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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte PRIYAMVADA PATNAIK and
RUSSELL PRUITT HERRINGTON, Jr.¹

Appeal 2018-003357
Application 13/755,103
Technology Center 3600

Before CAROLYN D. THOMAS, JEREMY J. CURCURI, and
NABEEL U. KHAN, *Administrative Patent Judges*.

THOMAS, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants seek our review under 35 U.S.C. § 134(a) of the Examiner's Final Rejection of claims 1, 8, 10–13, 15, 19, and 21, all the pending claims in the present application (*see* Claims Appendix). We have jurisdiction over the appeal under 35 U.S.C. § 6(b).

We AFFIRM.

The present invention relates generally to techniques for transaction quantity control (*see* Abstract).

¹Appellants name NCR Corporation as the real party in interest (App. Br. 2).

Claim 1 is illustrative:

1. A processor-implemented method for transaction quality control, the method programmed in memory and/or a non-transitory computer-readable storage medium as executable instructions that executes on one or more hardware processors of a physical device configured to execute the method, comprising:

detecting, on the device, an item listed in a transaction having a quantity value greater than 1, wherein the transaction is associated with a consumer buying multiple items from an enterprise;

defining, on the device, the item and the quantity value as a container object;

identifying, on the device, a price adjustment for the item; and

dynamically splitting and cloning, on the device and during the transaction, the container object into one or more cloned container objects based on properties that define when the item is to be split on two or more independent line entries, on the device and during the transaction, and using the container object and the one or more cloned container objects for outputting two or more independent line entries for the item of the transaction, each independent line entry represented by the container object or a particular one of the one or more cloned container objects, and wherein at least one line entry applying all or a portion of the price adjustment and at least one other line entry having no price adjustment, and wherein each line entry and its supporting details presented for inspection during the transaction on a display of the device, and each line entry having a specific quantity and different prices based on whether the price adjustment was applied or not applied thereby providing transaction quality control, and dynamically presenting changes made for the transaction on the display for viewing in real time by the consumer and a cashier during the transaction.

Appellants appeal the following rejection:

Claims 1, 8, 10–13, 15, 19, and 21 are rejected under 35 U.S.C.

§ 101 because the claimed invention is directed to patent-ineligible subject matter (Final Act. 3–10).

We review the appealed rejections for error based upon the issues identified by Appellants, and in light of the arguments and evidence produced thereon. *Ex parte Frye*, 94 USPQ2d 1072, 1075 (BPAI 2010) (precedential).

ANALYSIS

Rejection under § 101

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).

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 the 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.”). For example, 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)).

Recently, the USPTO published revised guidance on the application of § 101. USPTO’s 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) (“Revised Guidance”). Under the Revised Guidance “Step 2A,” the office first looks 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* MPEP § 2106.05(a)-(c), (e)-(h)). 84 Fed. Reg. at 51–52, 55.

Only if a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, does the Office then (pursuant to the Revised Guidance “Step 2B”) look to whether the claim:

- (3) adds a specific limitation beyond the judicial exception that is 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. 84 Fed. Reg. at 56.

Alice/Mayo—Step 1 (Abstract Idea)
Step 2A—Prongs 1 and 2 identified in the Revised Guidance

Step 2A, Prong 1

With respect to independent method claims 1 and 15, and similarly, system claim 19, the Examiner determines that the claims are directed to the abstract idea of “identifying discount items and splitting line item and applying [a] discount” (Final Act. 5), which the Examiner concludes, and we agree, is “a fundamental economic practice” (*id.*) e.g., *detecting an item listed in a transaction . . . identifying a price adjustment . . . and splitting transaction into two or more independent line entries* (see claim 1), which is akin to certain methods of organizing human activity.

The Specification discloses:

Techniques for transaction quantity control are provided. A transaction having multiple purchases for a same item type and having an adjustment in price is identified. An analysis on an adjustment condition results in dynamic splitting a line entry for the item into multiple sets, each set reflect a different aspect of the adjustment condition and a quantity identifier; and the sets together completely representing the adjustment condition.

Abstract.

Claim 1 recites at least the following limitations: (1) “detecting . . . an item listed in a transaction,” (2) “defining . . . a container object” (3) “identifying . . . a price adjustment,” (4) “dynamically splitting and cloning . . . the container object,” and (5) “dynamically presenting changes.” These limitations, under their broadest reasonable interpretation, recite fundamental economic practice related to at least sales activities or behaviors because the limitations all recite operations that would ordinarily take place in a commercial environment. *Alice*, 573 U.S. at 219–20

(concluding that use of a third party to mediate settlement risk is a “fundamental economic practice” and thus an abstract idea); *Inventor Holdings, LLC v. Bed Bath & Beyond, Inc.*, 876 F.3d 1372, 1378–79 (Fed. Cir. 2017) (holding that concept of “local processing of payments for remotely purchased goods” is a “fundamental economic practice, which *Alice* made clear is, without more, outside the patent system.”); *OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362–63 (Fed. Cir. 2015) (concluding that claimed concept of “offer-based price optimization” is an abstract idea “similar to other ‘fundamental economic concepts’ found to be abstract ideas by the Supreme Court and this court.”).

Appellants do not directly challenge the Examiner’s determination that the claims are directed to an abstract idea, but instead make arguments more directly related to integrating the judicial exception into a practical application and whether specific limitations are not well-understood, routine, conventional activity in the field. Such arguments will be addressed below.

Therefore, for at least the aforementioned reasons, we agree with the Examiner that claim 1 is directed to an abstract idea, which we conclude is certain methods of organizing human activity, e.g., a fundamental economic principle.

Step 2A—Prong 2 (integration into Practical Application)²

Under the Revised Guidance, we now must determine if additional elements in the claims integrate the judicial exception into a **practical application** (*see* MPEP § 2106.05(a)–(c), (e)–(h)).

We discern no additional element (or combination of elements) recited in Appellants’ representative claim 1 that integrates the judicial exception into a practical application. *See* Revised Guidance, 84 Fed. Reg. at 54–55 (“Prong 2”). For example, Appellants’ claimed additional elements (e.g., “a physical device,” “hardware processors,” and “a display”) do not: (1) improve the functioning of a computer or other technology; (2) are not applied with any particular machine (except for a generic computer); (3) do not effect a transformation of a particular article to a different state; and (4) are not applied in any meaningful way beyond generally linking the use of the judicial exception to a particular technological environment, such that the claim as a whole is more than a drafting effort designed to monopolize the exception. *See* MPEP §§ 2106.05(a)–(c), (e)–(h).

Appellants contend that the claims “improves the capabilities associated with conventional display processing by extending and enhancing such existing capabilities” (App. Br. 9) and “improve the technological processes associated with transaction processing” (*id.*) and thus are analogous to the claims in *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327

² We acknowledge that some of the considerations at Step 2A, Prong 2, properly may be evaluated under Step 2 of *Alice* (Step 2B of the Office revised guidance). For purposes of maintaining consistent treatment within the Office, we evaluate them under Step 1 of *Alice* (Step 2A of the Office revised guidance). *See* Revised Guidance, 84 Fed. Reg. at 55 n.25, 27–32.

(Fed. Cir. 2016) and *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299 (Fed. Cir. 2016) (*id.*).

In response, the Examiner concludes, and we agree, that “[t]he current claims at issue do not make improvement on conventional display processing . . . [and] does not make the technological improvement in transaction processing . . . [i]t is [merely] a business implementation using computers as tools” (Ans. 3–4).

In *Enfish*, for example, the Federal Circuit relied on the distinction made in *Alice* between computer functionality improvements and uses of existing computers as tools in aid of processes focused on “abstract ideas.” See *Enfish*, 822 F.3d at 1335–36 (“[T]he first step in the *Alice* inquiry in this case asks whether the focus of the claims is on the specific asserted improvement in computer capabilities (i.e., the self-referential table for a computer database) or, instead, on a process that qualifies as an ‘abstract idea’ for which computers are invoked merely as a tool.”); see also *Alice*, 273 U.S. at 216.

However, the present case is different from *Enfish* because the focus of the claims are not on an improvement in computers or upon an innovative way to use computers or other devices, but is focused on an independently abstract idea that uses generic and routine equipment as tools; that abstract idea is represented in the steps of identifying items, splitting line items, and applying discounts. That is, the arguably innovative technique of the appealed claims is inextricably a part of the abstract idea akin to certain methods of organizing human activity. Moreover, nothing in the claims, understood in light of the Specification, requires anything other than an off-the-shelf, conventional computer used for detecting, defining, identifying

and outputting various information/data; anything other than an off-the-shelf, conventional display used for displaying changes to the data.

Therefore, unlike in *Enfish*, the claims are directed not to improvement in computer capabilities, but to the results of applying an abstract idea.

Also, in *McRO*, the Federal Circuit concluded that the claim, when considered as a whole, was directed to a “technological improvement over the existing, manual 3-D animation techniques” through the “use of limited rules specifically designed to achieve an improved technological result in conventional industry practice.” *McRO*, 837 F.3d at 1316.

Specifically, the Federal Circuit found that the claimed rules allow computers to produce accurate and realistic lip synchronization and facial expressions in animated characters that previously could only be produced by human animators; and the rules are limiting because they define morph weight sets as a function of phoneme sub-sequences. *Id.* at 1313 (citations omitted). In contrast, here, Appellants have not identified any analogous improvement attributable to the claimed invention. Although providing techniques for transaction quantity control may improve a business process, it does not achieve an improved technological result. We see no parallel between the limiting rules described in *McRO* and the results-based rules recited in Appellants’ claims.

Regarding Appellants’ contention that “the claims as presented are not preemptive of transaction processing technologies” (App. Br. 9), we note that although pre-emption “might tend to impede innovation more than it would tend to promote it, ‘thereby thwarting the primary object of the patent laws’” (*Alice*, 573 U.S. at 217 (citing *Mayo*, 566 U.S. at 77)), “the absence of complete preemption does not demonstrate patent eligibility” (*Ariosa*

Diagnostics, Inc. v. Sequenom, Inc., 788 F.3d 1371, 1379 (Fed. Cir. 2015)). Moreover, because we find the claimed subject matter covers patent-ineligible subject matter, the pre-emption concern is necessarily addressed. “Where a patent’s claims are deemed only to disclose patent ineligible subject matter under the *Mayo* framework, [] preemption concerns are fully addressed and made moot.” *Ariosa Diagnostics*, 788 F.3d at 1379.

For at least the reason noted *supra*, we determine that claim 1 (1) recites a judicial exception and (2) does not integrate that exception into a practical application.

Alice/Mayo—Step 2 (Inventive Concept)
Step 2B identified in the Revised Guidance

Turning to the second step of the *Alice* inquiry, we now look to whether claim 1 contains any “inventive concept” or adds anything “significantly more” to transform the abstract concept into a patent-eligible application. *Alice*, 573 U.S. at 216. As recognized by the Revised Guidance, an “inventive concept” under *Alice* step 2 can be evaluated based on whether an additional element or combination of elements:

- (1) “adds 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;”
or
- (2) “simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception, which is indicative that an inventive concept may not be present.”

See Revised Guidance, 84 Fed. Reg. at 56; *see* MPEP § 2106.05(d).

Appellants contend “that the lack of art rejections demonstrates novelty and demonstrates processing that necessarily has to be unconventional” (App. Br. 10). However, a finding of novelty or non-

obviousness does not require the conclusion that the claimed subject matter is patent-eligible. 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 nonobviousness, but, rather, is 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*, 573 U.S. at 216. “Groundbreaking, innovative, or even brilliant discovery does not by itself satisfy the § 101 inquiry.” *Ass’n. for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 591 (2013). A novel and non-obvious claim directed to a purely abstract idea is, nonetheless, patent-ineligible. *See Mayo*, 566 U.S. at 90. *See also Diamond v. Diehr*, 450 U.S. 175, 188–89 (1981) (“The ‘novelty’ of any element or steps in a process, or even of the process itself, is of no relevance in determining whether the subject matter of a claim falls within the § 101 categories of possibly patentable subject matter.”).

Furthermore, we find no element or combination of elements recited in Appellants’ claim 1 that contains any “inventive concept” or adds anything “significantly more” to transform the abstract concept into a patent-eligible application. As we explained above, the claim language and Specification indicate that the claimed limitations are performed using a conventional computer and processor.

Because Appellants’ independent claim 1 is directed to a patent-ineligible abstract concept, does not include additional elements that integrate the judicial exception into a practical application, and does not add a specific limitation beyond the judicial exception that is not “well-understood, routine, and conventional,” we sustain the Examiner’s rejection

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of the claims 1, 8, 10–13, 15, 19, and 21 under 35 U.S.C. § 101 as being directed to non-statutory subject matter in light of *Alice*, its’ progeny, and the Revised Guidance.

DECISION

We affirm the Examiner’s § 101 rejection of claims 1, 8, 10–13, 15, 19, and 21.

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