UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/821,720	06/23/2010	Prasanth GOPALAKRISHNAN	2011-0201US01	4451

74739   7590   11/22/2019
Potomac Law Group, PLLC (Oracle International)
8229 Boone Boulevard
Suite 430
Vienna, VA 22182

EXAMINER
SCHEUNEMANN, RICHARD N

ART UNIT	PAPER NUMBER
3624	

NOTIFICATION DATE	DELIVERY MODE
11/22/2019	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):

bgoldsmith@potomaclaw.com
eofficeaction@appcoll.com
patents@potomaclaw.com

PTOL-90A (Rev. 04/07)

UNITED STATES PATENT AND TRADEMARK OFFICE
_____

BEFORE THE PATENT TRIAL AND APPEAL BOARD
_____

Ex parte PRASANTH GOPALAKRISHNAN
_____

Appeal 2018-008118
Application 12/821,720
Technology Center 3600
_____

Before BIBHU R. MOHANTY, BRUCE T. WIEDER, and
AMEE A. SHAH, *Administrative Patent Judges*.

WIEDER, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant[1] seeks review under 35 U.S.C. § 134 from the Examiner's final rejection of claims 1, 3, 5–7, 10–12, 14, 16, 17, 19, and 21–27. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

---

[1] We use the word "Appellant" to refer to "applicant" as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as Oracle International Corporation. (Appeal Br. 2.)

CLAIMED SUBJECT MATTER

Appellant's invention relates to "a product management system [that] allows a user to make modifications to product information." (Spec. ¶ 32.)

Claims 1, 12, and 17 are the independent claims on appeal. Claim 1 is illustrative. It recites:

> 1. A non-transitory computer-readable medium having instructions stored thereon that, when executed by a processor, cause the processor to process and use production data in a production context, the processing and using comprising:
>
> instantiating an observer from a static class, the observer including a first collection of entities and a second collection of entities;
>
> creating an entity interface including an application programming interface that declares a set of methods for implementation by entities;
>
> retrieving production data associated with a manufactured product from a product database coupled to a network, the production data including a description of the manufactured product and a plurality of attributes of the manufactured product, the product database including a plurality of data tables, each data table including a plurality of rows, each row including a plurality of fields, the production data being stored across one or more rows of one or more tables of the product database;
>
> creating a product entity associated with the manufactured product, the product entity including a plurality of entities, each entity including one or more attributes retrieved from the product database and an attribute bitmap including a modification bit for each attribute, each modification bit being set to a first value indicating that the respective attribute has not been modified;
>
> receiving one or more modifications to one or more attributes of one or more of the plurality of entities associated with the manufactured product from a user computer coupled to the network;
>
> for each received modification, modifying the respective attribute in the respective entity, and setting the respective

modification bit in the respective attribute bitmap to a second value indicating that the respective attribute has been modified;

adding each modified entity that requires approval to the first collection of the observer entity;

adding each modified entity that requires approval and each modified entity that does not require approval to the second collection of the observer entity;

storing each modified entity of the second collection that is not also of the first collection into the product database using the application programming interface;

initiating a workflow for at least one change order to process the modified entities that require approval, including

adding each modified entity of the first collection to the change order using the application programming interface, including:

creating a copy of the entity;

extracting one or more modified attributes from the modified entity based on the modification bit values in the attribute bitmap;

moving the modified attributes from the modified entity to the copy of the entity; and

moving the copy of the entity, including the modified attributes, to the change order;

receiving approval for at least one modified entity of the first collection; and

storing each approved modified entity of the first collection into the product database, based on the effective date of the approved modified entity, using the application programming interface.

REJECTION

Claims 1, 3, 5–7, 10–12, 14, 16, 17, 19, and 21–27 are rejected under 35 U.S.C. § 101 as directed to a judicial exception without significantly more.

ANALYSIS

"Whoever 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." 35 U.S.C. § 101. Section 101, however, "'contains an important implicit exception: Laws of nature, natural phenomena, and abstract ideas are not patentable.'" *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014) (quoting *Assoc. for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013)).

Alice applies a two-step framework, earlier set out 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*, 573 U.S. at 217.

Under the two-step framework, it must first be determined if "the claims at issue are directed to a patent-ineligible concept." *Id.* at 218. If the claims are determined to be directed to a patent-ineligible concept, e.g., an abstract idea, then the second step of the framework is applied to determine if "the elements of the claim . . . contain[] an 'inventive concept' sufficient to 'transform' the claimed abstract idea into a patent-eligible application." *Id.* at 221 (citing *Mayo*, 566 U.S. at 72–73, 79).

With regard to step one of the *Alice* framework, we apply a "directed to" two prong test to: 1) evaluate whether the claim recites a judicial exception, and 2) if the claim recites a judicial exception, evaluate whether the claim "appl[ies], rel[ies] on, or use[s] the judicial exception in a manner that imposes a meaningful limit on the judicial exception, such that the claim

is more than a drafting effort designed to monopolize the judicial exception." *See* USPTO, 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50, 54 (Jan. 7, 2019) (hereinafter "2019 Guidance").

Here, the Examiner determines that claim 1 is "directed to processing data associated with manufactured products (as evidenced by the preamble of exemplary claim 1; 'use production data in a production context'), an abstract idea." (Final Action 5.) The Examiner also determines that claim 1 is "directed towards a method of organizing information related to manufactured products." (*Id.*)

Appellant disagrees and argues that the "claims are expressly grounded in the solution uniquely rooted in software" and that the claims recite a "technical solution to a technical problem." (Appeal Br. 7.) Specifically, Appellant asserts that "[c]reating and using attribute bitmaps to identify product attribute modifications for production data in a production context as claimed provides a technical solution to [a] technical problem." (*Id.* (quoting Declaration of Gopalakrishnan of July 24, 2017, ¶ 13 [hereinafter "Decl."]).)

Under step one of the *Alice* framework, we "look at the 'focus of the claimed advance over the prior art' to determine if the claim's 'character as a whole' is directed to excluded subject matter." *Affinity Labs of Texas, LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1257 (Fed. Cir. 2016) (quoting *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016)).

> The 'directed to' inquiry . . . cannot simply ask whether the claims *involve* a patent-ineligible concept, because essentially every routinely patent-eligible claim involving physical products and actions *involves* a law of nature and/or natural phenomenon . . . . Rather, the 'directed to' inquiry applies a stage-one filter to claims, considered in light of the specification, based on whether

'their character as a whole is directed to excluded subject matter.' *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015).

Enfish, LLC v. Microsoft Corp., 822 F.3d 1327, 1335 (Fed. Cir. 2016). In other words, the first step of the *Alice* framework "asks whether the focus of the claims is on the specific asserted improvement in [the relevant technology] or, instead, on a process that qualifies as an 'abstract idea' for which computers are invoked merely as a tool." *Id.* at 1335–36; *see also* 2019 Guidance at 54–55.

The Specification provides evidence as to what the claimed invention is directed. In this case, the Specification discloses that the invention relates to "a product management system [that] allows a user to make modifications to product information." (Spec. ¶ 32.) Claim 1 provides further evidence. Claim 1 recites "instantiating an observer," "creating an entity interface," "retrieving production data," "creating a product entity associated with the manufactured product, the product entity including a plurality of entities, each entity including one or more attributes," "receiving one or more modifications to one or more attributes," "for each received modification, modifying the respective attribute in the respective entity," "adding each modified entity that requires approval to the first collection," "storing each modified entity of the second collection that is not also of the first collection," "initiating a workflow for at least one change order," "receiving approval for at least one modified entity," "and storing each approved modified entity."

This evidence shows that claim 1 is directed to organizing information related to a manufactured product, i.e., data manipulation. This is in accord with the Examiner's determination. (*See* Final Action 5.) The Federal

Circuit has found claims directed to similar subject matter to be directed to abstract ideas. *See, e.g.*, *Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332 (Fed. Cir. 2017) (Claims directed to displaying dynamic documents to a user to permit user modifications to the documents determined to be directed to an abstract idea.), *Bancorp Servs., L.L.C. v. Sun Life Assur. Co. of Canada (U.S.)*, 687 F.3d 1266 (Fed. Cir. 2012) (Claims directed to managing a type of life insurance policy by performing calculations and manipulating results determined to be directed to an abstract idea.), *Content Extraction and Transmission LLC v. Wells Fargo Bank, Nat'l Ass'n*, 776 F.3d 1343, 1347 (Fed. Cir. 2014) ("[T]he claims of the asserted patents are drawn to the abstract idea of 1) collecting data, 2) recognizing certain data within the collected data set, and 3) storing that recognized data in a memory."), *Cyberfone Sys., L.L.C. v. CNN Interactive Grp., Inc.*, 558 F. App'x 988 (Fed. Cir. 2014) (Claims directed to organizing, storing, and transmitting information determined to be directed to an abstract idea.).

In short, the recited steps in claim 1 are "directed towards a method of organizing information related to manufactured products," i.e., commercial interactions and managing behavior or relationships including following rules or instructions." (*See* Final Action 5; *see also* 2019 Guidance at 52.) Thus, the claim recites certain methods of organizing human activity, and under prong one of the two prong test in the 2019 Guidance, claim 1 recites an abstract idea.

With regard to prong two, we are asked to determine if additional elements in claim 1 "apply, rely on, or use the judicial exception in a manner that imposes a meaningful limit on the judicial exception, such that the claim

is more than a drafting effort designed to monopolize the judicial exception." (2019 Guidance at 54.) Appellant argues that claim 1 does "not merely recite conventional functionality." (Appeal Br. 13 (emphasis omitted); *see also id.* at 14.) But Appellant does not persuasively argue what additional elements in claim 1 "apply, rely on, or use the judicial exception in a manner that imposes a meaningful limit on the judicial exception." (*See* 2019 Guidance at 54.)

Appellant has not persuaded us that the Examiner erred in determining that claim 1 is directed to organizing information related to a manufactured product, i.e., the abstract idea of certain methods of organizing human activity. (*See* Final Action 5.)

Step two of the *Alice* framework has been described "as a search for an '"inventive concept"' –*i.e.*, 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*, 573 U.S. at 217– 18 (quoting *Mayo*, 566 U.S. at 72–73). Under step two, we examine, *inter alia*, whether a claim element or combination of elements "[a]dds a specific limitation or combination of limitations that are not well-understood, routine, conventional activity in the field, which is indicative that an inventive concept may be present." (2019 Guidance at 56.)

The Examiner determines that "bitmap coding provides a type of data to be used in the database" and that "[t]he present application and the claimed invention do not teach an improvement to bitmap coding or software coding." (Answer 7.) Additionally, the Examiner determines

> that electronic recordkeeping and/or storing information in
> memory is well-understood, routine, and conventional activity
> that does not amount to significantly more than an abstract idea.

> The present claims recite steps that amount to storing records
> for product data pertaining to modifications in a bitmap format.

(*Id.*)

"Whether something is well-understood, routine, and conventional to a skilled artisan . . . is a factual determination." *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1369 (Fed. Cir. 2018). Here, Appellant presents evidence that, with regard to each modification of an entity attribute, it was not conventional "to 'modify the respective attribute in the respective entity, and set the respective modification bit in the respective attribute bitmap to a second value indicating that the respective attribute has been modified.'" (Decl. ¶ 12 (emphasis omitted); *see also* Appeal Br. 16.) Appellant also presents evidence that it was not conventional "to employ attribute bitmaps to identify product attribute modifications" and "extract one or more modified attributes from the modified entity based on the modification bit values" as claimed. (*Id.* (emphasis omitted); *see also* Appeal Br. 14.)

At best, the Examiner provides support for why bitmap coding is well-understood, routine, and conventional (*see* Answer 7), and states that "[t]he choice of a known binary format to organize the binary information recited in the claims is extra-solution activity" (*id.* at 7–8). However, the Examiner does not sufficiently address or provide support as to why or how the specific way of employing bitmaps to identify modifications and extract modified attributes from the modified entities based on the modified bit values is well-understood, routine, and conventional. Thus, in this case, and in view of Appellant's evidence, we determine that the Examiner has not provided sufficient evidence to support a finding that these steps were well-understood, routine, or conventional to a skilled artisan. Therefore, we will

reverse the rejection of claim 1. Independent claims 12 and 17 contain similar language and for similar reasons, we will also reverse the rejection of claims 12 and 17, and dependent claims 3, 5–7, 10, 11, 14, 16, 19, and 21–27.

CONCLUSION

The Examiner's rejection of claims 1, 3, 5–7, 10–12, 14, 16, 17, 19, and 21–27 under 35 U.S.C. § 101 is reversed.

Specifically:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1, 3, 5–7, 10–12, 14, 16, 17, 19, 21–27	101	eligibility		1, 3, 5–7, 10–12, 14, 16, 17, 19, 21–27

REVERSED