



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.
13/686,138 11/27/2012 Alex KUSHKULEY T9049-19436US02 7286

74739 7590 02/13/2018
Potomac Law Group, PLLC
Oracle International Corporation
5335 Wisconsin Avenue
Suite 440
Washington, DC 20015

EXAMINER

NGUYEN, NGA B

ART UNIT PAPER NUMBER

3683

NOTIFICATION DATE DELIVERY MODE

02/13/2018

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patents@potomaclaw.com
bgoldsmith@potomaclaw.com
officeaction@apcoll.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ALEX KUSHKULEY and SU-MING WU

Appeal 2016-004719¹
Application 13/686,138²
Technology Center 3600

Before NINA L. MEDLOCK, PHILIP J. HOFFMANN, and
ROBERT J. SILVERMAN, *Administrative Patent Judges*.

MEDLOCK, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner’s final rejection of claims 1, 3–9, 11–17, 19, and 20. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ Our decision references Appellants’ Appeal Brief (“App. Br.,” filed August 17, 2015) and Reply Brief (“Reply Br.,” filed April 4, 2016), and the Examiner’s Answer (“Ans.,” mailed February 3, 2016) and Final Office Action (“Final Act.,” mailed March 18, 2015).

² Appellants identify Oracle International Corporation as the real party in interest. App. Br. 2.

CLAIMED INVENTION

Appellants' claimed invention "is directed generally to a computer system that forecasts retail sales or provides pricing, and in particular to estimating elastic and inventory effect for a computer system that forecasts retail sales or provides pricing" (Spec. ¶ 2).

Claims 1, 9, and 17 are the independent claims on appeal. Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A non-transitory computer-readable medium having instructions stored thereon that, when executed by a processor, cause the processor to generate a sales forecast for an item at a store, the generating comprising:
 - receiving a sales condition relationship for the item at the store, the relationship comprising an elasticity parameter, an inventory effect parameter and a sales constant;
 - receiving a demand model for sales of the item in terms of the elasticity parameter and the inventory effect parameter and a base demand for the item selling at the store;
 - estimating the sales constant, the estimating comprising generating a theta parameter by taking logarithms of the sales condition relationship;
 - using linear regression to estimate a logarithm of the sales constant and a value of the theta parameter;
 - determining a relationship between the elasticity parameter and the inventory effect parameter based on the value of the theta parameter;
 - wherein the inventory effect parameter comprises a power function of inventory levels;
 - eliminating either the elasticity parameter or the inventory effect parameter from the demand model based on the value of theta to generate a single variable demand model;
 - using a single parameter linear regression to determine the base demand and to solve for either the elasticity parameter or the inventory effect parameter in the single variable demand model;
 - setting a price for the item; and

generating the sales forecast at the price using the demand model and based at least on the determined base demand and the elasticity parameter or inventory effect parameter.

REJECTIONS

Claims 1, 3–9, 11–17, 19, and 20 are rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter.³

ANALYSIS

Under 35 U.S.C. § 101, an invention is patent-eligible if it claims a “new and useful process, machine, manufacture, or composition of matter.” 35 U.S.C. § 101. The Supreme Court, however, has long interpreted § 101 to include an implicit exception: “[l]aws of nature, natural phenomena, and abstract ideas” are not patentable. *See, e.g., Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2354 (2014).

The Supreme Court, in *Alice*, reiterated the two-step framework previously set forth in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66 (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 Corp.*, 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.” *Id.* If the claims are not directed to a patent-ineligible concept, e.g., an abstract idea, the inquiry ends. Otherwise, the inquiry proceeds to the second step where the elements of the claims are considered “individually and ‘as an ordered

³ We treat the Examiner’s reference, in the Final Office Action, to cancelled claims 2, 10, and 18 as inadvertent error.

combination” to determine whether there are additional elements that “transform the nature of the claim’ into a patent-eligible application.” *Id.* (quoting *Mayo*, 566 U.S. at 79, 78).

The Court acknowledged in *Mayo*, that “all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.” *Mayo*, 566 U.S. at 71. Therefore, the Federal Circuit has instructed that claims are to be considered in their entirety to determine “whether their character as a whole is directed to excluded subject matter.” *McRO, Inc. v. Bandai Namco Games Am., Inc.*, 837 F.3d 1299, 1312 (Fed. Cir. 2016) (quoting *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015)).

Here, in rejecting the claims under 35 U.S.C. § 101, the Examiner found that the claims are directed to a process of “estimating elasticity and inventory effect,” i.e., to an abstract idea; that “the claimed method simply describe[s] the concept of gathering, generating, and organizing data through mathematical relationships”; and that the claims do not include additional elements or a combination of elements that amount to significantly more than the abstract idea itself (Final Act. 2–4).

Focusing on step one of the *Mayo/Alice* framework, Appellants argue that the Examiner has overgeneralized the claims as directed to “estimating elasticity and inventory effect,” and ignored most of the claim limitations (App. Br. 4). But, aside from quoting the language of claim 1, Appellants offer no persuasive argument or reasoning to explain why any particular claim limitation requires altering the Examiner’s findings regarding the concept to which the clam is directed.

Appellants also argue that the § 101 rejection cannot be sustained because the Examiner has provided no evidence that the claims are directed to an abstract idea. That argument is similarly unpersuasive.

There is no requirement that an examiner provide evidentiary support in every case before a conclusion can be made that a claim is directed to an abstract idea. *See, e.g.*, para. IV “July 2015 Update: Subject Matter Eligibility”⁴ to 2014 Interim Guidance on Subject Matter Eligibility, 79 Fed. Reg. 74618 (Dec. 16, 2014) (“The courts consider the determination of whether a claim is eligible (which involves identifying whether an exception such as an abstract idea is being claimed) to be a question of law. Accordingly, courts do not rely on evidence that a claimed concept is a judicial exception, and in most cases resolve the ultimate legal conclusion on eligibility without making any factual findings.”). Nor, contrary to Appellants’ suggestion, did this Board hold in *Ex parte Renald Poisson*, Appeal 2012-011084 (PTAB Feb. 27, 2015), that there is any such requirement.⁵ Although evidence may be helpful, e.g., where facts are in dispute, it is not always needed. *See Mortgage Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d 1314, 1325–26 (Fed. Cir. 2016) (“[I]t is also possible, as numerous cases have recognized, that a § 101 analysis may sometimes be undertaken without resolving fact issues.”). Appellants’ bare assertion that evidence is needed here, without any supporting reasoning as

⁴ Available at <https://www.uspto.gov/sites/default/files/documents/ieg-july-2015-update.pdf>.

⁵ We would not be bound, in any event, by a non-precedential decision of another panel of the Board.

to why, is insufficient to require the Examiner to provide evidentiary support.⁶

The Federal Circuit, moreover, has repeatedly observed that “the prima facie case is merely a procedural device that enables an appropriate shift of the burden of production.” *Hyatt v. Dudas*, 492 F.3d 1365, 1369 (Fed. Cir. 2007) (citing *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992)). The court has, thus, held that the USPTO carries its procedural burden of establishing a prima facie case when its rejection satisfies the requirements of 35 U.S.C. § 132 by notifying the applicant of the reasons for the rejection, “together with such information and references as may be useful in judging of the propriety of continuing the prosecution of [the] application.” *See In re Jung*, 637 F.3d 1356, 1362 (Fed. Cir. 2011). Thus, all that is required of the Office is that it sets forth the statutory basis of the rejection in a sufficiently articulate and informative manner as to meet the notice requirement of § 132. *Id.*; *see also Chester v. Miller*, 906 F.2d 1574, 1578 (Fed. Cir. 1990) (Section 132 “is violated when a rejection is so uninformative that it prevents the applicant from recognizing and seeking to counter the grounds for rejection.”).

In rejecting the pending claims under § 101, the Examiner analyzed the claims using the *Mayo/Alice* two-step framework, consistent with the guidance set forth in the USPTO’s “2014 Interim Guidance on Patent Subject Matter Eligibility,” in effect at the time the Final Office Action was mailed. Specifically, the Examiner notified Appellants that the claims are directed to a process of “estimating elasticity and inventory effect,” which

⁶ We note that the Appellants have put forward no rebuttal evidence showing the claims are not directed to an abstract idea.

the Examiner found is an abstract idea; that “the claimed method simply describe[s] the concept of gathering, generating, and organizing data through mathematical relationships”; and that the claims do not include additional elements or a combination of elements that amount to significantly more than the abstract idea itself (Final Act. 2–4). The Examiner, thus, set forth the statutory basis of the rejection in a sufficiently articulate and informative manner as to meet the notice requirement of § 132. And we find that, in doing so, the Examiner set forth a proper rejection under § 101 such that the burden shifted to Appellants to demonstrate that the claims are patent-eligible.

Further referencing the USPTO’s “July 2015 Update: Subject Matter Eligibility,” Appellants argue the § 101 rejection cannot be sustained because “estimating elasticity and inventory effect” is not similar to a concept that the courts have identified as an abstract idea.⁷ Yet Appellants present no persuasive argument or technical reasoning to explain why the Examiner’s finding, i.e., that “[t]his idea is similar to the basic concept of manipulating information using mathematical relationships (e.g., converting

⁷ The July 2015 Update instructs examiners to refer to the body of case law precedent in order to identify abstract ideas by way of comparison to concepts already found to be abstract (*id.* at 3), and explains that “[t]his discussion is meant to . . . 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” (*id.*). Examiners also are instructed to clearly articulate “the reason(s) why the claimed invention is not eligible, for example, by providing a reasoned rationale that identifies the judicial exception recited in the claim and why it is considered an exception, and that identifies the additional elements in the claim (if any) and explains why they do not amount to significantly more than the exception” (*id.* at 6).

numerical representation in Benson), which has been found by the courts to an abstract idea” (Final Act. 3), is unreasonable or unsupported.

Also, to the extent Appellants maintain that the § 101 rejection must be withdrawn because the Examiner has failed to comply with USPTO guidelines, we note, for the record, that an Examiner’s failure to follow the Director’s guidance is appealable only to the extent that the Examiner has failed to follow the statutes or case law. To the extent the Director’s guidance goes beyond the case law and is more restrictive on the Examiner than the case law, the failure of the Examiner to follow those added restrictions is a matter for petition to the Director. We are aware of no controlling precedent, nor do Appellants identify any controlling case law, that precludes an examiner from finding a claimed concept patent-ineligible unless it is similar to a concept that a court has identified as being patent-ineligible.

Turning to the second step of the *Mayo/Alice* framework, Appellants assert that even if the claims are directed to an abstract idea, the claims are nonetheless patent-eligible because “the claims include an ‘inventive concept’ or additional elements so that the abstract idea is transformed into a patent-eligible application” (App. Br. 5). Yet, to the extent Appellants maintain that the claimed invention is patent-eligible, i.e., that the recited functionality is not “‘well-understood’ or ‘previously known’” because the claims are “‘indicated to be allowable over the cited prior art’” (*id.*), Appellants misapprehend the controlling precedent.

A finding of novelty or non-obviousness does not automatically lead to the conclusion that the claimed subject matter is patent-eligible. Although the second step in the *Mayo/Alice* framework is termed a search for an

“inventive concept,” the analysis is not an evaluation of novelty or non-obviousness, but rather, a search for “an element or combination of elements that is ‘sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.’”

Alice Corp., 134 S. Ct. at 2355. “Groundbreaking, innovative, or even brilliant discovery does not by itself satisfy the § 101 inquiry.” *Ass’n. for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 591 (2013).

A novel and non-obvious claim directed to a purely abstract idea is, nonetheless, patent-ineligible. *See Mayo*, 566 U.S. at 90. *See also Diamond v. Diehr*, 450 U.S. 175, 188–89 (1981) (“The ‘novelty’ of any element or steps in a process, or even of the process itself, is of no relevance in determining whether the subject matter of a claim falls within the § 101 categories of possibly patentable subject matter.”).

Appellants argue that the claims “go well beyond the mere concepts of simply retrieving, comparing and combining data using a computer,” and note that claim 1 recites, *inter alia*, “using linear regression to estimate a logarithm of the sales constant and a value of the theta parameter”; that “the inventory effect parameter comprises a power function of inventory levels”; and “using a single parameter linear regression to determine the base demand and to solve for either the elasticity parameter or the inventory effect parameter in the single variable demand model” (App. Br. 6).

However, we find no indication in the record, nor do Appellants point us to any indication, that the particular operations recited in the claims require any specialized computer hardware or other inventive computer components, invoke any assertedly inventive programming, or that the claimed invention is implemented using other than generic computer components, which is not

enough for patentability. *See DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1256 (Fed. Cir. 2014) (“[A]fter *Alice*, there can remain no doubt: recitation of generic computer limitations does not make an otherwise ineligible claim patent-eligible.”).

We also are not persuaded of Examiner error by Appellants’ argument that the claims are patent-eligible because they “do not attempt to preempt every application” of estimating elasticity and inventory effect (App. Br. 7). There is no dispute that the Supreme Court has described “the concern that drives [the exclusion of abstract ideas from patent-eligible subject matter] as one of pre-emption.” *Alice Corp.*, 134 S. Ct. at 2354. But characterizing preemption as a driving concern for patent eligibility is not the same as characterizing preemption as the sole test for patent eligibility. “The Supreme Court has made clear that the principle of preemption is the basis for the judicial exceptions to patentability” and “[f]or this reason, questions on preemption are inherent in and resolved by the § 101 analysis.” *Arioso Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015) (citing *Alice*, 134 S. Ct. at 2354). Although “preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility.” *Id.*

Appellants further argue that the claims are patent-eligible because they provide improvements to the functioning of the computer (App. Br. 7–8). Citing paragraph 36 of the Specification,⁸ Appellants assert that “[t]he

⁸ Paragraph 36 reads:

Having a value for theta now gives a relationship between alpha and gamma as follows:

$$\alpha\theta - 1 = \gamma$$

elimination of [the] inaccuracies of the prior art clearly leads to a better result when using embodiments of the present invention” (*id.* at 8). But, even accepting Appellants’ argument, there is a fundamental difference between computer functionality improvements, on the one hand, and uses of existing computers as tools to perform a particular task, on the other.

Indeed, the Federal Circuit applied this distinction in *Enfish, LLC v. Microsoft Corp.*, 822 F.3d. 1327 (Fed. Cir. 2016) in rejecting a § 101 challenge at the step one stage in the *Alice* analysis because the claims at issue focused on a specific type of data structure, i.e., a self-referential table for a computer database, designed to improve the way a computer carries out its basic functions of storing and retrieving data, and not on asserted advances in uses to which existing computer capabilities could be put. *Id.* at 1335–36. The alleged improvement that Appellants tout does not concern an improvement to computer capabilities but instead relate to an alleged improvement in generating a sales forecast for an item at a store for which a computer is used as a tool in its ordinary capacity.

Finally, Appellants argue that the Examiner failed to consider the claim elements both individually and in combination and, thus, 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” (App. Br. 8–

(Equation 3)

Based on Equation 2 above, embodiments use the relationship between alpha and gamma of Equation 3 to eliminate gamma from the regression. Therefore, embodiments avoid the need to estimate both alpha and gamma simultaneously, as is done in prior systems, which can lead to inaccuracy in alpha and gamma.

9). But again, as described above, a finding of novelty or non-obviousness does not automatically lead to the conclusion that the claimed subject matter is patent-eligible.

We are not persuaded for the foregoing reasons that the Examiner erred in rejecting claims 1, 3–9, 11–17, 19, and 20 under 35 U.S.C. § 101. Therefore, we sustain the Examiner’s rejection.

DECISION

The Examiner’s rejection of claims 1, 3–9, 11–17, 19, and 20 under 35 U.S.C. § 101 is affirmed.

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

AFFIRMED