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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* WALTER LO FARO and CHRISTOPHER J. MERZ

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Appeal 2018-007138  
Application 13/834,229  
Technology Center 3600

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Before ANTON W. FETTING, KENNETH G. SCHOPFER, and  
BRADLEY B. BAYAT, *Administrative Patent Judges*.

FETTING, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE<sup>1</sup>

Walter Lo Faro and Christopher J. Merz (Appellant<sup>2</sup>) seeks review under 35 U.S.C. § 134 of a Final Rejection of claims 1, 7, 11–14, 20, 24–27,

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<sup>1</sup> Our decision will make reference to the Appellant’s Appeal Brief (“App. Br.,” filed February 28, 2018) and Reply Brief (“Reply Br.,” filed July 3, 2018), and the Examiner’s Answer (“Ans.,” mailed May 4, 2018), and Final Action (“Final Act.,” mailed October 13, 2017).

<sup>2</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. 1).

33, 34, and 37–42, the only claims pending in the application on appeal. We have jurisdiction over the appeal pursuant to 35 U.S.C. § 6(b).

The Appellant invented a way of recommending a competitor set of merchants to a merchant requesting such a competitor set, wherein the competitor set is based on payment transactions initiated at the competitor set of merchants and at the requestor merchant. Specification para. 1.

An understanding of the invention can be derived from a reading of exemplary claim 14, which is reproduced below (bracketed matter and some paragraphing added).

14. A computer-implemented method

for developing a merchant score representing a measure of closeness of a competitor to a subscriber merchant based upon actual electronic payment card transaction data,

said method using a merchant analytic (MA) computer system,

wherein the MA computer system is in communication with a memory device for storing electronic data,

said method comprising:

[1] receiving,

at the MA computer system,

electronic payment card transaction data from a point of sale terminal,

the electronic payment card transaction data associated with a plurality of cardholders from a payment network,

the electronic payment card transaction data

including electronic data processed over the payment network

and

relating to a plurality of purchases made by the plurality of cardholders using payment cards at a plurality of merchants,

the purchases satisfying a first criterion;

[2] receiving,

at the MA computer system,

merchant descriptive information in an electronic format;

[3] determining location information of each of the plurality of merchants relative to at least one of a predetermined selectable location and a location of a subscriber merchant;

[4] associating,

from the received electronic payment card transaction data,

the subscriber merchant with a competitor merchant from the plurality of merchants to form a merchant pair;

[5] generating a matrix of merchant associations for the plurality of merchants

including a number of electronic payment card transactions between a payment cardholder and each merchant of the merchant pair,

wherein the generated matrix is configured to organize the plurality of merchants in separate rows, respectively, against a column of the subscriber merchant,

and

wherein the intersection of the subscriber merchant column and one of the merchant rows represents a block including the respective number of electronic payment transactions performed by the same payment cardholder at both merchants of the respective merchant pair;

[6] incrementing a counter associated with each block, respectively, of the generated matrix

for each instance of one of the payment cards being used with both merchants of the respective merchant pair;

[7] performing website scraping to retrieve subscriber merchant preference information,

wherein the subscriber merchant preference information represents a measurement of a preference of the subscriber merchant relative to the competitor merchant;

[8] generating a preference vector including the subscriber merchant preference information associated with each merchant of the plurality of merchants;

[9] determining a merchant ranking vector

based on the preference vector and the matrix of merchant associations,

the merchant ranking vector including a merchant rank associated with each merchant of the plurality of merchants,

the merchant rank representing a measurement of a general popularity of each merchant relative to the plurality of merchants that is adjusted according to the subscriber merchant preference information;

[10] generating a neutral preference vector

including generic subscriber merchant preference information

that is equal for each merchant of the plurality of merchants,

wherein the neutral preference vector represents an equal preference of the subscriber merchant for the plurality of merchants;

[11] determining a neutral merchant ranking vector

based on the neutral preference vector applied to the matrix of merchant associations,

the neutral merchant ranking vector including a neutral merchant rank associated with each merchant of the plurality of merchants,

the neutral merchant rank representing a measurement of general popularity of each merchant relative to the plurality of merchants;

[12] determining a merchant score vector for the subscriber merchant

based on the neutral merchant ranking vector and the merchant ranking vector,

the merchant score vector including a merchant score for each merchant of the plurality of merchants,

the merchant score indicating the difference between the merchant rank and the neutral merchant rank associated with each merchant of the plurality of merchants;

[13] transmitting the merchant scores from the determined merchant score vector to the subscriber merchant

wherein a higher merchant score represents a merchant that is a closer competitor to the subscriber merchant;

and

[14] activating an electronic device of the subscriber merchant

to display a recommended ranking of the subscriber merchant with respect to the competitor merchant based on the transmitted merchant scores and a value of the counter.

Claims 1, 7, 11–14, 20, 24–27, 33, 34, and 37–42 stand rejected under 35 U.S.C. § 101 as directed to a judicial exception without significantly more.

## ISSUES

The issues of eligible subject matter turn primarily on whether the claims recite more than abstract conceptual advice of results desired.

## FACTS PERTINENT TO THE ISSUES

The following enumerated Findings of Fact (FF) are believed to be supported by a preponderance of the evidence.

### Facts Related to Claim Construction

01. The disclosure contains no lexicographic definition of “vector.”
02. The customary meaning of a “vector” in computer programming is a one dimensional array.<sup>3</sup>
03. The disclosure contains no lexicographic definition of “website scraping.”
04. The customary meaning of “web scraping” is the set of techniques used to automatically get some information from a website instead of manually copying it.<sup>4</sup>
05. The disclosure contains no lexicographic definition of “activating.”

## ANALYSIS

We initially construe “vector.” This is not lexicographically defined, but the customary meaning in programming is a one dimensional array. We construe “vector” as a one dimensional array. In other words, it is a set of data because all data, no matter the nominal structure, is physically stored in a one dimensional array defined by its addressing.

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<sup>3</sup> *Vector Definition*, Free On-Line Dictionary of Computing, <http://foldoc.org/vector>. (last visited Jan. 15, 2020.)

<sup>4</sup> Eloisa Vargiu, Exploiting web scraping in a collaborative filtering based approach to web advertising, *Artificial Intelligence Research*, 2013, Vol. 2, No. 1, December 5, 2012 <https://pdfs.semanticscholar.org/25cf/21117f60d80b32c6d2868defc39e39f74109.pdf>

We next construe “website scraping.” This is not lexicographically defined, nor are any examples described. The Specification refers to it in paragraphs 22, 64, and 72 only, and then only generically. The customary meaning of web scraping is the set of techniques used to automatically get some information from a website instead of manually copying it. This is a well developed methodology that the Specification refers to generically. Thus we construe website scraping as using conventional programming to automatically retrieve website data.

We next construe the limitation “activating an electronic device of the subscriber merchant to display a recommended ranking.” Claim 14, limitation 14. The Specification does not lexicographically define or even use the word “activate” or its alternatives such as “activating.” Appellant cites Specification paragraphs 77 and 78 for support. App. Br. 6. The only support for such activation is in providing a list in “The MA computer system then provides 720 a list of potential competitor merchants 24 to the subscriber merchant 23, and/or to a market analyst retained by subscriber merchant 23, wherein the list is based on the sorted merchant score vector.” Spec. Para. 77. In particular, there is no description of turning a device on as activation, so activation is being recited in the claims in the sense of getting a device to display something by sending content to it. Thus we construe this limitation as providing a list on an electronic device of the subscriber merchant to display a recommended ranking.

STEP 1<sup>5</sup>

Claim 14, as a method claim, nominally recites one of the enumerated categories of eligible subject matter in 35 U.S.C. § 101. The issue before us is whether it is directed to a judicial exception without significantly more.

STEP 2

The Supreme Court:

set forth a framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts. First, . . . determine whether the claims at issue are directed to one of those patent-ineligible concepts. If so, we then ask, “[w]hat else is there in the claims before us? To answer that question, . . . consider the elements of each claim both individually and “as an ordered combination” to determine whether the additional elements “transform the nature of the claim” into a patent-eligible application. [The Court] described step two of this analysis as a 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.”

*Alice Corp., Pty. Ltd. v CLS Bank Intl*, 573 U.S. 208, 217–18 (2014)

(citations omitted) (*citing Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66 (2012)). To perform this test, we must first determine what the claims are directed to. This begins by determining whether the claims recite one of the judicial exceptions (a law of nature, a natural phenomenon, or an abstract idea). Then, if claims recite a judicial exception<sup>5</sup>, determining whether the claims at issue are directed to the recited judicial exception, or whether the recited judicial exception is integrated into

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<sup>5</sup> For continuity of analysis, we adopt the steps nomenclature from 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) (“Revised Guidance”).

a practical application of that exception, i.e., that the claims “apply, rely on, or use the judicial exception in a manner that imposes a meaningful limit on the judicial exception, such that the claim is more than a drafting effort designed to monopolize the judicial exception.” Revised Guidance at 54. If the claims are directed to a judicial exception, then finally determining whether the claims provide an inventive concept because the additional elements recited in the claims provide significantly more than the recited judicial exception.

STEP 2A Prong 1

At a high level, and for our preliminary analysis, we note that method claim 14 recites receiving transaction and merchant descriptive data, determining merchant location data, associating two merchants, generating and incrementing a matrix of counters arrayed by merchant associations, web scraping data, generating a preference vector, determining a merchant ranking vector and generating a neutral preference vector, determining another neutral preference vector and a merchant score vector, and transmitting scores and activating a device to display a ranking. Determining, associating, incrementing, ranking, and generating data are rudimentary forms of data analysis. As construed supra, web scraping is conventional generic data retrieval and activating a device is displaying on a device. Thus, claim 14 recites receiving, analyzing, transmitting, and displaying data. None of the limitations recite technological implementation details for any of these steps, but instead recite only results desired by any and all possible means.

From this we see that claim 14 does not recite the judicial exceptions of either natural phenomena or laws of nature.

Under Supreme Court precedent, claims directed purely to an abstract idea are patent in-eligible. As set forth in the Revised Guidance, which extracts and synthesizes key concepts identified by the courts, abstract ideas include (1) mathematical concepts<sup>6</sup>, (2) certain methods of organizing human activity<sup>7</sup>, and (3) mental processes<sup>8</sup>. Among those certain methods of organizing human activity listed in the Revised Guidance are commercial or legal interactions. Like those concepts, claim 14 recites the concept of providing market information subscriptions. Specifically, claim 14 recites operations that would ordinarily take place in advising one to sort merchants based on scores derived from various arrays of data in turn derived from web site data and counts of card transactions. The advice to sort merchants based on scores derived from various arrays of data in turn derived from web site data and counts of card transactions involves providing market research, which is an economic act, and scoring merchants, which is an act ordinarily performed in the stream of market research commerce. For example, claim 14 recites “display a recommended ranking of the subscriber merchant,” which is an activity that would take place whenever one is providing market

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<sup>6</sup> See, e.g., *Gottschalk v. Benson*, 409 U.S. 63, 71–72 (1972); *Bilski v. Kappos*, 561 U.S. 593, 611 (2010); *Mackay Radio & Telegraph Co. v. Radio Corp. of Am.*, 306 U.S. 86, 94 (1939); *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1163 (Fed. Cir. 2018).

<sup>7</sup> See, e.g., *Bilski*, 561 U.S. at 628; *Alice*, 573 U.S. at 219-20; *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715 (Fed Cir. 2014); *Smart Sys. Innovations, LLC v. Chicago Transit Auth.*, 873 F.3d 1364, 1383 (Fed. Cir. 2017); *In re Marco Guldenaar Holding B.V.*, 911 F.3d 1157, 1160–61 (Fed. Cir. 2018).

<sup>8</sup> See, e.g., *Benson*, 409 U.S. at 67; *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1371–72 (Fed. Cir. 2011); *Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1318 (Fed. Cir. 2016).

research about comparisons among merchants. Similarly, claim 1 recites “developing a merchant score representing a measure of closeness,” which is also characteristic of market research.

The Examiner determines the claims to be directed to using matrices for determination of a merchant rank. Final Act. 7.

The preamble to claim 14 recites that it is a method for developing a merchant score representing a measure of closeness of a competitor to a subscriber merchant based upon actual electronic payment card transaction data. The steps in claim 14 result in displaying a recommended ranking of merchants based on scores absent any technological mechanism other than a conventional computer for doing so.

As to the specific limitations, limitations 1, 2, and 7 recite receiving data. That a limitation does so using conventional web scraping techniques is no more than using conventional programs available on generic computers. Limitations 13 and 14 recite insignificant transmitting and displaying of market research data, which advise one to apply generic functions to get to these results. Limitations 3–6 and 8–12 recite rudimentary forms of data analysis, albeit using one and two dimension arrays (vectors and matrices). The limitations thus recite advice for sorting merchants based on scores derived from various arrays of data in turn derived from web site data and counts of card transactions. To advocate sorting merchants based on scores derived from various arrays of data in turn derived from web site data and counts of card transactions is conceptual advice for results desired and not technological operations.

The Specification at paragraph 1 describes the invention as relating to recommending a competitor set of merchants to a merchant requesting such

a competitor set, wherein the competitor set is based on payment transactions initiated at the competitor set of merchants and at the requestor merchant. Thus, all this intrinsic evidence shows that claim 14 recites scoring and sorting merchants in a market relative to some neutral merchant rank, i.e. providing market information subscriptions. This is consistent with the Examiner's determination.

This in turn is an example of commercial or legal interactions as a certain method of organizing human activity because market research is a fundamental component of generating marketing transactions. The concept of providing market information subscriptions by sorting merchants based on scores derived from various arrays of data in turn derived from web site data and counts of card transactions is one idea for researching merchant status. The steps recited in claim 14 are part of how this might conceptually be premised.

Our reviewing court has found claims to be directed to abstract ideas when they recited similar subject matter. *Digitech Image Technologies, LLC v. Electronics for Imaging, Inc.*, 758 F.3d 1344, 1351 (Fed. Cir. 2014) (analyzing data sets); *Accenture Global Servs., GmbH v. Guidewire Software, Inc.*, 728 F.3d 1336, 1338 (Fed. Cir. 2013) (generating rule-based tasks for processing an insurance claim); *Bancorp Servs., L.L.C. v. Sun Life Assur. Co. of Canada (U.S.)*, 687 F.3d 1266, 1278 (Fed. Cir. 2012) (managing a stable value protected life insurance policy); *Dealertrack, Inc. v. Huber*, 674 F.3d 1315, 1333 (Fed. Cir. 2012) (processing loan information through a clearinghouse); *Content Extraction and Transmission LLC v. Wells Fargo Bank*, 776 F.3d 1343, 1347 (Fed. Cir. 2014) (collecting data and storing recognized patterns in the data).

From this we conclude that at least to this degree, claim 14 recites providing market information subscriptions by sorting merchants based on scores derived from various arrays of data in turn derived from web site data and counts of card transactions, which is a commercial and legal interaction, one of certain methods of organizing human activity identified in the Revised Guidance, and, thus, an abstract idea.

#### STEP 2A Prong 2

The next issue is whether claim 14 not only recites, but is more precisely directed to this concept itself or whether it is instead directed to some technological implementation or application of, or improvement to, this concept, i.e. integrated into a practical application.<sup>9</sup>

At the same time, we tread carefully in construing this exclusionary principle lest it swallow all of patent law. At some level, “all inventions ... embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.” Thus, an invention is not rendered ineligible for patent simply because it involves an abstract concept. “[A]pplication[s]” of such concepts “ ‘to a new and useful end,’ ” we have said, remain eligible for patent protection. Accordingly, in applying the § 101 exception, we must distinguish between patents that claim the “ ‘buildin[g] block[s]’ ” of human ingenuity and those that integrate the building blocks into something more.

*Alice*, 573 U.S. at 217 (citations omitted).

Taking the claim elements separately, the operation performed by the computer at each step of the process is expressed purely in terms of results, devoid of implementation details. Steps 1, 2, and 7 are pure data gathering steps. Limitations describing the nature of the data do not alter this. Steps

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<sup>9</sup> See, e.g., *Alice*, 573 U.S. at 223, discussing *Diamond v. Diehr*, 450 U.S. 175 (1981).

13 and 14 are insignificant post solution activity, such as transmitting and displaying the results. Steps 3–6 and 8–12 recite generic computer processing expressed in terms of results desired by any and all possible means and so present no more than conceptual advice. All purported inventive aspects reside in how the data is interpreted and the results desired, and not in how the process physically enforces such a data interpretation or in how the processing technologically achieves those results.

Viewed as a whole, Appellant’s claim 14 simply recites the concept of providing market information subscriptions by sorting merchants based on scores derived from various arrays of data in turn derived from web site data and counts of card transactions as performed by a generic computer. This is no more than conceptual advice on the parameters for this concept and the generic computer processes necessary to process those parameters, and do not recite any particular implementation.

Claim 14 does not, for example, purport to improve the functioning of the computer itself. Nor does it affect an improvement in any other technology or technical field. The over 30 pages of specification spell out different generic equipment<sup>10</sup> and parameters that might be applied using this concept and the particular steps such conventional processing would entail based on the concept of providing market information subscriptions by sorting merchants based on scores derived from various arrays of data in turn derived from web site data and counts of card transactions under different scenarios. They do not describe any particular improvement in the manner a computer functions. Instead, claim 14 at issue amounts to nothing

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<sup>10</sup> The Specification describes a personal computer having a web browser. Spec. para. 49.

significantly more than an instruction to apply providing market information subscriptions by sorting merchants based on scores derived from various arrays of data in turn derived from web site data and counts of card transactions using some unspecified, generic computer. Under our precedents, that is not enough to transform an abstract idea into a patent-eligible invention. *See Alice*, 573 U.S. at 225–26.

None of the limitations reflect an improvement in the functioning of a computer, or an improvement to other technology or technical field, applies or uses a judicial exception to effect a particular treatment or prophylaxis for a disease or medical condition, implements a judicial exception with, or uses a judicial exception in conjunction with, a particular machine or manufacture that is integral to the claim, effects a transformation or reduction of a particular article to a different state or thing, or applies or uses the judicial exception in some other 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.

We conclude that claim 14 is directed to achieving the result of providing market information subscriptions by advising one to sort merchants based on scores derived from various arrays of data in turn derived from web site data and counts of card transactions, as distinguished from a technological improvement for achieving or applying that result. This amounts to commercial or legal interactions, which fall within certain methods of organizing human activity that constitute abstract ideas. The claim does not integrate the judicial exception into a practical application.

STEP 2B

The next issue is whether claim 14 provides an inventive concept because the additional elements recited in the claim provide significantly more than the recited judicial exception.

The introduction of a computer into the claims does not generally alter the analysis at *Mayo* step two:

the mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention. Stating an abstract idea “while adding the words ‘apply it’” is not enough for patent eligibility. Nor is limiting the use of an abstract idea “to a particular technological environment.” Stating an abstract idea while adding the words “apply it with a computer” simply combines those two steps, with the same deficient result. Thus, if a patent’s recitation of a computer amounts to a mere instruction to “implement[t]” an abstract idea “on . . . a computer,” that addition cannot impart patent eligibility. This conclusion accords with the preemption concern that undergirds our § 101 jurisprudence. Given the ubiquity of computers, wholly generic computer implementation is not generally the sort of “additional feature[e]” that provides any “practical assurance that the process is more than a drafting effort designed to monopolize the [abstract idea] itself.”

*Alice*, 573 U.S. at 223–24 (citations omitted).

“[T]he relevant question is whether the claims here do more than simply instruct the practitioner to implement the abstract idea [] on a generic computer.” *Alice*, 573 U.S. at 225. They do not.

Taking the claim elements separately, the function performed by the computer at each step of the process is purely conventional. Using a computer for receiving, analyzing, transmitting, and displaying data amounts to electronic data query and retrieval—one of the most basic functions of a computer. All of these computer functions are generic, routine, conventional

computer activities that are performed only for their conventional uses. *See Elec. Power Grp. v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016). *Also see In re Katz Interactive Call Processing Patent Litigation*, 639 F.3d 1303, 1316 (Fed. Cir. 2011) (“Absent a possible narrower construction of the terms ‘processing,’ ‘receiving,’ and ‘storing,’ . . . those functions can be achieved by any general purpose computer without special programming”). None of these activities are used in some unconventional manner nor do any produce some unexpected result. Appellant does not contend they invented any of these activities. In short, each step does no more than require a generic computer to perform generic computer functions. As to the data operated upon, “even if a process of collecting and analyzing information is ‘limited to particular content’ or a particular ‘source,’ that limitation does not make the collection and analysis other than abstract.” *SAP America, Inc. v. InvestPic LLC*, 898 F.3d 1161, 1168 (Fed. Cir. 2018).

Considered as an ordered combination, the computer components of Appellant’s claim 14 add nothing that is not already present when the steps are considered separately. The sequence of data reception-analysis-transmission-display is equally generic and conventional. *See Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715 (Fed. Cir. 2014) (sequence of receiving, selecting, offering for exchange, display, allowing access, and receiving payment recited an abstraction), *Inventor Holdings, LLC v. Bed Bath & Beyond, Inc.*, 876 F.3d 1372, 1378 (Fed. Cir. 2017) (sequence of data retrieval, analysis, modification, generation, display, and transmission), *Two-Way Media Ltd. v. Comcast Cable Communications, LLC*, 874 F.3d 1329, 1339 (Fed. Cir. 2017) (sequence of processing, routing, controlling,

and monitoring). The ordering of the steps is therefore ordinary and conventional.

We conclude that claim 14 does not provide an inventive concept because the additional elements recited in the claim do not provide significantly more than the recited judicial exception.

### REMAINING CLAIMS

Claim 14 is representative. The remaining method claims merely describe process parameters. We conclude that the method claims at issue are directed to a patent-ineligible concept itself, and not to the practical application of that concept.

As to the structural claims, they:

are no different from the method claims in substance. The method claims recite the abstract idea implemented on a generic computer; the system claims recite a handful of generic computer components configured to implement the same idea. This Court has long “warn[ed] ... against” interpreting § 101 “in ways that make patent eligibility ‘depend simply on the draftsman’s art.’

*Alice*, 573 U.S. at 226. As a corollary, the claims are not directed to any particular machine.

### LEGAL CONCLUSION

From these determinations we further determine that the claims do not recite an improvement to the functioning of the computer itself or to any other technology or technical field, a particular machine, a particular transformation, or other meaningful limitations. From this we conclude the claims are directed to the judicial exception of the abstract idea of certain methods of organizing human activity as exemplified by the commercial and legal interaction of providing market information subscriptions by sorting

merchants based on scores derived from various arrays of data in turn derived from web site data and counts of card transactions, without significantly more.

#### APPELLANT'S ARGUMENTS

As to Appellant's Appeal Brief arguments, we adopt the Examiner's determinations and analysis from Final Action 5–10 and Answer 2–9 and reach similar legal conclusions. We now turn to the Reply Brief.

We are not persuaded by Appellant's argument that "the Examiner has failed to identify any alleged judicial exception **within the claim language.**" Reply Br. 1. The Examiner made such determinations although he did not make references to specific recitations in the claims. This is done supra under Step 2A Prong 1.

We are not persuaded by Appellant's argument that "the claims do not merely 'use' matrices. Instead, the pending claims require a particular logical model for a matrix technique, and a particular non-conventional and non-generic implementation of this claimed logical model." Reply Br. 2. No logical model is recited in the claims. The claims recite a sequence of conventional computer operations such as receiving and analyzing data as single dimensional arrays of data (vectors) to score and then rank merchants.

Any set of data may be characterized as a single dimensional array as any set may be flattened into such an array. The claims recite no particular implementation for how arrays are structured. The claims do recite intermediate results to be obtained along the way to that scoring. But the claims recite no technological model or other implementation for doing so.

We are not persuaded by Appellant’s argument that “the Examiner has failed to demonstrate that the MA computer system 121 and other claim limitations are generic.” *Id.* See footnote 10 supra.

We are not persuaded by Appellant’s argument that “the Examiner has failed to provide a factual determination that the claimed elements, including the MA computer system 121, are generic.” *Id.* Such determinations are presented under Step 2 B supra.

We are not persuaded by Appellant’s argument that “the recitations of the present claims are clearly not widely prevalent or in common use in the relevant industry, as the present claims are not rejected under Sections 102 or 103.” *Id.* Novelty and obviousness are not at issue. “A claim for a new abstract idea is still an abstract idea. The search for a § 101 inventive concept is thus distinct from demonstrating § 102 novelty.” *Synopsys, Inc. v. Mentor Graphics Corporation*, 839 F.3d 1138, 1151 (Fed. Cir. 2016).

We are not persuaded by Appellant’s argument that the claims contain an inventive concept that is also found in the specific ordered combination of the limitations, similar to the Federal Circuit’s findings in *BASCOM* (*Bascom Global Internet v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016)). Reply Br. 2. Initially, we remind Appellant that *BASCOM* did not find claims eligible on the substance, but rather that the Appellees did not provide sufficient evidence to support a 12(b)(6) motion to dismiss in which facts are presumed in the non-movant’s favor.

The key fact in *BASCOM* was the presence of a structural change in “installation of a filtering tool at a specific location, remote from the end-users, with customizable filtering features specific to each end user. This design gives the filtering tool both the benefits of a filter on a local computer

and the benefits of a filter on the ISP server.” *BASCOM*, 827 F.3d at 1350. The instant claims have no analogous structural benefit.

We are not persuaded by Appellant’s argument that the claims are analogous to those in *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016). Reply Br. 3. The claims differ from those found patent eligible in *Enfish*, where the claims were “specifically directed to a *self-referential* table for a computer database.” 822 F.3d 1327, 1337 (Fed. Cir. 2016). The claims thus were “directed to a specific improvement to the way computers operate” rather than an abstract idea implemented on a computer. *Id.* at 1336. Here, by contrast, the claims are not directed to an improvement in the way computers operate. Though the claims purport to accelerate and improve the accuracy of the process of comparing merchants, our reviewing court has held that speed and accuracy increases stemming from the ordinary capabilities of a general purpose computer “do[] not materially alter the patent eligibility of the claimed subject matter.” *Bancorp Servs., L.L.C. v. Sun Life Assurance Co. of Can. (U.S.)*, 687 F.3d 1266, 1278 (Fed. Cir. 2012). Instead, the claims are more analogous to those in *FairWarning*, 839 F.3d 1089 (Fed. Cir. 2016), wherein claims reciting “a few possible rules to analyze audit log data” were found directed an abstract idea because they asked “the same questions (though perhaps phrased with different words) that humans in analogous situations detecting fraud have asked for decades.” 839 F.3d at 1094, 1095.

As to the contention that the claims are “specifically directed to a particular innovative matrix technique that increments intersecting blocks of a matrix only when a single cardholder performs transaction with both

merchants of a particular merchant pair,” Reply Br, *id.*, using a matrix of counters is notoriously old and we note Appellant does not claim to have invented this. The claims recite no technological implementation for structuring the matrix in any event. It is only the criteria used for incrementing counters that is argued to be novel. This argues no more than the benefits of some context while using conventional technology. “The Supreme Court and this court have repeatedly made clear that merely limiting the field of use of the abstract idea to a particular existing technological environment does not render the claims any less abstract.” *Affinity Labs of Texas, LLC v. DirecTV, LLC*, 838 F.3d 1253, 1258 (Fed. Cir. 2016).

#### CONCLUSIONS OF LAW

The rejection of claims 1, 7, 11–14, 20, 24–27, 33, 34, and 37–42 under 35 U.S.C. § 101 as directed to a judicial exception without significantly more is proper.

#### CONCLUSION

The rejection of claims 1, 7, 11–14, 20, 24–27, 33, 34, and 37–42 is affirmed.

In summary:

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
1, 7, 11–14, 20, 24–27, 33, 34, 37–42	101	Eligibility	1, 7, 11–14, 20, 24–27, 33, 34, 37–42	

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2011).

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AFFIRMED