance, 84 Fed. Reg. at 54–55 (emphasis added). In contrast to *DDR* and *Amdocs*, Appellants’ abstract idea of ranking and recommending merchants to consumers 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. Nor does Appellants’ invention entail, like *Amdocs*, any “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. Instead, the solution proposed by Appellants is simply to improve merchant recommendations and consumer experience, and not to improve the technology.

We also note Appellants’ reliance on *McRO* and *Enfish* is misplaced. *See* App. Br. 12. For example, *McRO*’s ’576 patent (U.S. Patent No. 6,307,576) describes computer software for matching audio to a 3D animated mouth movement to provide lip-synched animation. *McRO*’s claims contain (i) specific limitations regarding a set of rules that “define[] a morph weight set stream as a function of phoneme sequence and times associated with said phoneme sequence” to enable computers to produce “accurate and realistic lip synchronization and facial expressions in animated characters” (*McRO*, 837 F.3d at 1313) and, when viewed as a whole, are directed to (ii) a “technological improvement over the existing, manual 3–D animation techniques” that uses “limited rules in a process specifically designed to achieve an improved technological result in conventional industry practice.” *Id.* at 1316. *Enfish*’s data storage and retrieval method and system recites a “self-referential table . . . [for a computer database] [which] is a specific type of data structure designed to improve the way a computer stores and retrieves data in memory.” *Enfish*, 822 F.3d at 1336, 1339.

In contrast to *Enfish* and *McRO*, Appellants’ Specification and claims do not describe technological improvements, or a specific improvement to the way computers store and retrieve data in memory. *See Enfish*, 822 F.3d at 1336, 1339; Ans. 16, 20–21. Rather, Appellants’ Specification and claims describe “methods and systems for recommending merchants to a potential

consumer based at least in part on the potential consumer’s search location and payment transaction histories of local payment cardholders.” *See* Spec. ¶¶ 1, 17 (“methods and systems for providing cardholders objective and reputable information for making entertainment decisions among numerous available merchants”), 96 (“method and system of ranking merchants according to purchasing behaviors of local cardholders provid[ing] a cost-effective and reliable means for maintaining contact with a customer by merchants and a network interchange provider” to “engage cardholders and merchants in an enhanced purchasing experience in a cost-effective and reliable manner”).

For these reasons, we agree with the Examiner’s determination that Appellants’ claims 1, 2, 4, 5, 7–13, 15, 17, 18, and 20 are directed to an abstract idea that does not integrate into a practical application. *See* Ans. 15–21.

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

In the second step of the *Alice* inquiry, Appellants argue claims 1, 12, and 18 recite significantly more than a judicial exception for the reasons that: (1) “[l]ike the filtering system of *BASCOM*, the specific arrangement and distribution of functionality provided in the pending claims facilitates the practical application” of “analyzing electronic payment transaction information and data signals from a payment network to generate merchant recommendations for displaying to a consumer” using a “novel combination of correlating electronic data signals, at a central location (e.g., the MA computer device), transmitted by merchant computing devices to the payment processing network” (App. Br. 13–14 (citing *Bascom Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016)));

Reply Br. 5–6); (2) similar to *Bascom*, the claims include an “inventive concept . . . in the non-conventional and non-generic arrangement of pieces” (App. Br. 13); and (3) the “claims do not merely recite an MA computer device that is a server computer that collects and sends data as part of routine and conventional Internet activities,” rather “the MA computer device is more than a generic server computer that collects and sends data” and “the MA computer device is recited as part of a specific computer architecture” in which the “MA computer system is in communication with a payment processor computer device and a plurality of user computer devices,” thereby “enabl[ing] the MA computer device to leverage actual payment card transaction data to generate a list of recommended merchants” (Reply Br. 5–6).

Appellants’ arguments are not persuasive. 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) “[a]dds 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 2019 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*, 573 U.S. at 221. For example, Appellants’ abstract idea of ranking and recommending merchants is not rooted in computer technology, and 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” as the claims in *DDR*. *DDR*, 773 F.3d at 1257. Rather, Appellants’ claim 1 addresses a *business problem* (presenting better recommendations of merchants, e.g., restaurants) with a *business solution* (recommending restaurants based on local residents’ interactions with those restaurants, and based on new clients’ interactions with the restaurants) rather than a technological solution. Ans. 20; *see* Spec. ¶¶ 1, 3, 20–23, 63, 73, 96. Appellants also have not demonstrated their claimed generic processors, memory, database, and storage media are 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 generic processor, computer system, user devices, memory, and database structures storing, sending and receiving data by generic data communication techniques, and analyzing data to produce merchant recommendations. Thus, we are not persuaded that claim 1 recites an improved computer architecture, or an “MA computer device [that] is more than a generic server computer that collects and sends data” as Appellants assert. *See* Reply Br. 5–6.

With respect to *Bascom*, Appellants’ reliance on *Bascom* is also misplaced. For example, *Bascom*’s patent-eligible ordered combination of claim limitations contains an “inventive concept [that] harnesses [a] . . . technical feature of network technology in a filtering system by associating

individual accounts with their own filtering scheme and elements while locating the filtering system on an ISP [(Internet Service Provider)] server.” See *Bascom*, 827 F.3d at 1350. *Bascom*’s claimed ordered combination “improve[s] the performance of the computer system itself” with a “technology-based solution . . . to filter content on the Internet that overcomes existing problems with other Internet filtering systems.” See *Bascom*, 827 F.3d at 1351–52 (internal citation omitted). Appellants’ abstract idea of ranking and recommending merchants for consumers does not provide any particular practical application as required by *Bascom*. Instead, Appellants’ invention uses generically-claimed and arranged computing elements to perform the abstract idea. Ans. 21–23. Appellants assert that “[s]imilar to *BASCOM*, Appellant[s]’ recited system includes the use of elements **at a unique location that provides an advantage over the prior art**” and, thus, “Appellant[s] ‘[are] not claiming the idea of [recommending merchants to a candidate consumer] simply applied to the Internet. . . . [but] is instead claiming a technology-based solution.” App. Br. 14 (citing *Bascom*, 827 F.3d at 1350–51). We remain unpersuaded because Appellants’ claim 1 does not recite *specific locations* as in *Bascom*’s claims. Particularly, *Bascom*’s inventive concept includes “the installation of a filtering tool at a specific location, remote from the end-users, with customizable filtering features specific to each end user” thereby “giv[ing] the filtering tool both the benefits of a filter on a local computer and the benefits of a filter on the ISP server” and “giv[ing] users the ability to customize filtering for their individual network accounts.” See *Bascom*, 827 F.3d at 1350, 1352. The Federal Circuit recognized that *Bascom*’s installation of an Internet content filter *at a particular network location* is “a

technical improvement over prior art ways of filtering such content” because such an arrangement advantageously allows the Internet content filter to have “both the benefits of a filter on a local computer and the benefits of a filter on the ISP server” and “give[s] users the ability to customize filtering for their individual network accounts.” *Bascom*, 827 F.3d at 1350, 1352.

In contrast, Appellants’ claim 1 recites a MA computer system that “is in communication with a payment processor computer device and a plurality of user computer devices” and “collect[s] payment card transaction information, from the payment processor computer device associated with the payment processor network,” which is dissimilar from *Bascom*’s

inventive concept [that] harnesses this technical feature of network technology [installation of a filtering tool at a specific location, remote from the end-users, with customizable filtering features specific to each end user] in a filtering system by associating individual accounts with their own filtering scheme and elements while locating the filtering system on an ISP server.

See Bascom, 827 F.3d at 1350. Thus, we disagree with Appellants that claim 1 recites a “non-conventional and non-generic arrangement of pieces,” or that it “claim[s] a technology-based solution” similar to *Bascom* because Appellants’ claimed “system includes the use of elements **at a unique location**” and “correlate[s] electronic data signals, *at a central location*.” *See* App. Br. 13–14 (emphasis added).

Additionally, Appellants’ Specification describes generic computing elements performing generic data processing, storage, and display functions, and Appellants’ claim 1 uses generic technology to perform data analysis and calculating steps. *See* Spec. ¶¶ 26, 29, 37, 40, 55, 75–78, 80, 85, 92–94. “[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). 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*, 573 U.S. at 222–23).

Because Appellants’ independent claims 1, 12, and 18 are directed to a patent-ineligible abstract concept and do not recite an “inventive concept” by providing a solution to a technical problem under the second step of the *Alice* analysis, we sustain the Examiner’s § 101 rejection of independent claims 1, 12, and 18, and their dependent claims 2, 4, 5, 7–11, 13, 15, 17, and 20 not separately argued.

CONCLUSION

On the record before us, we conclude Appellants have not demonstrated the Examiner erred in rejecting claims 1, 2, 4, 5, 7–13, 15, 17, 18, and 20 under 35 U.S.C. § 101.

DECISION

As such, we AFFIRM the Examiner’s rejection of claims 1, 2, 4, 5, 7–13, 15, 17, 18, and 20 under 35 U.S.C. § 101.

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