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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* MARQUIS G. WALLER, LINDA S. LIEBELT,  
THOMAS N. BILAN, and IOANA C. NAGY<sup>1</sup>

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Appeal 2019-001335  
Application 13/428,322  
Technology Center 2600

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Before ROBERT E. NAPPI, JOHN A. EVANS, and  
SCOTT B. HOWARD, *Administrative Patent Judges*.

NAPPI, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1, 3, 6 through 12, 14, and 16 through 19. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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<sup>1</sup> We use the word Appellant to refer to “applicant” as defined in 37 C.F.R. § 1.42(a). According to Appellant, Ricoh Company Ltd. is the real party in interest. Appeal Br. *iii*.

## INVENTION

The invention is directed to a printing software product, for use on a print server, that generates an object including one or more attributes defining work expected to be received in a printing system, assigns the object to an input device associated with a folder designated to receive the work, monitors the received work and provides a notification if the received work does not match the attributes of the object. Spec., Abstract. Claim 1 is reproduced below.

1. An article of manufacture comprising a non-transitory machine-readable medium including data that, when accessed by a machine, cause the machine to perform operations comprising:

assigning an object to an input device associated with a workflow folder designated to determine one or more print jobs received at the workflow folder, wherein the object includes one or more attributes defining a set of rules for print jobs expected to be received the workflow folder, and the object attributes have a scheduling attribute including a value that indicates a number of print jobs expected to be received in a time specified by the scheduling attribute;

monitoring print jobs received at the workflow folder via the input device;

transmitting a print request for the one or more print jobs upon determining that the received print jobs matches the object attributes; and

providing a notification upon determining that the received print jobs do not match the object attributes, wherein the notification is provided when the number.

## EXAMINER’S REJECTION<sup>2</sup>

The Examiner rejected claims 1, 3, 6 through 12, 14, and 16 through 19 under 35 U.S.C. § 101 for being directed to patent-ineligible subject matter. Final Act. 3–8.

## ANALYSIS

We have reviewed Appellant’s arguments in the Briefs, the Examiner’s rejections, and the Examiner’s response to Appellant’s arguments. Appellant’s arguments have not persuaded us of error in the Examiner’s rejection of all the claims under 35 U.S.C. § 101. Patent eligibility under § 101 is a question of law that may contain underlying issues of fact. “We review the [Examiner’s] ultimate conclusion on patent eligibility de novo.” *Interval Licensing LLC v. AOL, Inc.*, 896 F.3d 1335, 1342 (Fed. Cir. 2018) (citing *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1365 (Fed. Cir. 2018)); *see also SiRF Tech., Inc. v. Int’l Trade Comm’n*, 601 F.3d 1319, 1331 (Fed. Cir. 2010) (“Whether a claim is drawn to patent-eligible subject matter is an issue of law that we review de novo.”)

## PRINCIPLES OF LAW

Patent-eligible subject matter is defined in 35 U.S.C. § 101 of the Patent Act, which recites:

Whoever invents or discovers any new and useful process,  
machine, manufacture, or composition of matter, or any new

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<sup>2</sup> Throughout this Decision we refer to the Appeal Brief filed May 14, 2018 (“Appeal Br.”); the Reply Brief filed November 30, 2018 (“Reply Br.”); the Final Office Action mailed January 8, 2018 (“Final Act.”); and the Examiner’s Answer mailed November 16, 2018 (“Ans.”).

and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

There are, however, three judicially created exceptions to the broad categories of patent-eligible subject matter in 35 U.S.C. § 101: “[l]aws of nature, natural phenomena, and abstract ideas.” *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014); *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 70 (2012).

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*. *Alice*, 573 U.S. at 217–18 (citing *Mayo*, 566 U.S. at 75–77). 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 187; *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 (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 United States Patent and Trademark Office “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) (“Memorandum”). Under that guidance, we first determine 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) (9<sup>th</sup> 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 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.

*See* Memorandum.

## DISCUSSION

### *The Judicial Exception*

The Examiner determines the claims are not patent eligible because

they are directed to a judicial exception without reciting significantly more. Final Act. 3–8. Specifically, the Examiner determines the claim recites “steps describe the concept of managing a workflow, which corresponds to concepts identified as abstract ideas by the courts, such as collecting, analyzing, and displaying certain results of the collection and analysis in *Electric Power Group*, or data recognition in *Content Extraction*.” Final Act. 4 (citing *Electric Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350 (Fed. Cir. 2016); *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat. Ass’n*, 776 F.3d 1343 (Fed. Cir. 2014)).

Appellant does not contest that the claims recite an abstract idea but instead asserts that the claims amount to significantly more than an abstract idea, as “claims provide a solution to a problem recognized in print production workflow management.” Appeal Br. *viii*.

We concur with the Examiner’s uncontested finding that representative claim 1 sets forth an abstract concept, a mental process. Representative claim 1 recites: “assigning an object to an input device associated with a workflow folder . . . wherein the object includes one or more attributes defining a set of rules for print jobs expected to be received in the workflow folder”<sup>3</sup> (a data gathering step) this step is similar to a mental step a supervisor performs in managing the expecting work from various people or process; “monitoring print jobs received at the workflow folder” (a data gathering or observation element) and is similar to a

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<sup>3</sup> Appellant’s Specification identifies an input device as software to monitor folders to determine if a file is input. Specification ¶ 23. Further objects are to provide notification of the input devices. *Id.* Thus they are merely data gathering elements.

supervisor checking to see if an expected job is done; and “transmitting a print request for the one or more print jobs” and “providing notification upon determination that the receive print jobs do not match” (are a means of communicating the result of the analysis); similar to the supervisor signing off on the job being done or notification that the job is not done. We consider these limitations to recite an abstract mental process.

These steps can be performed in the human mind as they are merely gathering data, analyzing the data and displaying the results, and thus we agree with the Examiner that they recite a concept similar to that at issue in *Electric Power Group*. The claims at issue in *Electric Power Group* recited several steps of receiving data from various sources, detecting and analyzing the data and displaying the data. *Elec. Power Grp.*, 830 F.3d at 1351–52. The court stated “we 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.” *Id.* at 1353; *see also Classen Immunotherapies, Inc. v. Biogen IDEC*, 659 F.3d 1057, 1067 (Fed. Cir. 2011) (claim to collecting and comparing known information determined to be steps that can be practically performed in the human mind); *Content Extraction*, 776 F.3d at 1347 (“The concept of data collection, recognition, and storage is undisputedly well-known. Indeed, humans have always performed these functions.”); October 2019 Update: Subject Matter Eligibility 7 (discussing *Electric Power Group* and mental processes), available at [https://www.uspto.gov/sites/default/files/documents/peg\\_oct\\_2019\\_update.pdf](https://www.uspto.gov/sites/default/files/documents/peg_oct_2019_update.pdf). Thus, we concur with the Examiner and consider representative claim 1 to recite an abstract concept.

*Integration of the Judicial Exception into a Practical Application*

Appellant argues that the claims recite significantly more than the abstract concept of gathering analyzing and displaying data and solve a problem in the field of high speed print production. Appeal Br. *viii*. Reply Br 2. Appellant argues:

Appellant's claims provide a solution to a problem recognized in print production workflow management. In high speed print production, a workflow often includes thousands of print jobs. However, there may be occurrences in which one or more of the print jobs may not be received, and there is no notification of them not being received. As a result, it may be necessary to reprocess some print jobs that are lost (e.g., not received).

Appellant's claims recite a process of solving this problem by monitoring print jobs received at a workflow folder, transmitting print request for one or more print jobs upon determining that the received print jobs match the object attributes and providing a notification upon determining that the received print jobs do not match the object attributes (e.g., indicating that corresponding jobs have not been received). Thus, the claimed process recites much more than merely monitoring received print jobs, as asserted by the Examiner. See Advisory Action at Page 2, lines 12-13. Instead, the present claims recite a specific process that provides for an inventive workflow management solution to a problem recognized in high-speed print production environments.

Appeal Br. *viii*, *ix*.

The Examiner finds that the additional claim limitations do not recite an improvement to a technical field or a technology. Final Act. 5, Answer 4.

We are not persuaded of error by Appellant's arguments. As discussed above, we concur with the Examiner that representative claim 1 recites an abstract idea. Further, Appellant has not persuaded us that the claim is drawn to a practical application of the abstract idea as we do not

find that the claim recites an improvement to technology or otherwise tied to technology. Initially, we note we agree with the Examiner’s statement “the solution to the problem of ‘it may be necessary to reprocess some print jobs that are lost’ (as applicant alleges) is not included in the claims.” Answer 4. Rather, representative claim 1 just recites providing notification if the number of received print jobs in the time specified by the scheduling attribute does not match the value. Further, Appellant’s Specification identifies the purpose of the invention as to notify the user when expected work is not received. Specification ¶¶ 4, 6. Thus, Appellant’s arguments are not commensurate with the scope of the claim or supported by the Specification. Further, we do not consider the claim to recite an improvement to a technological field. The Specification does not identify that the method changes the operation of a computer to improve the function of the computer, but rather to improve the abstract concepts of gathering, analyzing and displaying data (notifying the user). Thus, the claims, when interpreted in light of the Specification, merely recite use of a computer as a tool to implement a process of gathering, analyzing and displaying data (an abstract idea). *See, e.g., RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d 1322, 1327 (Fed. Cir. 2017) (“Unlike *Enfish*, [the claim] does not claim a software method that improves the functioning of a computer . . . [but] claims a ‘process that qualifies as an “abstract idea” for which computers are invoked merely as a tool.’” (citation omitted)). Thus, Appellant’s argument has not persuaded us the Examiner erred in not considering the claim as an improvement to a technical field or a technology.

*Significantly More than the Abstract Idea*

Under the Memorandum, 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 adds a specific limitation beyond the judicial exception that is not “well-understood, routine, conventional” in the field (*see* MPEP § 2106.05(d) and *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1365 (Fed. Cir. 2018)); **or**, simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.

Appellant argues that the Examiner erred as “none of the steps in the recited claims could reasonably be construed as merely using existing technology to recognize and store data from specific data fields.” Appeal. Br. *ix*.

We are not persuaded of error in the Examiner’s rejection by this argument and do not find that the representative claim recites additional elements, beyond the judicial exception, that are not well-understood, routine, or conventional. Representative claim 1 recites the additional element of a non-transitory machine readable medium, and an input device. The Examiner has found, that these elements do not amount to significantly more and are merely well-understood, routine and conventional activities. Final Act. 4–5. Appellant’s Specification identifies the machine readable medium generically as any of a plurality different mediums. Specification ¶ 39. Further, Appellant’ Specification discusses input devices as being both generic computer components such as a keyboard, mouse etc. and as software to gather data. Specification ¶¶ 15, 23. Thus, Appellant’s Specification supports the Examiner’s finding that the additional elements are well known conventional elements. Further, the activities of assigning

an object, and monitoring print jobs, as discussed above are merely data collection steps which are conventional to computer technology MPEP § 2106.05(d) II (iv). Similarly the transmitting step is also conventional to computer technology, *see* MPEP § 2106.05(d) II (i). The providing notification step broadly is a step of displaying data as conventional. *See Electric Power Grp.*, 830 F.3d at 1355.

Thus, we find ample evidence to support the Examiner's finding that the elements of the claim, in addition to the abstract concept, represent well-understood, routine and conventional activities.

In summary, Appellant's arguments have not persuaded us of error in the Examiner's determination that representative claim 1 is directed to an abstract idea; a mental process. Further, Appellant's arguments have not persuaded us that the Examiner erred in finding that the claim is not: directed to an improvement in the functioning of the computer or to other technology or other technical field; directed to a particular machine; directed to performing or affecting a transformation of an article to a different state or thing; directed to using a judicial exception in some meaningful way beyond linking the exception to a particular technological environment such that the claim as a whole is more than a drafting effort to monopolize the judicial exception. For these reasons, we are unpersuaded that the claim recites additional elements that integrate the judicial exception into a practical application. *See* Memorandum, 84 Fed. Reg. at 54. Accordingly, we sustain the Examiner's rejection, under 35 U.S.C. § 101, of representative claim 1 and claims 3, 6 through 12, 14, and 16 through 19 grouped with claim 1.

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
1, 3, 6–12, 14, 16–19	101	Eligibility	1, 3, 6–12, 14, 16–19	

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**