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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/561,653	09/17/2009	Peter J. STENGARD	T9049-19639US03	2715
74739	7590	12/14/2017	EXAMINER	
MILES & STOCKBRIDGE P.C. Oracle International Corporation 1751 Pinnacle Drive Suite 1500 Tysons Corner, VA 22102-3833			PADOT, TIMOTHY	
			ART UNIT	PAPER NUMBER
			3683	
			NOTIFICATION DATE	DELIVERY MODE
			12/14/2017	ELECTRONIC

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte PETER J. STENGARD, FRANCISCO V. CASAS,
JOOYOUNG JOHN KIM, KRISZTIAN Z. DANKO, ARI MOZES, and
MARCOS CAMPOS

Appeal 2016-005366
Application 12/561,653
Technology Center 3600

Before ST. JOHN COURTENAY III, DENISE M. POTHIER, and
JOYCE CRAIG, *Administrative Patent Judges*.

COURTENAY, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from a non-final rejection of claims 1–4, 7–12, 15–18, and 20–23, which are all the claims pending in this application. Claims 5, 6, 13, 14, and 19 are cancelled. We have jurisdiction over the pending claims under 35 U.S.C. § 6(b).

We affirm.

STATEMENT OF THE CASE

Introduction

One embodiment of Appellants’ invention is “directed generally to customer sales, and more particularly to [a] computer system for assisting with customer sales.” (Spec. ¶ 2).

Representative Claim

Claim 1 is representative of the invention and reads as follows.

1. A non-transitory computer-readable medium having instructions stored thereon that, when executed by a processor, cause the processor to generate a customer reference recommendation by:

uploading customer data including past purchasing pattern data and demographic data for a plurality of customers;

receiving a request for the customer reference recommendation for a sales prospect that comprises a product and a potential customer;

receiving the customer reference recommendation from a prediction model trained by the purchasing pattern data and the demographic data, wherein the customer reference recommendation comprises reference customers that have previously purchased products and have a level of similarity to the potential customer, wherein the level of similarity is determined from a first cluster model based on the past purchasing data and a second cluster model based on the demographic data; and

generating a ranked list of the reference customers that have previously purchased products, wherein the ranking is based on the determined level of similarity to the potential customer for each reference customer.

Rejection

Claims 1–4, 7–12, 15–18, and 20–23 are rejected under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter (Non-final Act. 4–5).

Issue on Appeal

Did the Examiner err in rejecting claims 1–4, 7–12, 15–18, and 20–23 under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter?

ANALYSIS

We have considered all of Appellants’ arguments and any evidence presented. We highlight and address specific findings and arguments for emphasis in our analysis below.

Rejection A of Claims 1–4, 7–12, 15–18, and 20–23 under 35 U.S.C. § 101

Under 35 U.S.C. § 101, a patent may be obtained for “any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.” The Supreme Court has “long held that this provision contains an important implicit exception: Laws of nature, natural phenomena, and abstract ideas are not patentable.” *Alice Corp. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2354 (2014) (quoting *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 2107, 2116 (2013)). The Supreme Court in *Alice* reiterated the two-step framework previously set forth in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 132 S. Ct. 1289, 1300 (2012), “for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts.” *Alice*, 134 S. Ct. at 2355.

The first step in that analysis is to determine whether the claims at issue are directed to one of those patent-ineligible concepts, such as an abstract idea. Abstract ideas may include, but are not limited to, fundamental economic practices, methods of organizing human activities, an idea of itself, and mathematical formulas or relationships. *Id.* at 2355–57.

If the claims are not directed to a patent-ineligible concept, the inquiry ends. Otherwise, the inquiry proceeds to the second step where the elements of the claims are considered “individually and ‘as an ordered combination’ to determine whether the additional elements ‘transform the nature of the claim’ into a patent-eligible application.” *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 132 S. Ct. at 1298, 1297).

We, therefore, look to: (1) whether the claims focus on a specific means or method that improves the relevant technology, or (2) are directed to a result or effect that itself is the abstract idea, in which the claims merely invoke generic processes and machinery. *See Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1336 (Fed. Cir. 2016).

The Examiner’s Rejection under 35 U.S.C. § 101

Regarding the first part of the *Alice/Mayo* analysis, the Examiner concludes the claims are directed to “the abstract idea of generating customer references, which is a method for organizing human activities (e.g., human activities involved in generating sales leads) as well as a fundamental economic concept since generating sales references, referrals, leads, prospects, etc. [are] in common usage in business and marketing.” (Non-final Act. 4).

Mayo/Alice Analysis — Step 1

Regarding *Alice* Step 1, Appellants contend:

The Examiner has failed to provide any evidence that the claims are directed to an abstract idea. For example, in accordance with the recently issued, by the U.S. Patent and Trademark Office, “July 2015 Update: Subject Matter Eligibility” (“July 2015 Update”), when identifying the abstract idea, Examiners

should ensure that “a claimed concept is not identified as an abstract idea unless it is similar to at least one concept that the courts have identified as an abstract idea.” *See* July 2015 Update, p. 3. A quick reference sheet included with the July 2015 Update conveniently lists all of the abstract ideas that have been identified by the courts. However, a comparison of the alleged abstract idea of “generating customer references” to the abstract ideas identified by the courts shows that there are **no similarities**.

(App. Br. 3–4).

We note Appellants’ independent claim 1 is directed, *inter alia*, to “uploading customer data,” “receiving a request for the customer reference recommendation for a sales prospect,” “receiving the customer reference recommendation from a prediction model,” and “generating a ranked list of the reference customers that have previously purchased products, wherein the ranking is based on the determined level of similarity to the potential customer for each reference customer.” Remaining independent claims 9 and 16 recite similar language of commensurate scope.¹

Our reviewing court guides that fundamental economic and conventional business practices are often found to be abstract ideas, even if performed on a computer. *See, e.g., OIP Techs. Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362–63 (Fed. Cir. 2015). Thus, under a broad but reasonable interpretation, we conclude each of Appellants’ claims on appeal is directed to an economic or business practice, *i.e.*, to the *result* of “generating a ranked list of the reference customers that have previously purchased products, wherein the ranking is based on the determined level of

¹ We give the contested claim limitations the broadest reasonable interpretation (BRI) consistent with the Specification. *See In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997).

similarity to the potential customer for each reference customer.” (Claim 1; *see* similar language of commensurate scope, as recited in independent claims 9 and 16). (*See* Appeal Br. 10–14, Claims App’x).

Moreover, but for the recitation of a generic “processor” (claims 1, 9, and 16), we conclude the recited steps or functions (e.g., generating a ranked list of reference customers) could be performed as mental steps, or with the aid of pen and paper. *See CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1375 (Fed. Cir. 2011) (“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*”). Our reviewing court further guides “[t]he abstract idea exception prevents patenting a *result* where ‘it matters not by what process or machinery the result is accomplished.’” *McRO, Inc. v. Bandai Namco Games America Inc.*, 837 F.3d 1299, 1312 (2016) (quoting *O’Reilly v. Morse*, 56 U.S. 62, 113 (1854)) (emphasis added).

This guidance is applicable here. Therefore, on this record, we are not persuaded of error regarding the Examiner’s conclusion that all claims on appeal are directed to the “abstract idea of generating customer references, which is a method for organizing human activities (e.g., human activities involved in generating sales leads), as well as a fundamental economic concept since generating sales references, referrals, leads, prospects, etc. [are] in common usage in business and marketing.” (Non-final Act. 4).

Mayo/Alice Analysis – Step 2

Because the claims are directed to an abstract idea, we turn to the second part of the *Alice/Mayo* analysis. We analyze the claims to determine if there are additional limitations that individually, or as an ordered combination, ensure the claims amount to “significantly more” than the abstract idea. *Alice*, 134 S. Ct. at 2357.

Regarding *Alice* Step 2, Appellants note, inter alia, that “an application of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection.” *Mayo*, 132 S. Ct. at 1293–94; (App. Br. 5). Appellants assert “the present claims recite functionality that goes well beyond the mere concepts of simply retrieving, comparing and combining data using a computer.” (App. Br. 6). In support, Appellants recite claimed features:

Specifically, claim 1 recites that “the level of similarity is determined from a first cluster model based on the past purchasing data and a second cluster model based on the demographic data.” The use of cluster models to generate a “ranked list of the reference customers” elevates the present claims “beyond the mere concept of simply retrieving and combining data using a computer.” Further, the use of a computer to generate and use cluster models is clearly a technical solution to the problem of generating a ranked list of customer references, and is not a solution that can be performed manually or using routine computer data storage and mathematical operations. Therefore, the recited functionality elevates the present claims “beyond the mere concept of simply retrieving and combining data using a computer.”

(App. Br. 6).

Appellants further urge:

The Examiner failed to consider the innovative interaction between elements, and how one element uses an input from another element in an innovative manner, as evidenced by the lack of prior art that discloses the claimed functionality. For example, referring to claim 1, in one element “customer data” is uploaded, and then in another element “a request for the customer reference recommendation” is received. Another element uses the customer data from a “prediction model” that generates reference customers that “have a level of similarity to the potential customer”, “where the level of similarity is determined from a first cluster model based on the past purchasing data and a second cluster model based on the demographic data.” Finally, still another element generates “a ranked list of the reference customers that have previously purchased products.” The elements, taken in combination, are both novel, innovative, and amount to significantly more.

(App. Br. 8–9) (emphasis added).

Appellants’ arguments do not persuade us the Examiner erred, because Appellants essentially recite the claim limitations without any persuasive explanation of how the limitations either individually, or as an ordered combination, amount to an inventive concept that converts the abstract idea into patent-eligible subject matter.

We find Appellants’ claimed data gathering, analysis, and reporting are consistent with “well-understood, routine, [and] conventional activit[ies] previously known to the industry.” *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat. Ass’n*, 776 F.3d 1343, 1347–48 (Fed. Cir. 2014) (quoting *Mayo*, 132 S. Ct. at 1294). It is our view that vendors have long ranked best-fit customers, who are targeted based upon their past buying patterns and demographics, for likely future sales. This practice is a

pervasive fundamental economic and business practice. The category of abstract ideas embraces “fundamental economic practice[s] long prevalent in our system of commerce.” *Alice*, 134 S. Ct. at 2356. Further, “simply appending conventional steps, specified at a high level of generality, to laws of nature, natural phenomena, and abstract ideas cannot make those laws, phenomena, and ideas patentable.” *Mayo*, 132 S. Ct. at 1300. (Emphasis added).

For example, we conclude the independent claims on appeal (which each recite a “processor”) are not related to the type of patent-eligible database claim considered by the court in *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016). Here, none of Appellants’ claims is directed to a “self-referential table for a computer database.” *Enfish*, 822 F.3d at 1336. Instead, we conclude Appellants’ claims merely encompass a *conventional database* that stores typical types of customer data: e.g., “the customer data comprises record types stored in a database, the record types comprising customers, products, orders, order lines, and target customers by user.” (Dependent claims 4 and 12). Thus, we conclude Appellants’ claims are merely directed to a generic “processor” (Claims 1, 9, and 16), and are not “directed to a specific improvement to the way computers operate, embodied in the self-referential table,” as was found by the court regarding the subject claims in *Enfish*, 822 F.3d at 1336. (emphasis added).

Appellants nevertheless urge the claims “include patentable invention concepts” (App. Br. 4). In support, Appellants contend the Examiner’s finding that the limitations “have been shown during prosecution to be well-known in the art . . . is logically inconsistent with the fact that the claims are allowable over all of the cited prior art.” (*Id.*).

However, the Supreme Court guides: “[t]he ‘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.” *Diamond v. Diehr*, 450 U.S. 175, 188–89 (1981) (emphasis added). Our reviewing court further guides that “[e]ligibility and novelty are separate inquiries.” *Two-Way Media Ltd. v. Comcast Cable Communications, LLC*, 874 F.3d 1329, 1340 (Fed. Cir. 2017); see also *Affinity Labs of Texas, LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1263 (Fed. Cir. 2016) (holding that “even assuming” that a particular claimed feature was novel does not “avoid the problem of abstractness”).

Nor do we find Appellants’ claims similar to the claimed solution the court held to be patent-eligible in *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014). Here, we conclude Appellants’ claimed solution is not rooted in computer technology, such that the invention on appeal overcomes a problem specifically arising in the realm of computer networks, as was the case with the type of claim the court concluded was patent-eligible in *DDR Holdings*. (*Id.* at 1257). We note Appellants’ claims on appeal are silent regarding any mention of a computer “network.”

Although Appellants’ claims are directed to a “computer readable medium having instructions stored thereon” (claim 1), a “computer implemented method” (claim 9), and a “system” (i.e., apparatus) (claim 16), we nevertheless conclude Appellants’ claims are more analogous to the method claim considered by the court in *Electric Power Group, LLC v. Alstom S.A.*, 830 F.3d 1350 (2016), at least to the extent that Appellants’ claims are similarly directed to “merely selecting information, by content or

source, for collection, analysis, and display [which] does nothing significant to differentiate a process from ordinary mental processes.” *Id.* at 1355.

Thus, we agree with the Examiner’s conclusion:

Appellant's claims are not reasonably understood as yielding an improvement to the functioning of the computer itself or to any technology. Appellant's claims simply do not relate to any technological field, but instead only tangentially rely on existing technology in so far as the claims rely on a general purpose computer to perform functions that could otherwise be performed manually. Thus, similar to the District Court's finding in *East Coast*,² the Examiner finds that Appellant has made no showing that the claims do anything more than merely “*speed up a process by eliminating the need for human activity,*” however such an “*innovation is not an invention eligible for patent protection.*” Therefore, Appellant's suggestion that the claimed invention improves the functioning of the computer is not found persuasive.

(Ans. 9).

To the extent that Appellants’ recited steps or acts (or functions) may be performed faster or more efficiently using a computer, our reviewing court provides applicable guidance:

While the claimed system and method certainly purport to accelerate the process of analyzing audit log data, **the speed increase comes from the capabilities of a general-purpose computer, rather than the patented method itself.** See *Bancorp Servs., L.L.C. v. Sun Life Assurance Co. of Can.* (U.S.), 687 F.3d 1266, 1278 (Fed. Cir. 2012) (“[T]he 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.”).

² *East Coast Metal Fabricating Corp. v. Autodesk Inc.*, 2015 WL 226084 (D.N.H. Jan. 15, 2015).

FairWarning IP, LLC v. Iatric Sys., Inc., 839 F.3d 1089, 1095 (Fed. Cir. 2016) (emphases added).

Further regarding the use of a generic processor, *see Alice*, 134 S. Ct. at 2358 (holding that “the mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention”); *BASCOM Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1348 (Fed. Cir. 2016) (“An abstract idea on ‘an Internet computer network’ or on a generic computer is still an abstract idea.”); *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1355 (Fed. Cir. 2016) (quotation omitted) (“We have repeatedly held that such invocations of computers and networks that are not even arguably inventive are ‘insufficient to pass the test of an inventive concept in the application’ of an abstract idea.”) (quotations omitted); *Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1341 (Fed. Cir. 2017) (“Rather, the claims recite both a generic computer element—a processor—and a series of generic computer ‘components’ that merely restate their individual functions . . . That is to say, they merely describe the functions of the abstract idea itself, without particularity. This is simply not enough under step two.”);

Applying the aforementioned guidance here, we conclude Appellants’ claims are not directed to an improvement in computer functionality, or database functionality. Therefore, we conclude that none of the claim limitations, viewed “both individually and as an ordered combination,” amount to significantly more than the judicial exception in order to sufficiently transform the nature of the claims into patent-eligible subject matter. *See Alice*, 134 S. Ct. at 2355 (internal quotations omitted) (quoting *Mayo*, 132 S. Ct. at 1297).

For at least the aforementioned reasons, and on this record, Appellants have not persuaded us the Examiner erred. Accordingly, we sustain the Examiner's rejection of claims 1–4, 7–12, 15–18, and 20–23 under 35 U.S.C. § 101.³

Reply Brief

To the extent Appellants advance new arguments in the Reply Brief not in response to a shift in the Examiner's position in the Answer, we note arguments raised in a Reply Brief that were not raised in the Appeal Brief or are not responsive to arguments raised in the Examiner's Answer will not be considered except for good cause. *See* 37 C.F.R. § 41.41(b)(2).

CONCLUSION

The Examiner did not err in rejecting claims 1–4, 7–12, 15–18, and 20–23 under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter.

DECISION

We affirm the Examiner's decision rejecting claims 1–4, 7–12, 15–18, and 20–23 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). *See* 37 C.F.R. § 41.50(f).

AFFIRMED

³ To the extent Appellants have not advanced separate, substantive arguments for particular claims, or other issues, such arguments are waived. *See* 37 C.F.R. § 41.37(c)(1)(iv).