



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

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--------------------------|-------------|----------------------|---------------------|------------------|
| 12/956,412 | 11/30/2010 | Saeed Bagheri | YOR920100522US1 | 9335 |
| 48062 | 7590 | 05/23/2018 | EXAMINER | |
| RYAN, MASON & LEWIS, LLP | | | SWARTZ, STEPHEN S | |
| 2425 Post Road | | | ART UNIT | |
| Suite 204 | | | PAPER NUMBER | |
| Southport, CT 06890 | | | 3623 | |
| | | | NOTIFICATION DATE | |
| | | | DELIVERY MODE | |
| | | | 05/23/2018 | |
| | | | 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):

ctoffice@rml-law.com
kmm@rml-law.com
mjc@rml-law.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte SAEED BAGHERI, KRISHNA RATAKONDA, and
ROSE WILLIAMS

Appeal 2017-001299
Application 12/956,412
Technology Center 3600

Before BRADLEY W. BAUMEISTER, IRVIN E. BRANCH, and
AMBER L. HAGY, *Administrative Patent Judges*.

HAGY, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants¹ appeal under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 1, 3–15, 17–20, and 22–24, which are all of the pending claims.² We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

¹ Appellants identify International Business Machines Corporation as the real party in interest. (App. Br. 1.)

² Claims 2, 16, 21, and 25 have been canceled. (App. Br. 18, 22, 24, 25.)

STATEMENT OF THE CASE

According to Appellants, the claimed invention relates “to information technology, and, more particularly, to delivery management.” (Spec. 1:10–11.) By way of background, Appellants’ Specification describes a “challenge” facing “delivery management” in that, typically, “no more than 20% of the projects in a portfolio can undergo delivery management review in a quarter.” (*Id.* at 1:19–22.) To address that challenge, Appellants’ Specification discloses and claims ways to prioritize project review—in particular, “techniques for delivery management effort allocation” based on projects’ “financial outlook.” (*Id.* at 1:24–2:6.)

Exemplary Claim

Claims 1, 15, and 20 are independent. Claim 1, reproduced below, is exemplary of the claimed subject matter:

1. A method for estimating future health of a project, wherein the method comprises:

defining a set of one or more financial health metrics that represent a proximity of a current state of a project to that of a goal project, said financial health metrics being derived from a corporate information warehouses database associated with a specific enterprise that stores global project related data pertaining to the specific enterprise, and wherein said corporate information warehouses database is executing on a hardware processor;

defining a parametric evolution model comprising one or more parameters, wherein the parametric evolution model governs a relationship between various data of the specific enterprise that includes current data of the set of one or more financial health metrics, current project health in relation to past data of the set of one or more financial health metrics, and related project health in relation to past data of the set of one or more financial health metrics for one or more related previous projects, said defining carried out via a project profiler module executing on the hardware

processor, wherein said project profiler module interacts, via a communication link, with the corporate information warehouses database to obtain the various data of the specific enterprise;

determining a value of each of the one or more parameters of the parametric evolution model using an optimization problem, said determining carried out via the project profiler module executing on the hardware processor;

using the value of each of the one or more parameters of the parametric evolution model and the current data of the set of one or more financial health metrics and current project health in relation to past data of the set of one or more financial health metrics to estimate the future health of the project, said using carried out via the project profiler module executing on the hardware processor, and wherein said estimating the future health of the project comprises estimating a value of future net profit for the project via:

$$\tilde{X}_{n+1}^p = \sum_{i=1}^n (a_i^p R_i^p - b_i^p C_i^p) + d^p, \text{ wherein:}$$

index i represents time, and the current time is $i = n$;

\tilde{X}_{n+1}^p represents the estimated net profit of the project, p , at future time $n+1$;

R_i^p represents the revenue of the project, p , at current time i ;

C_i^p is the cost of the project, p , at current time i ; and

a_i , b_i and d represent coefficients determined via the following equation:

$$[a^p, b^p, d^p] = \arg \min \left\{ \text{var} \left(X_{n+1}^p - \sum_{i=1}^n (a_i^p R_i^p - b_i^p C_i^p) - d^p \right) \right\};$$

generating an assignment of delivery effort to a portfolio of multiple projects based on the estimated future health of the project and an estimated future health of each additional project of the portfolio of multiple projects, wherein said generating comprises:

matching a resource to each of the multiple projects based on the estimated future health of each of the multiple projects, wherein said matching is carried out by a risk manager profile module executing on the hardware processor, wherein said risk manager

profile module, via a communication link with the corporate information warehouses database, analyzes data pertaining to the specific enterprise extracted from the corporate information warehouses database to determine the assignment;

displaying the assignment, via interaction between the risk manager profile module and a user interface module, through the user interface module executing on the hardware processor; and

outputting the assignment, via a communication link between the risk manager profile module and an allocation database, to the allocation database executing on the hardware processor.

REJECTION

Claims 1, 3–15, 17–20, and 22–24 stand rejected under 35 U.S.C. § 101 as directed to patent-ineligible subject matter. (Final Act. 2–7.)

ANALYSIS

Section 101 defines patent-eligible subject matter as “any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.” 35 U.S.C. § 101. 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.’” *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013) (internal brackets omitted) (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 70 (2012)).

To distinguish “patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts,” the Supreme Court has set up an analytical framework. *Alice Corp. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2355 (2014) (citing *Mayo*, 566 U.S. at 71–73). In the first step of the analysis, we determine whether the

claims at issue are “directed to” a judicial exception, such as an abstract idea. *Alice*, 134 S. Ct. at 2355. If not, the inquiry ends. *Thales Visionix Inc. v. U.S.*, 850 F.3d 1343, 1346 (Fed. Cir. 2017); *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1339 (Fed. Cir. 2016). If the claims are determined to be directed to an abstract idea, then we consider under step two whether the claims contain an “inventive concept” sufficient to “transform the nature of the claim into a patent-eligible application.” *Alice*, 134 S. Ct. at 2355 (quotations and citation omitted).

Noting that the two stages involve “overlapping scrutiny of the content of the claims,” the Federal Circuit has described “the first-stage inquiry” as “looking at the ‘focus’ of the claims, their ‘character as a whole,’” and “the second-stage inquiry (where reached)” as “looking more precisely at what the claim elements add—specifically, whether, in the Supreme Court’s terms, they identify an ‘inventive concept’ in the application of the ineligible matter to which (by assumption at stage two) the claim is directed.” *Electric Power Grp, LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016). In considering whether a claim is directed to an abstract idea, we acknowledge, as did the Court 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. We, therefore, look to whether the claims focus on a specific means or method that improves the relevant technology or are instead directed to a result or effect that in itself is the abstract idea and merely invoke generic processes and machinery. *See Enfish*, 822 F.3d at 1336.

Step One: Whether the Claims Are Directed to a Patent-Ineligible Concept (Abstract Idea)

Claim 1, which is representative of the claims before us,³ is directed to “estimating the future health of the project,” wherein the steps include “defining” inputs to a mathematical model to estimate the financial health of a project and, based on the model, matching resources to the project based on a comparison of data from a database by applying rules within a risk manager profile, and, ultimately, outputting the resulting assignment through a display and via a communication link. The Examiner concludes that claim 1 is directed towards an “abstract idea” of “estimating future health,” which the Examiner finds “is viewed as the comparing of new and stored information using rules to identify options.” (Ans. 3.) In particular, the Examiner characterizes each step in claim 1 as ““comparing new and stored information and using rules to identify options,”” ““organizing information through mathematical correlations,”” and/or ““using categories to organize, store and transmit (i.e.[,] display””) information. (*Id.* at 3–4.) We agree, and adopt the Examiner’s findings as our own.

Appellants raise several arguments challenging the Examiner’s conclusion that the claims are directed to one or more abstract ideas. (*See* App. Br. 11–12; Reply Br. 3–4.) Appellants first challenge the Examiner’s analysis semantically, asserting the Examiner has failed to address what the

³ Appellants collectively argue the rejection of all claims with regard to the Examiner’s rejection of claim 1 under 35 U.S.C. § 101. Separate patentability is not argued for dependent claims independent claims 15 or 20, or dependent claims 3–14, 17–19, or 22–24. (*See* App. Br. 11, 16.) Therefore, based on Appellants’ arguments, we decide the appeal of all pending claims based on claim 1 alone. *See* 37 C.F.R. § 41.37(c)(1)(iv).

claims are “directed to” and has “erred in merely inquiring as to whether the claims ‘deal with’ (or involve) a patent-ineligible concept.” (*Id.* at 12.)

We disagree with Appellants’ characterization of the Examiner’s conclusions. The Examiner expressly states in the Final Action that the claims “are *directed to* the abstract idea of estimating future health” (Final Act. 6.) The Examiner’s additional discussion does not detract from this conclusion, which the Examiner further elaborates in the Answer. (Ans. 3–4.)

Appellants further argue “the Examiner has not considered the collection of specific claim limitations as a whole,” suggesting the Examiner has evaluated the claims at too high a level of abstraction. (App. Br. 12.) Appellants appear to be arguing that application of the abstract idea in the context of estimating the financial health of a project, by using particular parameters and formulas, removes the claims from the realm of being directed to an abstract idea.

We disagree. As the Supreme Court has explained, “‘if a claim is directed essentially to a method of calculating, using a mathematical formula, even if the solution is for a specific purpose, the claimed method is nonstatutory.’” *Parker v. Flook*, 437 U.S. 584, 595 (1978) (quoting *In re Richman*, 563 F.2d 1026, 1030 (CCPA 1977)); *see also* *Digitech Image Techs., LLC v. Elecs. for Imaging, Inc.*, 758 F.3d 1344, 1351 (Fed. Cir. 2014) (concluding claims to a “process that employs mathematical algorithms to manipulate existing information to generate additional information” were patent-ineligible). In addition, the Supreme Court and the Federal Circuit 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, 1259 (Fed. Cir. 2016).

The claims at issue here are similar to claims the Federal Circuit has held to be directed to an abstract idea. *See FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1093–94 (Fed. Cir. 2016). In *FairWarning*, the Federal Circuit characterized the claimed method as one that

collects information regarding accesses of a patient’s personal health information, analyzes the information according to one of several rules (i.e., related to accesses in excess of a specific volume, accesses during a pre-determined time interval, or accesses by a specific user) to determine if the activity indicates improper access, and provides notification if it determines that improper access has occurred.

Id. at 1093. Noting that the “realm of abstract ideas” includes “collecting information, including when limited to particular content,” and further noting that “analyzing information by steps people go through in their minds, or by mathematical algorithms, without more,” are “essentially mental processes within the abstract-idea category,” the court concluded that the claims before it were directed to patent-ineligible abstract ideas. *Id.* at 1093–1095. The court in *FairWarning* also concluded that the additional step of providing a notification did not remove the claim from the realm of abstract ideas, explaining: “[W]e have found that ‘merely presenting the results of abstract processes of collecting and analyzing information, without more (such as identifying a particular tool for presentation), is abstract as an ancillary part of such collection and analysis.’” *Id.* at 1093.

Similar analysis supports the present Examiner’s conclusion that the claims are directed to patent-ineligible abstract ideas because they recite limitations that fall within the categories of “comparing new and stored

information and using rules to identify options,” “organizing information through mathematical correlations,” and/or “using categories to organize, store and transmit (i.e., display) information.” (See Ans. 3–4.) In that regard, we note that a claim need not be addressed to a single abstract idea to be patent ineligible. As the Federal Circuit held in *FairWarning*, patent-ineligible claims may be directed to “a combination of . . . abstract-idea categories.” *FairWarning IP*, 839 F.3d at 1093–94; see also *RecogniCorp, LLC v. Nintendo Co., Ltd.*, 855 F.3d 1322, 1327 (Fed. Cir. 2017) (“Adding one abstract idea . . . to another abstract idea . . . does not render the claim non-abstract.”).

Because we agree with the Examiner, at step one of the *Alice* analysis, that the claims are directed to one or more abstract ideas, we turn to the second step of the *Alice* analysis. To that end, we determine whether the additional elements of the claims transform them into patent-eligible subject matter.

Step Two: Whether Additional Elements Transform The Abstract Idea Into Patent-Eligible Subject Matter

The Examiner also finds the claims “do not include additional elements that are sufficient to amount to significantly more than the judicial exception because the steps of defining, using, generating, matching, displaying, and outputting” amount to no more than performing the abstract idea “on a generic computer.” (Final Act. 7; Ans. 7–10.) In particular, the Examiner finds, and we agree, that although “the claims may have novelty in the use of mathematical modeling in order to determine the future health,” and also although “the data may be useful to a business,” the claimed invention merely implements the abstract idea “on a generic computer with generic computer components and not significantly more.” (Ans. 6–7.)

We agree that the computer components recited in the claims do not amount to significantly more than the underlying abstract ideas. Rather, as in *FairWarning*, the claims here “merely graft generic computer components onto otherwise-ineligible method claims.” *FairWarning*, 839 F.3d at 1096. In particular, claim 1 calls for a “hardware processor,” a “communication link,” and a “corporate information warehouses database,” to carry out the recited steps. Appellants’ Specification does not define these components as limited to specialized hardware, but instead describes them broadly—describing a “processor,” for example, as “any processing device.” (Spec. 12:9–12.) Thus, broadly but reasonably construed, the computer technology recited in claim 1 covers implementation of the invention on generic computer systems. Moreover, the tasks recited in claim 1—such as executing modules by the processor and transmitting information between a database and the processor via a communication link—are common computer functions. (*See* Ans. 7, 10.)

Appellants do not appear to dispute that their claimed invention encompasses generic computer technology. Instead, Appellants argue their claims “are significantly more than the alleged abstract idea” because they include “unconventional steps” and a set of specific limitations that have been deemed “not anticipated, taught, or even suggested by a field of available art” (App. Br. 12–15; Reply 5–8.)

Appellants do not explain what in particular is allegedly “unconventional” in their claims, despite repeating that characterization several times. (*See id.*) In essence, Appellants appear to be arguing that their claims are patent-eligible under § 101 because they are novel. In that regard, Appellants misapprehend the controlling precedent. 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*, 134 S. Ct. at 2355. In the context of the § 101 analysis, even a novel and nonobvious claim directed to a purely abstract idea is, nonetheless, patent-ineligible. *See Mayo*, 566 U.S. at 90.

Similarly unpersuasive is Appellants’ contention that their claims, “given their specificity,” do not “preempt all ways of [carrying out the abstract idea] on the Internet.” (Reply Br. 8.) There is no dispute that the Supreme Court has described “the concern that drives this exclusionary principle [i.e., the exclusion of abstract ideas from patent eligible subject matter] as one of pre-emption.” *See Alice Corp.*, 134 S. Ct. at 2354. However, characterizing preemption as a driving concern for patent eligibility is not the same as characterizing preemption as the sole test for patent eligibility. As our reviewing court has explained: “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.” *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015) (citing *Alice Corp.*, 134 S. Ct. at 2354). Although “preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility.” *Id.*

It also is insufficient, without more, that the particular operations recited in the claims, e.g., “generating an assignment of delivery effort to a

portfolio of multiple projects based on the estimated future health of the project,” as recited in claim 1, may not be routine or conventional, absent some indication that the claim elements are implemented using other than generic computer components. “[A]fter *Alice*, there can remain no doubt: recitation of generic computer limitations does not make an otherwise ineligible claim patent-eligible.” *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1256 (Fed. Cir. 2014) (citing *Alice Corp.*, 134 S. Ct. at 2358)). And, as noted above, Appellants do not appear to dispute that their claims are implemented using generic computer technology.

For the foregoing reasons, we are not persuaded the Examiner erred in rejecting independent claim 1 under 35 U.S.C. § 101 as directed to patent-ineligible subject matter, or in rejecting on the same basis independent claims 15 and 20, as well as dependent claims 3–14, 17–19, and 22–24, which Appellants do not argue separately. (App. Br. 16.)

DECISION

For the above reasons, the Examiner’s rejection of claims 1, 3–15, 17–20, and 22–24 is affirmed.⁴

⁴ In the event of further prosecution, the Examiner and Appellants should consider whether the claimed “tangible computer readable recordable storage memory including computer useable program code,” as recited in independent claim 15, excludes transitory media. Appellants’ Specification provides no explicit definition of that term, and thus does not exclude transitory media, which are non-statutory subject matter. *See In re Nuijten*, 500 F.3d 1346, 1356–57 (Fed. Cir. 2007). Appellants’ Specification does describe a “tangible computer readable storage medium” (Spec. 2:19–20), but also does not limit that medium to excluding transitory media, which are non-statutory subject matter. As the Board has held, “those of ordinary skill in the art would understand the claim term ‘machine-readable

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

storage medium” would include signals *per se*, and where “the broadest reasonable interpretation” of a claim “covers a signal *per se*,” the claim “must be rejected under 35 U.S.C. § 101 as covering non-statutory subject matter.” *Ex parte Mewherter*, 107 USPQ2d 1857, 1862 (PTAB 2013) (precedential) (citing *In re Nuijten*, 500 F.3d at 1356–57). Similar analysis applies to a “computer-readable tangible storage device,” *see id.*, and hence also logically applies to a “tangible computer readable recordable storage memory,” as recited in Appellants’ claim 15. Although the Examiner previously rejected claim 15 on this basis and withdrew the rejection on January 15, 2013, that withdrawal was prior to the Board’s decision in *Mewherter*.