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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte MARK E. TEMARES, ALAN B. NEWMAN, and
NOOR A. MENAI¹

Appeal 2017-004903
Application 13/104,461
Technology Center 3600

Before MICHAEL J. STRAUSS, JOSEPH P. LENTIVECH, and
MICHAEL M. BARRY, *Administrative Patent Judges*.

STRAUSS, *Administrative Patent Judge*.

DECISION ON APPEAL

¹ According to Appellants, the real party in interest is Citicorp Credit Services. *See* App. Br. 1.

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's Non-Final rejection of claims 1–25. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.²

THE INVENTION

The claims are directed to purchase-based segmentation of potential customers. Spec., Abstract. Claim 1, reproduced below with disputed language highlighted in *italics*, is representative of the claimed subject matter:

1. A computer-implemented method for purchased-based segmentation of customers, comprising:

receiving, by a computer having a processor and memory, machine-readable empirical data comprising purchasing behavior of a group of customers transmitted from one or more data warehouses storing the empirical data, wherein the empirical data further comprises purchase information associated with the purchasing behavior of the group of customers;

responsive to receiving the empirical data from the one or more data warehouses:

automatically identifying, by the computer, at least three different sets of segments or clusters of customers for the group of customers associated with the empirical data based on at least one purchasing behavior datum in the empirical data;

automatically identifying, by the computer, a first subset of customers associated with a first segment or cluster in a first set of segments or clusters of customers in the group of customers of the empirical data based upon the purchasing

² We refer to the Specification, filed May 10, 2011 (“Spec.”); the Non-Final Office Action, mailed Sept. 4, 2015 (“Non-Final Act.”); Appeal Brief, filed May 3, 2016 (“App. Br.”); the Examiner’s Answer, mailed Dec. 2, 2016 (“Ans.”), and the Reply Brief, filed Feb. 2, 2017 (“Reply Br.”).

behavior of the customers in the at least three sets of segments or clusters of customers in the empirical data;

generating, by the computer, an output of purchasing behavior of a customer in the first subset of customers;

calculating, by the computer, a likelihood that the purchasing behavior in the output for the customer of the first subset of customers correlates with each segment or cluster of a first set of segments or clusters received from a first data feed from a first cluster server;

calculating, by the computer, a likelihood that the purchasing behavior in the output for the customer of the first subset of customers correlates with each segment or cluster of a second set of segments or clusters received from a second data feed from a second cluster server;

determining, by the computer, at least one attribute associated with the segment or cluster of the first set of segments or clusters having the highest likelihood of correlation and at least one attribute associated with the segment or cluster of the second set of segments or clusters having the highest likelihood of correlation; and

automatically identifying, by the computer, one or more potential customers from the group of customers having the at least one attribute associated with the segment or cluster of the first set of segments or clusters having the highest likelihood of correlation and the at least one attribute associated with the segment or cluster of the second set of segments or clusters having the highest likelihood of correlation.

REJECTIONS and OBJECTION

The Examiner made the following rejections and objection:

Claims 1–25 stand rejected under 35 U.S.C. § 101 because the claimed invention is directed to a judicial exception without significantly more.

Claims 1–25 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

The Specification is objected to under 35 U.S.C. § 132(a) as introducing new matter.

ANALYSIS

Appellants' contentions are unpersuasive of reversible Examiner error. We adopt as our own: (1) the findings and reasons set forth by the Examiner in the action from which this appeal is taken (Non-Final Act. 2–11); and (2) the reasons set forth by the Examiner in the Examiner's Answer in response to Appellants' Appeal Brief (Ans. 2–12) and concur with the conclusions reached by the Examiner. We highlight the following for emphasis.

35 U.S.C. § 101

Patent eligibility is a question of law that is reviewable *de novo*. *Dealertrack, Inc. v. Huber*, 674 F.3d 1315, 1333 (Fed. Cir. 2012).

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

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

In interpreting this statute, the Supreme Court emphasizes that patent protection should not preempt “the basic tools of scientific and technological work.” *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972); *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 71 (2012); *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S.Ct. 2347, 2354 (2014). The rationale is that

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

The Supreme Court set forth a two-part test for subject matter eligibility in *Alice* (134 S.Ct. at 2355). The first step is to determine whether the claim is directed to a patent-ineligible concept. *Id.* (citing *Mayo*, 566 U.S. at 76–77). If so, then the eligibility analysis proceeds to the second step of the *Alice/Mayo* test in which we “examine the elements of the claim to determine whether it contains an ‘inventive concept’ sufficient to ‘transform’ the claimed abstract idea into a patent-eligible application.” *Alice*, 134 S.Ct. at 2357 (quoting *Mayo*, 566 U.S. at 72, 79). The “inventive concept” may be embodied in one or more of the individual claim limitations or in the ordered combination of the limitations. *Id.* at 2355. The “inventive concept” must be significantly more than the abstract idea itself, and cannot be simply an instruction to implement or apply the abstract idea on a computer. *Id.* at 2358. “[W]ell-understood, routine, [and] conventional activit[ies]’ previously known to the industry” are insufficient “to transform an abstract idea into a patent-eligible invention.” *Id.* at 2359–60 (citing *Mayo*, 566 U.S. at 73).

Alice/Mayo Step 1: Abstract Idea

The Examiner finds “claim 1 recites the steps of receiving data, analyzing data, organizing data, comparing data, filtering data, identifying data per rules, and outputting of data per rules directed to segmenting

customers.” Non-Final Act. 6. According to the Examiner, these steps can be performed mentally and manually using pen and paper and statistical techniques. *Id.* at 7. The Examiner further finds “[t]hese steps are similar to other concepts that have been identified as abstract by the courts, such as using categories to organize, store and transmit information in *Cyberfone*,^[3] or comparing new and stored information and using rules to identify options in *SmartGene*,^[4]” concluding claim 1 is directed to an abstract idea. *Id.* Appellants do not contest this finding under Step 1 of the *Alice/Mayo* framework, instead contending error under Step 2, arguing “the claims are patent-eligible because they satisfy the ‘significantly more’ requirement, as explained below.” App. Br. 5. Accordingly, the Examiner’s findings under Step 1 of the *Alice/Mayo* framework are undisputed.

Alice/Mayo Step 2: Inventive Concept

The Examiner finds the claims recite the additional element of a computer at a high level of generality that does not amount to significantly more than the abstract idea itself. Non-Final Act. 8. The Examiner reaches the same conclusion when considering the limitations as an ordered combination. *Id.* The Examiner further supports this conclusion with reference to the 2014 Interim Guidance on Patent Subject Matter Eligibility,

³ *Cyberfone Systems, LLC v. CNN Interactive Group, Inc.*, 558 Fed. App’x 988, 991–92 (Fed. Cir. 2014) (non-precedential) (Claims drawn to abstract idea of collecting data, recognizing certain data in the set, and storing recognized data in memory.).

⁴ *SmartGene v. Advanced Biological Laboratories, S.A.*, 555 Fed. App’x 950, 954–56 (Fed. Cir. 2014) (Claims drawn to abstract idea of comparing new and stored information and using rules to identify options.).

79 Fed. Reg. 74618-74633 (December 16, 2014) (“2014 Guidelines”).⁵

Non-Final Act. 8–9. The Examiner finds

the claim does not . . . purport to improve the functioning of the computer itself, or effect an improvement in any other technology or technical field or apply the judicial exception with, or by use of, a particular machine, or effecting a transformation or reduction of a particular article to a different state or thing, or adding a specific limitation other than what is well-understood, routine and conventional in the field, or adding unconventional steps that confine the claim to a particular useful application, or other meaningful limitations beyond generally linking the use of the judicial exception to a particular technological environment.

Non-Final Act. 9. The Examiner concludes the recitation of a generic computer performing generic computer functions is insufficient to transform the abstract idea into a patent-eligible invention. *Id.*

Appellants contend “[c]laims 1–25 recite features that amount to ‘significantly more’ than a mere description of the abstract idea of comparing and organizing data, because the claimed computing features recite a technical solution to a technical problem that did not exist in the ‘pre-Internet world.’” App. Br. 5 (citing to Example 21 of the July 2015 Update Appendix 1 of the 2014 Interim Guidance Matter Eligibility (hereinafter “Example 21”) and *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014)). Appellants argue, similar to claim 2 of Example 21, the pending claims recite significantly more than the abstract idea as

⁵ The 2014 Guidelines (or “Guidance”) explain(s) that the examples of “concepts courts have found to be” laws of nature, natural phenomena, and abstract ideas “are intended to be illustrative and not limiting.” 79 Fed. Reg. at 74622. The 2015 Update provides additional “illustrative” examples to “assist [E]xaminers and the public in applying the principles” in the 2014 Guidance. (2014 Guidelines (2015 Update) 1.

including “computing hardware address[ing] a complication in the art that did not arise in the ‘pre-Internet world.’” App. Br. 6. According to Appellants, prior to the availability of data collection devices and the Internet providing “Big Data” analytics, the lack of information availability “prevented [marketers] from collecting and/or generating certain types of information, and thus they could not generate certain data sets, fill gaps in knowledge, or produce certain types of new knowledge.” *Id* (citing Spec. ¶ 8). Appellants argue “before the claimed hardware features, existing technology did not gather and manipulate actual purchase transaction data and the third-party commercial data, and therefore could not provide the various results described in the Specification.” App. Br. 7. According to Appellants “several limitations in the prior art arose, not only from the known algorithmic functions, but also from the unavailability of actual purchase data, which hampered the capabilities of the prior art solutions.” *Id*.

Appellants’ arguments are unpersuasive of Examiner error. In particular, Appellants fail to provide sufficient evidence that, rather than use routine, well-known computer functions and communications connectivity provided by the Internet, the invention improves the underlying technology. The only apparent improvement is to the abstract idea of segmenting customers based on their collected purchase behavior by using the enhanced communications and processing capabilities provided by the Internet and generic computing devices.

To the extent that the recited steps or acts 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.”).

FairWarning IP, LLC v. Iatric Sys., Inc., 839 F.3d 1089, 1095 (Fed. Cir. 2016) (emphasis added). See also *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1350 (Fed. Cir. 2016)), to the extent that Appellants’ claims similarly collect information, analyze it in some fashion, and present or communicate the result. The Court in *Elec. Power* guides: “we have treated analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, as essentially mental processes within the abstract-idea category.” *Elec. Power*, 830 F.3d at 1354 (internal citations omitted). “Generally, a claim that merely describes an ‘effect or result dissociated from any method by which [it] is accomplished’ is not directed to patent-eligible subject matter.” *Ameranth*, 842 F.3d at 1244 (quoting *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1348 (Fed. Cir. 2015)).

Applying this reasoning to Appellants’ claims on appeal, we similarly find any purported faster or more efficient performance of the claimed steps or acts merely comes from the capabilities of a general-purpose computer and/or computer related elements, rather than from Appellants’ claimed steps or functions. Similarly, the enhanced availability of empirical customer purchasing behavior data resulting from electronic communications facilities, such as the Internet, which renders the claimed

techniques more commercially practical than if performed manually, does not make the invention Internet-centric as in *DDR Holdings*. See App. Br. 8. The claims in *DDR Holdings* were directed to a “challenge particular to the Internet,” and did not “broadly and generically claim ‘use of the Internet’ to perform an abstract business practice (with insignificant added activity).” *DDR Holdings*, 773 F.3d at 1257, 1258.

Moreover, regarding Appellants’ argument that the subject matter of the claims is similar to claims found patentable that are “necessarily rooted in computer technology,” Appellants’ reliance on *DDR Holdings* (App. Br. 8) is misplaced. For example, in *DDR Holdings*, the claims at issue involved, *inter alia*, “web pages displays [with] at least one active link associated with a commerce object associated with a buying opportunity of a selected one of a plurality of merchants” (claim 1, US 7,818,399). There is no such web page with an active link, or anything meaningfully analogous, in the claims here before us. As discussed *supra*, the Specification supports the view that the computer related elements of the claims are generic and do not constitute an inventive concept.

We are also unpersuaded by Appellants’ argument that, similar to Example 21 of the July 2015 Update, the claims recite significantly more than the abstract idea. See App. Br. 5.

First, claim 2 of Example 21 is a hypothetical claim, not an actual claim present in US 7,035,914 B1 that was at issue in *Google Inc. v. Simpleair, Inc.*, Covered Business Method Case No. CBM 2014-00170 (Jan. 22, 2015), the Board decision on which hypothetical Example 21 is based.

Second, the Board did not hold a claim like claim 2 of Example 21, or any claim in US 7,035,914 B1 for that matter, patent-eligible as a matter of

law. Rather, the Board found that the Petitioner had not “shown sufficiently that claims 1–3, 7, and 22–24 [of US 7,035,914 B1] are more likely than not unpatentable as being directed to patent-ineligible subject matter under 35 U.S.C. § 101.” *Id.* at 16. (“Petitioner’s generalized arguments, not directed to the specific language of the challenged claims, are insufficient to show that the claims more likely than not are directed to a patent-ineligible abstract idea.”)

Third, be that as it may, claim 2 of Example 21 is not comparable to what is claimed in the instant appeal. Claim 2 of Example 21 includes the limitation “[an] alert [which] activates [a] stock viewer application to cause the stock quote alert to display on the remote subscriber computer and to enable connection via the URL to the data source over the Internet when the wireless device is locally connected to the remote subscriber computer and the remote subscriber computer comes online.” Appellants have not explained how claim 1 here on appeal contains any comparable limitation.

We are further unpersuaded that the abstract idea could not otherwise be performed mentally using pencil (or pen) and paper. *See* App. Br. 6; Non-Final Act. 4. Although the manual collection and processing of data may have been cumbersome and/or commercially impractical, Appellants fail to persuade us that the recited processing can only be performed using a computer or the Internet, much less that the invention does any more than utilize conventional and generic computer and communication resources to automate a manual process. Our prior cases have made clear that mere automation of manual processes using generic computers of the Internet does not constitute a patentable improvement in computer technology. In those cases, “the focus of the claims is not on such an improvement in

computers as tools, but on certain independently abstract ideas that use computers as tools.” *Credit Acceptance Corp. v. Westlake Svcs.*, 859 F.3d 1044, 1055 (Fed. Cir. 2017) (quoting *Elec. Power Grp.*, 830 F.3d at 1354).

For the reasons discussed above, we are unpersuaded of Examiner error in connection with the rejection of claims 1–25 under 35 U.S.C. § 101, and we sustain that rejection of the claims.

35 U.S.C. § 112, first paragraph

Written Description

We are not persuaded by Appellants’ argument that the Examiner erred in rejecting claims 1–25 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. App. Br. 8–9. Instead, we agree with, and adopt the Examiner’s response to Appellants’ argument as set forth at pages 10–11 of the Answer.

Independent claim 1 is directed to a computer-implemented method for purchased-based segmentation of customers and recites that the method comprises, *inter alia*, “identifying . . . a first set of customers,” “generating purchasing behavior of a customer,” “calculating . . . a likelihood that the purchasing behavior . . . correlates with each segment or cluster of first [and second] set[s] of segments or clusters,” “determining [an] attribute associated with the segment or cluster of the first set,” and “identifying . . . customers . . . having the highest likelihood of correlation and the at least one attribute associated with the segment or cluster of the second set of segments or clusters having the highest.” Independent claim 13 is directed to a corresponding system for purchased-based segmentation of customers.

In rejecting claims 1–25 under 35 U.S.C. § 112, first paragraph, the Examiner finds that Appellants’ Specification fails to describe the claimed invention in sufficient detail such that a person of ordinary skill in the art would reasonably conclude that Appellants had possession of the claimed subject matter at the time the application was filed (Non-Final Act. 11).

More particularly, the Examiner finds the computer of claim 1 is

recited at a high level of generality and its broadest reasonable interpretation comprises only a processor, and memory to simply [use] the generic computer to perform generic functions of collecting data, processing information/data, filtering data, comparing data, identifying options per rules and outputting data per rules but the disclosure does not reveal the manner in which the above cited limitations related to identifying, calculating and determining steps are executed by a computer based on segments or clusters received from first and second feeds from first and second cluster servers.

Id. The Examiner concludes that Appellants’ “failure to disclose any meaningful structure/algorithm as to how the . . . identifying, calculating and determining steps are executed by a specific computer raises questions whether Applicant truly had possession of this feature at the time of filing.”

Id.

Appellants contend

there is no obligation for the Specification to recite the underlying mathematics or calculations . . . because this application is not directed to an abstract idea, but instead addresses the shortcomings in the technological intercommunications and data manipulation from disparate systems, the mathematics are not per se the underlying features needed for one having skill in the art to reasonably conclude that the Applicant had possession of the claimed features.

App. Br. 8–9. That is, according to Appellants, “[b]ecause the particulars of the mathematics are not necessary for one having ordinary skill in the art to reasonably conclude that Applicant possessed the claimed features, and because the claimed features are described in the Specification, the [written description] rejection is improper.” App. Br. 9.

Appellants’ argument is unpersuasive. As the Examiner observes, the issue is not whether a person of ordinary skill in the art would know how to program the processor to perform the recited steps. Ans. 10. Instead, the issue is whether the Specification describes the claimed invention in sufficient detail that a person skilled in the art could reasonably conclude that Appellants had possession of the claimed subject matter as of the filing date, *see Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1562–63 (Fed. Cir. 1991), i.e., that Appellants possessed the invention, including how to program the disclosed computer to perform the claimed functions, at the time the present application was filed.

We agree with the Examiner that although the claims refer to using a computer to accomplish the claimed steps (claims 1–12 and 24) or as part of a system for performing certain functions (claims 13–23 and 25), the Specification discloses, at most, a generic computer. Final Act. 11. Thus, for example, although the claims recite “calculating . . . a likelihood that the purchasing behavior in the output for the customer of the first subset of customers correlates with each segment or cluster of a first set of segments or clusters received from a first data feed from a first cluster server,” there is no explanation of exactly what the step involves.⁶

⁶ Appellants’ “Summary of the Claimed Subject Matter” (App. Br. 2) is based on an earlier version of the claims and was not updated to reflect the amended claims appearing in the revised Claims Appendix filed Sept. 26,

The Federal Circuit has held that the written description requirement may be satisfied when the particular steps, i.e., an algorithm, necessary to perform the claimed function, are “described in the [S]pecification.” *See, e.g., In re Hayes Microcomputer Prods., Inc. Patent Litigation*, 982 F.2d 1527, 1533–34 (Fed. Cir. 1992). The Federal Circuit also has acknowledged that the level of detail required for the written description requirement to be met is case-specific. *Id.*

Appellants’ Specification does not disclose an algorithm (whether in the form of a mathematical formula, in prose, as a flow chart, or in any other manner) for performing the claimed functions, as called for in claims 1–25.⁷ Nor does the Specification otherwise describe the claimed invention in sufficient detail that a person skilled in the art could reasonably conclude that Appellants possessed the invention, including how to program the disclosed computer to perform the claimed functions, at the time the application was filed.

Therefore, we sustain the Examiner’s rejection of claims 1–25 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

Objection to the Specification

The Examiner objects to the Specification under 35 U.S.C. 132(a) because the amendment, filed May 26, 2015, is deemed to introduce new matter into the disclosure. Non-Final Act. 11–12. Appellants contend the

2016. Presumably the referenced calculating step corresponds to the earlier recited step of “automatically identifying . . . a first subset of customers” the support for which Appellants cite to Spec. ¶¶ 27, 29, 30, and 31.

⁷ Figure 2 is a flowchart which, at best, shows a general, non-specific listing of broad steps without description of how the disputed steps are effected.

objection should be withdrawn, arguing “the Specification supports all of the elements recited by the claims.” App. Br. 9. The Examiner responds, noting “issues related to Objection to Specification are considered by making petition to the Director,” not normally by way of appeal, and, in any case, is appropriate for the reasons given in connection with the written description rejection. Ans. 12.

Ordinarily an objection is petitionable to the Director and a rejection is appealable to the Board. When the issue of new matter presented is the subject of both an objection and a rejection, the issue is appealable. Manual of Patent Examining Procedure (MPEP) § 2163.06(II). Review of New Matter Objections and/or Rejections (9th Ed. Rev. 7, Nov. 2015)); *see also* MPEP § 608.04(c); 35 U.S.C. § 134(a); 37 C.F.R. § 1.181(a)(1). Because we sustain the rejection of claims 1 and 13 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement, we likewise sustain the disputed objection to the Specification.

DECISION

We affirm the Examiner’s decision to reject claims 1–25 under 35 U.S.C. § 101.

We affirm the Examiner’s decision to reject claims 1–25 under 35 U.S.C. § 112, first paragraph.

We affirm the Examiner’s objection to the Specification under 35 U.S.C. § 132(a).

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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