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SCULLY, SCOTT, MURPHY & PRESSER, P.C.
400 GARDEN CITY PLAZA
SUITE 300
GARDEN CITY, NY 11530

EXAMINER	
NELSON, FREDA ANN	

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JOANN P. BRERETON, AJAY A. DESHPANDE, HONGLIAN FEI, ARUN HAMPAPUR, MIAO HE, KIMBERLY D. HENDRIX, STEVE IGREJAS, ALAN J. KING, YINGJIE LI, XUAN LIU, CHRISTOPHER S. MILITE, JAE-EUN PARK, VADIRAJA S. RAMAMURTHY, JOLINE ANN V. UICHANCO, SONGHUA XING, and XIAO BO ZHENG

Appeal 2017-011258
Application 15/018,274
Technology Center 3600

Before MAHSHID D. SAADAT, JOHNNY A. KUMAR, and SCOTT E. BAIN, *Administrative Patent Judges*.

SAADAT, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants[1] appeal under 35 U.S.C. § 134(a) from the final rejection of claims 1–22. We have jurisdiction over the pending claims under 35 U.S.C. § 6(b).

We affirm.

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

STATEMENT OF THE CASE

Introduction

Appellants' Specification describes "a system and method for optimizing source selections of an online order" that "minimizes the fulfillment cost of an order by considering multiple types of parameters, including shipping costs, backlog costs and markdown savings of the order to optimize the source selections." Spec. ¶ 15.

Exemplary Claim

Claim 1 is illustrative of the invention and reads as follows.

> 1. A computer implemented method for optimizing selections for sourcing an online order for a plurality of items, comprising:
>
> obtaining an order for a plurality of items from an internet on-line order retrieval subsystem of an order management system (OMS) of a merchant;
>
> automatically selecting a plurality of candidate sources from the OMS;
>
> automatically retrieving data of the selected candidate sources, including retrieving inventory data obtained from a merchant inventory subsystem, backlog data obtained from a source shipping subsystem for each candidate source and markdown availability data obtained from the merchant inventory subsystem, the markdown availability data including unit price, unit cost and markdown rate for each item;
>
> automatically calculating cost parameters and saving parameters of each of the selected candidate sources by utilizing the retrieved data, the cost parameters and saving parameters comprising shipping costs, markdown savings, cost per backlog day and backlog days, including calculating the markdown savings based on the markdown availability data;

> automatically identifying a plurality of sourcing selections of the order from the selected candidate sources, each sourcing selection comprising one or more candidate source;
>
> automatically calculating a fulfillment cost for each sourcing selection of the order by adding the shipping costs with the backlog costs, and subtracting the markdown savings of all candidate sources in each sourcing selection;
>
> automatically applying constraints to the fulfillment cost calculation based on order handling capacity data and safety stock data obtained from the source shipping subsystem for each sourcing selection;
>
> automatically generating a sourcing selection of the order with the lowest fulfillment cost based on the applied constraints;
>
> automatically providing the sourcing selection with the lowest fulfillment cost based on the applied constraints to the OMS for order execution.

The Examiner's Rejection

Claims 1–22 stand rejected under 35 U.S.C. § 101 for being directed to patent-ineligible subject matter. Final Act. 7–9.

ANALYSIS

We have reviewed the Examiner's rejections in light of Appellants' arguments (Appeal Brief and Reply Brief) that the Examiner has erred. We are unpersuaded by Appellants' contentions and agree with and adopt the Examiner's findings and conclusions in (i) the action from which this appeal is taken (Final Act. 7–9) and (ii) the Answer (Ans. 3–13) to the extent they are consistent with our analysis below.

Principles of Law

Under 35 U.S.C. § 101, a patent may be obtained for "any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof." 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." *Alice Corp. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2354 (2014) (quoting *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 2107, 2116 (2013)). 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, 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*, 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, such as an abstract idea. Abstract ideas may include, but are not limited to, fundamental economic practices, methods of organizing human activities, an idea of itself, and mathematical formulas or relationships. *Id.* at 2355–57. If the claims are not directed to a patent-ineligible concept, the inquiry ends. Otherwise, the inquiry proceeds to the second step where the elements of the claims are considered "individually and 'as an ordered combination' to determine whether the additional elements 'transform the nature of the claim' into a patent-eligible application." *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 566 U.S. at 79, 78). We, therefore, look to whether the claims focus on a specific means or method that improves the relevant technology or instead are 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).

The Examiner's Determinations

Considering the first part of the *Alice/Mayo* analysis, the Examiner determines:

> Claims 1–22 are directed to the abstract idea of "*selecting sourcing for an online order based on fulfillment cost*" as shown by the steps of obtaining an order for a plurality of items; selecting a plurality of candidate sources; retrieving data of the selected candidate sources calculating cost parameters and saving parameters of each the selected candidate sources; identifying a plurality of sourcing selections of the order from the selected candidate sources; calculating a fulfillment cost for each sourcing selection; identifying the sourcing selection of the order with the lowest fulfillment cost; applying constraints to the fulfillment cost calculation based on order handling capacity data and safety stock data; generating a sourcing selection of the order with the lowest fulfillment cost based on the applied constraints; and providing the sourcing selection with the lowest fulfillment cost.

Final Act. 7–8. The Examiner further finds the recited concept "corresponds to concepts identified as abstract ideas by the courts, such as Mathematical relationships/formulas and/or An idea 'of itself.'" Final Act. 8. The Examiner further determines "[t]he claims do not include additional elements that are sufficient to amount to significantly more than the judicial exception because the additional elements when considered both individually and as an ordered combination do not amount to significantly more than the abstract idea." *Id.*

Additionally, with respect to the second part of the *Alice/Mayo* analysis, the Examiner determines the recited components "would be routine in any computer implementation of the abstract idea" and "the '***obtaining***'

and '***retrieving***' steps appear to be ***extra-solution data gathering***- also, a well-known and routine computer function." *Id.* Lastly, the Examiner finds "[t]here is no indication that the combination of elements improves the functioning of a computer or improves any other technology." Final Act. 9.

Appellants' Contentions

Appellants contend the Examiner erred. *See* App. Br. 6–16. Without disputing the Examiner's determination that "claims 1-22 are directed to the abstract idea of 'selecting sourcing for an online order based on fulfillment cost,'" Appellants argue that "the claims do include additional elements that are sufficient to amount to significantly more than the abstract idea." App. Br. 6–7. Appellants assert "the 'automatically calculating cost parameters and saving parameters' step and 'the automatically calculating a fulfillment cost' step, do amount to significantly more individually, as neither were found individually to be taught or suggested in the prior art." App. Br. 8.

Appellants further argue the claims are directed to an inventive concept that is similar to the claims in *DDR Holdings, LLC v. Hotels.com L.P.*, 773 F.3d 1245, 1257 (Fed. Cir. 2014). *See* App. Br. 9–12. Next, Appellants characterize their claims as the concept claimed in *Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1294 (Fed. Cir. 2016) and assert their claimed elements "are an advancement over the prior art as noted above, which solves a technological problem of optimizing sourcing selections for orders made from an on-line order retrieval subsystem of a computerized order management system, by automatically providing the sourcing selection with the lowest fulfillment cost based on applied constraints." App. Br. 12–13. Further, citing *McRO, Inc. v. Bandai Namco*

Games Am. Inc., 837 F.3d 1299 (Fed. Cir. 2016), Appellants contend the recited steps in their claims

> of automatically calculating cost and saving parameters, calculating the fulfillment cost and applying the specify constraints, renders information into a specific format that is then used and applied to create desired results: optimizing selections for sourcing an online order by automatically generating a sourcing selection of the order with the lowest fulfillment cost.

App. Br. 13–15.

Discussion

We are not persuaded by Appellants' argument that claims 1, 9, and 16 are similar to the claims in *DDR Holdings*. *See* App. Br. 9–12. In *DDR Holdings*, the disputed claims solved an Internet-specific problem with an Internet-based solution that was "necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks." *DDR Holdings*, 773 F.3d at 1257–58. In *DDR Holdings*, the Federal Circuit determined that the claims addressed the problem of retaining website visitors who, if adhering to the routine, conventional functioning of Internet hyperlink protocol, would be transported instantly away from a host's website after clicking on an advertisement and activating a hyperlink. *DDR Holdings*, 773 F.3d at 1257. The Federal Circuit, thus, held that the claims were directed to statutory subject matter because they claim a solution "necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks." *Id.* The court cautioned that "not all claims purporting to address Internet-centric challenges are eligible for patent." *Id.* at 1258.

That is not the case here. Instead, consistent with the Examiner's findings, the problem of "'*selecting sourcing for an online order based on fulfillment* cost' is not 'necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks.'" *See* Ans. 7.

Also, as stated by the Examiner (Ans. 8–9), our reviewing court has found similar methods to be abstract ideas. "[W]e have treated collecting information, including when limited to particular content (which does not change its character as information), as within the realm of abstract ideas." *Elec. Power Grp., LLC v. Alstom S.A.,* 830 F.3d 1350, 1353 (Fed. Cir. 2016) (citations omitted). "In a similar vein, we have treated analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, as essentially mental processes within the abstract-idea category." *Id.* at 1354. "And we have recognized 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.*

Appellants have not persuasively argued, nor provided sufficient evidence why the claim recitations regarding "automatically calculating cost parameters" and "automatically calculating a fulfillment cost" are not routine computer functions that produce more data. Reply Br. 6–7. *See, e.g., Elec. Power Grp.,* 830 F.3d at 1355 ("We have repeatedly held that such invocations of computers and networks that are not even arguably inventive are insufficient to pass the test of an inventive concept in the application of an abstract idea.") (quotations omitted); *BASCOM Glob.*

Internet Servs., Inc. v. AT&T Mobility LLC, 827 F.3d 1341, 1348 (Fed. Cir. 2016) ("An abstract idea on 'an Internet computer network' or on a generic computer is still an abstract idea."); *Alice*, 134 S. Ct. at 2358 ("[T]he mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention.").

We also agree with the Examiner that the claimed subject matter has provided no actual improvement to the machine or technology itself, or solved a technological problem. Ans. 10. As stated by the Examiner, at best, the claims provide "an improvement to a business/pricing functionality, not an improvement to the overall data processing system." *Id.* *See Amdocs (Israel) Ltd.*, 841 F.3d at 1294 (explaining that, in determining whether claims are patent-eligible under § 101, "the decisional mechanism courts now apply is to examine earlier cases in which a similar or parallel descriptive nature can be seen–what prior cases were about, and which way they were decided").

We are also unpersuaded by Appellants' argument that the Examiner improperly characterizes the claims as reciting "well[-]understood, routine and conventional functions," citing *McRO, Inc.*, 837 F.3d 1299. *See* App. Br. 13–15. *McRO*'s holding does not extend to all improvements of a computer-implemented function. As the court explains at length, *McRO*'s invention is patent-eligible because it unconventionally automates a function. 837 F.3d at 1313–15. In *Alice*'s terminology, *McRO*'s invention thus improved the "technological process" of automating a function-not (merely) the function. *Alice*, 134 S. Ct. at 2358. Appellants' claim 1, in contrast, at best adds a new function-i.e., "automatically calculating cost

parameters" and "automatically calculating a fulfillment cost," as opposed to unconventionally automating the calculation of those parameters.

In addressing the Examiner's citation of the holding in *Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306 (Fed. Cir. 2015), Appellants do not direct attention to, and we do not see, where their Specification provides that the computer system processing device acts in an abnormal manner or outside of its ordinary capacity. Rather, the claims recite an invention that merely implements the abstract idea through the routine or conventional use of generic computer components. *See Versata*, 793 F.3d at 1334–35 (use of general purpose computer to implement abstract idea of using organizational and group hierarchies to determine a price was not rooted in computer technology to solve a problem specifically arising in computer technology). *See also FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1097 (Fed. Cir. 2016) and *DDR Holdings*, 773 F.3d at 1258–59.

In sum, Appellants' claims are "directed to nothing more than the performance of an abstract business practice . . . using a conventional computer. Such claims are not patent-eligible." *DDR Holdings,* F.3d at 1256. That is to say, they merely describe the functions of the abstract idea itself, without particularity. This is simply not enough under step two. *Intellectual Ventures I LLC v. Capital One Bank (USA),* 792 F.3d 1363, 1370 (Fed. Cir. 2015) ("[T]he 'interactive interface' simply describes a generic web server with attendant software, tasked with providing web pages to and communicating with the user's computer."). We, therefore, sustain the Examiner's rejection of claims 1–22 under 35 U.S.C. § 101.

DECISION

We affirm the Examiner's decision to reject claims 1–22.

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

AFFIRMED