UNITED STATES PATENT AND TRADEMARK OFFICE

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UNITED STATES PATENT AND TRADEMARK OFFICE
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BEFORE THE PATENT TRIAL AND APPEAL BOARD
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Ex parte THOMAS MICHAEL COZAD JR.
_____

Appeal 2018-008163
Application 14/321,498
Technology Center 3600

_____

Before ELENI MANTIS MERCADER, JASON J. CHUNG, and
SCOTT E. BAIN, *Administrative Patent Judges*.

MANTIS MERCADER, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant[1] appeals under 35 U.S.C. § 134 from a rejection of claims
1–12, 14–19, 21, and 22. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

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[1] Appellant is the real party in interest. Br. 1.

CLAIMED SUBJECT MATTER

The claims are directed to systems and methods for managing product

location information. Claim 1, reproduced below, is illustrative of the

claimed subject matter:

1.   A method for collecting and generating store location
infornation, the method comprising:
        in a mobile computing device, receiving an indication of
an initial position in a store, the indication of the initial position
identifying a first aisle in the store and a first side of the aisle,
the first aisle including multiple sections that are arranged in
order from a first end of the aisle to
a second end of the first aisle, each section having multiple
shelves;
        receiving a series of shelf counts that each correspond to
the total number of shelves in a distinct one of the sections in
the first aisle, the shelf counts based on inputs to the mobile
computing device from a user who is traversing the first aisle
from the first end to the second
end;
        receiving an indication that the user has reached the
second end of the first aisle;
        presenting a user interface that is configured to:
        receive a series of inputs that each indicate a
corresponding one of the shelf counts in the series of shelf
counts;
        receive only a single input from the user that indicates
that the user has reached the second end of the first aisle or that
the user has finished inputting shelf counts for the first aisle;
and
        in response to the received single input, automatically
update the user interface to receive shelf counts for the second
side of the first aisle or a second aisle in the store;
        automatically generating a data structure that represents
the aisles of the store based on the shelf counts received for
sections of each of the aisles of the store, wherein the data
structure includes placeholders for product location
information;

printing shelf identification tags based on the data structure, wherein each shelf identification tag includes machine readable data that identifies a corresponding shelf in the store; and

automatically generating a map of the store based on the data structure, by populating placeholders in the data structure with product location information received from a barcode scanner that reads shelf identifiers from the printed shelf identification tags and product identifiers from products located on the shelves of the store, wherein the map is generated without requiring a human to draw or lay out a rnap or other representation of the store.

REJECTIONS

Claims 1–12, 14–19, 21, and 22 stand rejected under 35 U.S.C. § 101 as being directed to a judicial exception without significantly more.

OPINION

Except where indicated, we adopt the Examiner's findings in the Answer and Final Office Action and we add the following primarily for emphasis. We note that if Appellant failed to present arguments on a particular rejection, we decline to review unilaterally those uncontested aspects of the rejection. *See Ex parte Frye*, 94 USPQ2d 1072, 1075 (BPAI 2010) (precedential); *Hyatt v. Dudas*, 551 F.3d 1307, 1313–14 (Fed. Cir. 2008) (the Board may treat arguments Appellant failed to make for a given ground of rejection as waived).

Appellant argues that the claims are not directed to an abstract idea because the limitations of

user interface that is configure to . . .
receive only a single input from the user that indicates
that the user has reached the second end of the first aisle or that

> the user has finished inputting shelf counts for the first aisle; and
>
> > in response to the received single input, automatically update the user interface to receive shelf counts for the second side of the first aisle or a second aisle in the store;

as recited in claim 1 address a specific problem in the prior art by providing an automatically updatable user interface. Br. 8–9. Appellant argues that like *McRO,*[2] the claims provide a solution and improvement to a prior art process that is at least in part manual, labor-intensive, and error prone gathering layout information for a given retail setting. Br. 9.

Appellant further argues that the claims recite significantly more than any alleged abstract idea because they include a specific, automatically configurable user interface combined with other elements including map generations. Br. 11–12. Appellant argues that unlike the *The Electric Power Group* the claims recite a specific mechanism or technique for performing operations such as collecting information, analyzing information, and displaying information. *Id.* at 12. Furthermore, Appellant argues that similar to *Bascom* they recite a concrete solution that requires the above-quoted claim limitations to improve a pre-exiting technology of inventory management systems. *Id.*

Appellant further argues with respect to claim 21 that the limitation of "automatically determining names for the sections in the first aisle, by invoking a machine learning classifier to classify each section based on products located in the section" technically solves the problem of

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[2] *McRO, Inc. v. Bandai Namco Games America Inc.*, 837 F.3d 1299 (Fed. Cir. 2016).

determining an appropriate description for each section of the aisle or store.
Br. 12–13.

Appellant also argues that the claim limitations identified with respect
to claim 22 pertaining to table creations add significantly more because they
do not attempt to monopolize any possible approach to solving a particular
problem. Br. 13.

We are not persuaded by Appellant's argument. An invention is
patent-eligible if it claims a "new and useful process, machine, manufacture,
or composition of matter." 35 U.S.C. § 101. However, the Supreme Court
has long interpreted 35 U.S.C. § 101 to include implicit exceptions: "[l]aws
of nature, natural phenomena, and abstract ideas" are not patentable. *E.g.*,
Alice Corp. v. CLS Bank Int'l, 573 U.S. 208, 216 (2014) (internal quotation
marks and citation omitted).

In determining whether a claim falls within an excluded category, we
are guided by the Supreme Court's two-step framework, described in *Mayo*
and *Alice*. *Id.* at 217–18 (citing *Mayo Collaborative Servs. v. Prometheus
Labs., Inc.*, 566 U.S. 66, 75–77 (2012)). In accordance with that framework,
we first determine what concept the claim is "directed to." *See Alice*, 573
U.S. at 219 ("On their face, the claims before us are drawn to the concept of
intermediated settlement, *i.e.,* the use of a third party to mitigate settlement
risk."); *see also Bilski v. Kappos*, 561 U.S. 593, 611 (2010) ("Claims 1 and 4
in petitioners' application explain the basic concept of hedging, or protecting
against risk.").

Concepts determined to be abstract ideas, and, thus, patent ineligible,
include certain methods of organizing human activity, such as fundamental
economic practices (*Alice*, 573 U.S. at 219–20; *Bilski*, 561 U.S. at 611);

mathematical formulas (*Parker v. Flook*, 437 U.S. 584, 594–95 (1978)); and mental processes (*Gottschalk v. Benson*, 409 U.S. 63, 69 (1972)). Concepts determined to be patent eligible include physical and chemical processes, such as "molding rubber products" (*Diamond v. Diehr*, 450 U.S. 175, 191 (1981)); "tanning, dyeing, making water-proof cloth, vulcanizing India rubber, smelting ores" (*id.* at 182 n.7 (quoting *Corning v. Burden*, 56 U.S. 252, 267–68 (1854))); and manufacturing flour (*Benson*, 409 U.S. at 69 (citing *Cochrane v. Deener*, 94 U.S. 780, 785 (1876))).

In *Diehr*, the claim at issue recited a mathematical formula, but the Supreme Court held that "[a] claim drawn to subject matter otherwise statutory does not become nonstatutory simply because it uses a mathematical formula." *Diehr*, 450 U.S. at 176; *see also id.* at 191 ("We view respondents' claims as nothing more than a process for molding rubber products and not as an attempt to patent a mathematical formula."). Having said that, the Supreme Court also indicated that a claim "seeking patent protection for that formula in the abstract . . . is not accorded the protection of our patent laws, . . . and this principle cannot be circumvented by attempting to limit the use of the formula to a particular technological environment." *Id.* (citing *Benson* and *Flook*); *see, e.g.*, *id.* at 187 ("It is now commonplace that an *application* of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection.").

If the claim is "directed to" an abstract idea, we turn to the second step of the *Alice* and *Mayo* framework, where "we must 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*, 573 U.S. at 221 (internal citation omitted). "A claim that recites an abstract idea must include 'additional features' to ensure 'that the [claim] is more than a drafting effort designed to monopolize the [abstract idea].'" *Id.* (quoting *Mayo*, 566 U.S. at 77). "[M]erely requir[ing] generic computer implementation[] fail[s] to transform that abstract idea into a patent-eligible invention." *Id.*

The PTO recently published revised guidance on the application of § 101. USPTO's January 7, 2019 Memorandum, *2019 Revised Patent Subject Matter Eligibility Guidance* ("Memorandum"). Under that guidance, we first look to whether the claim recites:

> (1) any judicial exceptions, including certain groupings of abstract ideas (i.e., mathematical concepts, certain methods of organizing human activity such as a fundamental economic practice, or mental processes); and
>
> (2) additional elements that integrate the judicial exception into a practical application (*see* Manual of Patent Examining Procedure (MPEP) § 2106.05(a)–(c), (e)–(h) (9th Ed., Rev. 08.2017, Jan. 2018)).

Only if a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, do we then look to whether the claim:

> (3) adds a specific limitation beyond the judicial exception that are not "well-understood, routine, conventional" in the field (*see* MPEP § 2106.05(d)); or
>
> (4) simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.

See Memorandum.

In the instant case, we adopt the Examiner's finding that claim 1 as a whole recites a method of organizing human activity. Ans. 4. In particular, the method of claim 1 allows

> receiving an indication of an initial position in a store, the indication of the initial position identifying a first aisle in the store and a first side of the aisle, the first aisle including multiple sections that are arranged in order from a first end of the aisle to a second end of the first aisle, each section having multiple shelves;
> receiving a series of shelf counts that each correspond to the total number of shelves in a distinct one of the sections in the first aisle, the shelf counts based on inputs to the mobile computing device from a user who is traversing the first aisle from the first end to the second end;
> receiving an indication that the user has reached the second end of the first aisle; . . .
> receive a series of inputs that each indicate a corresponding one of the shelf counts in the series of shelf counts;
> receive only a single input from the user that indicates that the user has reached the second end of the first aisle or that the user has finished inputting shelf counts for the first aisle; and
> in response to the received single input, automatically update the user interface to receive shelf counts for the second side of the first aisle or a second aisle in the store;
> automatically generating a data structure that represents the aisles of the store based on the shelf counts received for sections of each of the aisles of the store, wherein the data structure includes placeholders for product location information;
> printing shelf identification tags based on the data structure, wherein each shelf identification tag includes machine readable data that identifies a corresponding shelf in the store; and

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> automatically generating a map of the store based on the
> data structure, by populating placeholders in the data structure
> with product location information received from a barcode
> scanner that reads shelf identifiers from the printed shelf
> identification tags and product identifiers from products located
> on the shelves of the store, wherein the map is generated
> without requiring a human to draw or lay out a rnap or other
> representation of the store.

These limitations, as drafted, provide a process that, under its broadest reasonable interpretation, allows a user to collect and generate store location information, which is a method of organizing human activity. In essence, the method determines the total number of shelves for each distinct section in an aisle, generates a data structure that represents the aisles of the store with placeholders for product location information and generates a map from the data structure by populating the placeholders with the product location information. *See* Ans. 4. Thus, under Step 2A, prong 1, the claim recites an abstract idea. *See* Memorandum.

Because the claim recites a method of organizing human activity, we proceed to Step 2A, prong 2—i.e., we determine whether the method of organizing human activity is integrated into a practical application.

The mere nominal recitation of a generic "in a mobile computing device," "a user interface," and "a bar code scanner" at a high level of generality does not take the claim out of the method of organizing human activity pertaining to generating a map of store location information. The mere nominal recitation of a generic mobile computing device and the use of a GUI to enter the items into a computer listing does not take the claim limitation out of the organizing human activity grouping. As explained in *OIP Technologies, Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1363 (Fed. Cir.

2015), "relying on a computer to perform routine tasks more quickly or more accurately is insufficient to render a claim patent eligible." *See also Alice*, 573 U.S. at 224 ("use of a computer to create electronic records, track multiple transactions, and issue simultaneous instructions" is not an inventive concept). Simply adding a 'computer aided' limitation to a claim covering an abstract concept, without more, is insufficient to render the claim patent eligible." *Dealertrack, Inc. v. Huber,* 674 F.3d 1315, 1333 (Fed. Cir. 2012).

Although the "automatically updatable" user interface may more efficiently collect and generate store location information than can be accomplished manually, the additional elements continue to operate in their ordinary capacity by performing generic computer functions. Additionally, merely automatically generating a map based on a data structure that represents the aisles of the store based on the shelf counts received for sections of each of the aisles of the store comes from the capabilities of the generic computer components, and not the recited process itself. *See FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1095 (Fed. Cir. 2016) (citing *Bancorp Servs., LLC v. Sun Life Assurance Co.*, 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.")); *see also Intellectual Ventures I LLC v. Erie Indemnity Co.*, 711 F. App'x 1012, 1017 (Fed. Cir. 2017) (unpublished) ("Though the claims purport to accelerate the process of finding errant files and to reduce error, we have held that speed and accuracy increases stemming from the ordinary capabilities of a general-

purpose computer 'do[ ] not materially alter the patent eligibility of the claimed subject matter.'").

Simply implementing the abstract idea on a generic computer is not a practical application of the abstract idea under Step 2A, prong 2.

Under Step 2B, the claim as a whole merely describes the concept of of receiving an indication of an initial position in a store, receiving a series of shelf counts from a user who is traversing the first aisle, automatically generating a data structure that represents the aisles of the store based on the shelf counts received for sections of each of the aisles of the store, and thus, the claims do not plainly represent improvements to technology but instead merely perform more efficiently what could be accomplished manually. Appellant's Specification states that general purpose computing systems using standard programming techniques can be used. *See* Spec. paras. 57, 64. Thus, even as viewed as a whole, nothing in the claim adds significantly more (i.e., an inventive concept) to the abstract idea. Thus, claim 1 is ineligible. Similarly claims 2–12, 14–18, and 19 are ineligible for at least the reasons stated above.

Appellant further argues the learning classifier of claim 21 solves the problem of determining an appropriate description for each section of an aisle or store and therefore adds significantly more to the alleged abstract idea. Br. 12–13.

We do not agree. Appellant's specification briefly introduces a machine learning classifier in paragraph 32. In particular, the Specification recites:

> The user interface also presents a section name, which may be *manually entered or automatically determined.* Automatically determining a section name may be based on the most

frequently occurring product or product category in the section. Other approaches may include *machine learning/classification, such as by using a Bayesian classifier or neural network to classify a section based on the products located there*.

Spec. para. 32.

This recitation does not impart significantly more than the abstract idea when claimed in such a generic manner. As stated above, the courts have already declared the following computer functions to be well-understood, routine, conventional nature of the additional elements.

Appellant further argues that claim 22 is patent eligible because the specific mechanism by which the recited user interface is automatically updated to receive shelf counts for a second side of an aisle adds significantly more because it does not represent to attempt to monopolize any possible approach to solving a particular problem. *Id.* at 13.

Appellant's assertion regarding pre-emption is unpersuasive, because "[w]hile preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility . . . . Where a patent's claims are deemed only to disclose patent ineligible subject matter under the *Mayo* framework, as they are in this case, preemption concerns are fully addressed and made moot." *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015); *see also OIP*, 788 F.3d at 1362–63 ("that the claims do not preempt all price optimization or may be limited to price optimization in the e-commerce setting do not make them any less abstract").

Thus, we sustain the Examiner's rejection of claims 1–12, 14–19, 21, and 22.

DECISION

We affirm the Examiner's rejection of claims 1–12, 14–19, 21, and 22.

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

AFFIRMED