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Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO. Includes details for application 13/772,825 and a secondary filing date of 09/21/2018.

EXAMINER

BOYCE, ANDRE D

ART UNIT PAPER NUMBER

3623

NOTIFICATION DATE DELIVERY MODE

09/21/2018

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte GINTARAS V. PUSKORIUS, BRYAN R. GOODMAN,
ROBBIE J. ANIOL, WILLIAM R. FRAVEL, YU-NING LIU,
MELINDA K. HUNSAKER, BARBARA NANCE,
SHIGERU SADAKANE, and HE LI

Appeal 2017–000470¹
Application 13/772,825²
Technology Center 3600

Before ANTON W. FETTING, MICHAEL C. ASTORINO, and
MATTHEW S. MEYERS, *Administrative Patent Judges*.

MEYERS, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

¹ Our decision references Appellants’ Appeal Brief (“Appeal Br.,” filed July 21, 2015) and Reply Brief (“Reply Br.,” filed November 24, 2015), the Examiner’s Answer (“Ans.,” mailed September 25, 2015), and Final Office Action (“Final Act.,” mailed March 23, 2015).

² Appellants identify Ford Motor Company as the real party in interest (Appeal Br. 2).

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 42–65. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

CLAIMED INVENTION

Appellants' claims relate generally to an "order generation system" for automobile dealerships (Spec. ¶¶ 35–36).

Claims 42, 51, and 60 are the independent claims on appeal. Claim 42, reproduced below with minor formatting changes and added bracketed notations, is illustrative of the subject matter on appeal:

42. A method, comprising:

[a] determining, for a dealer of interest, a target inventory mix rate for an item having multiple features by using dealer-level historical sales mix rates and market-level historical sales mix rates for the features, wherein the target inventory mix rate is a number of items in an inventory having the features divided by the total number of the items in the inventory, and the respective sales mix rates are numbers of items sold having the feature divided by a total number of items sold;

[b] determining a projected inventory mix rate for the features based at least in part on projected dealer sales for items including the features; and

[c] performing, in a computing device having a processor and a memory, a mathematical programming optimization that includes an objective function and constraints to obtain a recommended feature allocation of the item including the features in the inventory, based at least in part on at least one weighting factor associated with the dealer of interest, by minimizing a difference between the projected inventory mix rate for the features and the target inventory mix rate for the features.

REJECTION³

Claims 42–65 are rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter.

ANALYSIS

Independent claims 42, 51, and 60, and dependent claims 46, 47, 49, 50, 55, 56, 58, 59, and 65

Appellants argue claims 42, 46, 47, 49–51, 55, 56, 58–60, and 65 as a group (*see* Appeal Br. 6–10; *see also* Reply Br. 2–3). We select independent claim 42 as representative. Claims 46, 47, 49–51, 55, 56, 58–60, and 65 stand or fall with independent claim 42. *See* 37 C.F.R. § 41.37(c)(1)(iv).

The Supreme Court in *Alice* reiterated the two-step framework, set forth previously in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66, 78–79 (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. Pty. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2355 (2014). The first step in that analysis is to “determine whether the claims at issue are *directed to* one of those patent-ineligible concepts.” *Id.* (citing *Mayo*, 566 U.S. at 79) (emphasis added). If so, the second step is to consider the elements of the claims “individually and ‘as an ordered combination’” to determine whether the additional elements “‘transform the nature of the claim’ into a patent-eligible application.” *Id.* (quoting *Mayo*, 566 U.S. at 78–79).

In other words, the second step is to “search for an ‘inventive concept’—*i.e.*, an element or combination of elements that is ‘sufficient to

³ The rejection under 35 U.S.C. § 112, second paragraph, was withdrawn by the Examiner (*see* Ans. 2).

ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.” *Id.* (alteration in original) (quoting *Mayo*, 566 U.S. at 72–73). 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. 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 itself is the abstract idea, and merely invoke generic processes and machinery. *See Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1336 (Fed. Cir. 2016).

Appellants argue that the Examiner’s rejection is in error because the Examiner fails to establish a prima facie case of subject matter ineligibility (*see* Appeal Br. 7–8; *see also* Reply Br. 2–3). More particularly, Appellants argue the Examiner “simply stated that the instant claims are directed to the alleged abstract idea of ‘determining an [sic] recommended feature allocation of inventory items comprising wholly generic computers’” without “address[ing] the specific recitations of the independent claims to explain how they allegedly fall within this abstract idea” (Appeal Br. 7; *see also* Reply Br. 2–3). Appellants’ arguments are not persuasive.

In rejecting the pending claims under 35 U.S.C. § 101, the Examiner analyzes the claims using the *Mayo/Alice* two-step framework (Final Act. 3, 7–11; Ans. 3–9). Here, the Examiner maintains the claims are directed to “determining [a] recommended feature allocation of inventory items comprising wholly generic computers” (Final Act. 9). And, looking to the language of the claims, the Examiner further determines the

[c]laims 42–65 are directed recommending a feature allocation of items (inventory mix for automobiles on a dealer’s lot). This is a concept involving human activity relating to commercial practices that have been found by the courts to be abstract ideas. The processing of determining a target inventory mix rate, determining a project inventory mix rate and performing a mathematical programming optimization all describe the abstract idea.

(Ans. 3–4). The Examiner also determines

[t]his concept is similar to the concepts involving mathematical relationships that have been found by the courts to be abstract ideas; for example: In re Maucorps that describes an algorithm for determining the optimal number of visits by a business representative to a client. Here, the concept is determining the optimal number of inventory allocation.

(*Id.* at 4; *see also id.* at 7). The Examiner further determines that the additional elements of the claims, taken alone and as an ordered combination, do not ensure that the claims amount to significantly more than the abstract idea (*see* Final Act. 9–11; *see also* Ans. 4–9). The Examiner, thus, has clearly followed the two-part framework specified by the Supreme Court in *Mayo/Alice* consistent with Office guidelines.

In this regard, the Examiner has articulated the reasons for the rejection and has notified Appellants 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.”

35 U.S.C. § 132. And we find that, in doing so, the Examiner sets forth a prima facie case of subject matter ineligibility. *See In re Jung*, 637 F.3d 1356, 1362 (Fed. Cir. 2011); *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.”).

We also agree with the Examiner that under step one of the framework set forth in *Mayo/Alice*, the claimed invention is directed broadly to the concept of “determining [a] recommended feature allocation of inventory items comprising wholly generic computers” (Final Act. 9), and similar to certain methods of organizing human activities that our reviewing court has found patent ineligible, such as “unpatentable mental processes” including “steps [that] can be performed in the human mind, or by a human using a pen and paper” in *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1372–73 (Fed. Cir. 2011), and the concept of collecting information, analyzing it, and displaying certain results of the collection and analysis in *Electric Power Group, LLC v. Alstom S.A.*, 830 F.3d 1350 (Fed. Cir. 2016).

In making this determination, we note that the present invention is described as “an order generation system . . . for automobile dealerships” (Spec. ¶ 36). According to the Specification, “variety in configuration complicates forecasting of item demand because sold items may have configurations including many different features, making it difficult to determine what features contributed to past sales and therefore should be ordered, and in what combination” (*id.* ¶ 3). The Specification identifies that “[v]ariety in configurations for an item also adds difficulties to the parts supply chain for the item, because different configurations may require different materials for manufacture of the items” (*id.*). To address these difficulties, the present invention utilizes “a feature selection (sometimes also referred to as feature allocation) subsystem to attempt to provide a

dealer with a balanced inventory” (*id.* ¶ 61). And, taking independent claim 42 as representative, the claimed subject matter is generally directed to “determining . . . a target inventory mix rate,” “determining a projected inventory mix rate,” and “performing . . . a mathematical programming optimization that includes an objective function and constraints to obtain a recommended feature allocation.” Thus, independent claim 42 involves collecting data and information through the user interface, analyzing the collected data, and displaying certain results of the collection and analysis through the user interface, without any particular inventive technology. *Cf. Elec. Power Grp.*, 830 F.3d at 1354.

Turning to the second step of the *Mayo/Alice* framework, rather than reciting additional elements that amount to “significantly more” than the abstract idea, exemplary independent claim 42, at best, adds only “a computing device having a processor and a memory,” i.e., “[s]upercomputer 170 is a computing device that is generally capable of performing parallel, processing-intensive, and/or memory-intensive calculations” (*see, e.g.*, Spec. ¶ 84), which lacks an inventive concept. The Specification discloses that “[s]upercomputer 170” may be a “collection of off-the-shelf processing components” “used for highly calculation-intensive tasks, such as weather and climate prediction, molecular modeling, and other types of simulation that allow for a task to be broken up into smaller units that may be processed in parallel” (*id.*). Thus, we agree with the Examiner that exemplary independent claim 42 does not include additional elements alone or in combination that are sufficient to amount to significantly more than the abstract idea. *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1256 (Fed. Cir. 2014) (internal quotation marks omitted) (“[A]fter *Alice*, there can

remain no doubt: recitation of generic computer limitations does not make an otherwise ineligible claim patent-eligible. . . . The bare fact that a computer exists in the physical rather than purely conceptual realm ‘is beside the point.’”).

And, similar to *Electric Power*, we are not apprised of anything other than off-the-shelf, conventional computer technology for gathering (*see, e.g.*, Spec. ¶¶ 93–96), analyzing (*see, e.g., id.* ¶ 102), and presenting the desired information to remove the claim from the class of subject matter ineligible for patenting. As the court explained in *Electric Power*, “merely selecting information, by content or source, for collection, analysis, and display does nothing significant to differentiate a process from ordinary mental processes, whose implicit exclusion from § 101 undergirds the information-based category of abstract ideas.” *Elec. Power Grp.*, 830 F.3d at 1355.

Here, as the Examiner points out, “the claim as a whole amounts to nothing more than generic computer functions merely used to implement an abstract idea, such as an idea that could be done by a human analog (i.e., by hand or by merely thinking)” (Ans. 5–6). Appellants argue

claim 42 recites not just obtaining “a feature allocation” using “the target inventory mix rate,” but in fact recites a specific manner of doing so, i.e., using an “objective function.” Thus, assuming arguendo that claim 42 is directed to the abstract idea of [“]feature allocation,” the recitation of obtaining the feature allocation from an “objective function” is significantly more, particularly when one accounts for the specific manner in which the objective function is carried out.

(Appeal Br. 9; *see also* Reply Br. 3). However, as discussed above, we agree with the Examiner that independent claim 42 is directed broadly to “determining [a] recommended feature allocation of inventory items” (Final Act. 9) including steps for “determining . . . a target inventory mix rate,”

“determining a projected inventory mix rate,” and “performing . . . a mathematical programming optimization that includes an objective function and constraints to obtain a recommended feature allocation”—none of which add inventiveness because they merely require the application of conventional, well-known analytical steps. *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 716 (Fed. Cir. 2014) (“[T]he claimed sequence of steps comprises only ‘conventional steps, specified at a high level of generality,’ which is insufficient to supply an ‘inventive concept.’”) (Citing *Alice*, 134 S. Ct. at 2357). There is no indication in the record that any specialized computer hardware is required or evidence that the programming related to these “improvement[s]” would entail anything atypical from conventional programming. Instead, the Specification discloses utilizing conventional computer components (*see* Spec. ¶¶ 84, 93–96, 104). *See Bancorp Services v. Sun Life*, 687 F.3d 1266, 1278, (Fed. Cir. 2012) (“The computer required by some of Bancorp’s claims is employed only for its most basic function, the performance of repetitive calculations, and as such does not impose meaningful limits on the scope of those claims.”).

And, considered as an ordered combination, the computer components of Appellants’ independent claim 42 add nothing that is not already present when the limitations are considered separately. Viewed as a whole, Appellants’ claims simply recite the concept of “determining [a] recommended feature allocation of inventory items comprising wholly generic computers” (Final Act. 9) using a computer. The claims do not, for example, purport to improve the functioning of the computer itself. Nor do they effect an improvement in any other technology or technical field. Instead, the claims at issue amount to nothing significantly more than an

instruction to apply the abstract idea of “determining [a] recommended feature allocation of inventory items” (Final Act. 9), which under our precedents, is not enough to transform an abstract idea into a patent-eligible invention. *See Alice*, 134 S. Ct. at 2360.

Appellants last argue that the present claims do not “preempt all applications of processes that determine a ‘recommended feature allocation of inventory items’” (Appeal Br. 9). However, Appellants’ preemption argument does not alter our § 101 analysis. Preemption concerns are fully addressed and made moot where a patent’s claims are deemed to disclose patent ineligible subject matter under the two-part framework described in *Mayo* and *Alice*. *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015). “While preemption may signal patent ineligible matter, the absence of complete preemption does not demonstrate patent eligibility.” *Id.*

In view of the foregoing, we sustain the Examiner’s rejection under 35 U.S.C. § 101 of independent claim 42, and claims 46, 47, 49–51, 55, 56, 58–60, and 65, which fall with independent claim 42.

Dependent claims 43–45, 48, 52–54, 57, and 61–64

Appellants also argue separately dependent claims 43–45, 48, 52–54, 57, and 61–64 (*see* Appeal Br. 16–17; *see also* Reply Br. 4). As we find, however, that dependent claims 43–45, 48, 52–54, 57, and 61–64 merely describe further characteristics of the underlying concept and lack additional elements that would render the claims patent-eligible, we also sustain the rejection under § 101 of these dependent claims on the same basis as the independent claims from which they depend. In particular, the dependent

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claims merely recite variations related to recommending a feature allocation of inventory items, which we discern sits squarely within, and does not alter appreciably, the broader concept of “determining [a] recommended feature allocation of inventory items.”

In view of the foregoing, we sustain the Examiner’s rejection under 35 U.S.C. § 101 of claims 43–45, 48, 52–54, 57, and 61–64 for the reasons discussed above.

DECISION

The Examiner’s rejection of claims 42–65 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