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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte KEVIN NELSON WONG, DANIEL A. TEOH,
EMILY A. STOVER, ENAM RABBANI, JASON A. YUEN,
SEAN S. KIRBY, JESSICA S. LIU, MEHRAN MALEK, and
BRYCE KWAN

Appeal 2019-002936
Application 13/462,178
Technology Center 3600

Before ST. JOHN COURTENAY III, BETH Z. SHAW, and
JOYCE CRAIG *Administrative Patent Judges*.

COURTENAY, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant¹ appeals under 35 U.S.C. § 134(a) from a Final rejection of claims 1 and 9–15. Claims 2–8 are canceled. We have jurisdiction over the pending claims under 35 U.S.C. § 6(b).

We affirm.

¹ We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42(a). According to Appellant, the real party in interest is Nulogy Corporation. *See* Appeal Br. 3.

STATEMENT OF THE CASE

Introduction

Embodiments of Appellant’s invention relate generally to “inventory management, and specifically to a method, system and apparatus for integrating order management and warehouse management.” Spec. ¶ 1.

Rejection^{2 3}

Claims 1 and 9–15 are rejected under 35 U.S.C. § 101, as being directed to a judicial exception, without significantly more. *See* Final Act. 2.

Issue on Appeal

Did the Examiner err in rejecting claims 1 and 9–15 under 35 U.S.C. § 101, as being directed to a judicial exception, without significantly more?

² The Examiner withdrew the rejection under 35 U.S.C. § 103. *See* Final Act. 4.

³ Regarding claims 11 and 12, in the event of further prosecution, we leave further review of these claims to the discretion of the Examiner. *See IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377, 1384 (Fed. Cir. 2005) (*citing Ex parte Lyell*, 17 USPQ2d 1548 (BPAI 1990)) (“[R]eciting both an apparatus and a method of using that apparatus [in a single claim] renders [such] claim indefinite under section 112, paragraph 2.”); *see also Pfizer Inc. v. Ranbaxy Labs. Ltd.*, 457 F.3d 1284, 1292 (Fed. Cir. 2006) (when a claim relying on another claim “fails to ‘specify a further limitation of the subject matter’ of the [another] claim to which it refers because it is completely outside the scope of [the another claim,]” such claim is invalid under pre-AIA 35 U.S.C. § 112, fourth paragraph.) Although the Board is authorized to reject claims under 37 C.F.R. § 41.50(b), no inference should be drawn when the Board elects not to do so. *See* Manual of Patent Examining Procedure (MPEP) § 1213.02.

ANALYSIS

We reproduce *infra* independent claim 1 in Table One. We have considered all of Appellant’s arguments and any evidence presented. To the extent Appellant has not advanced separate, substantive arguments for particular claims, or other issues, such arguments are waived. *See* 37 C.F.R. § 41.37(c)(1)(iv).

Principles of Law

A. Section 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 U.S. 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 Court’s two-part framework, described in *Mayo* and *Alice*. *Alice*, 573 U.S. 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, 67 (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 (1853))); 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 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 (quotation marks 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.*

B. USPTO § 101 Guidance

The U. S. Patent and Trademark Office (USPTO) published revised guidance on the application of § 101. USPTO’s January 7, 2019 Memorandum, *2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50 (“2019 Memorandum”).⁴ Under that guidance, we first look to whether the claim recites:

- (1) (*see* 2019 Memorandum Step 2A – Prong One) 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) (*see* 2019 Memorandum Step 2A – Prong Two) additional elements that integrate the judicial exception into a practical application (*see* MPEP § 2106.05(a)–(c), (e)–(h)).⁵

⁴ The Office issued a further memorandum on October 17, 2019 (the “October 2019 Memorandum”) clarifying guidance of the January 2019 Memorandum in response to received public comments. *See* https://www.uspto.gov/sites/default/files/documents/peg_oct_2019_update.pdf. Moreover, “[a]ll USPTO personnel are, as a matter of internal agency management, expected to follow the guidance.” January 2019 Memorandum at 51; *see also* October 2019 Memorandum at 1.

⁵ This evaluation is performed by (a) identifying whether there are any additional elements recited in the claim beyond the judicial exception, and

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 2019 Memorandum Step 2B.

Because there is no single definition of an “abstract idea” under *Alice* step 1, the PTO has recently synthesized, for purposes of clarity, predictability, and consistency, key concepts identified by the courts as abstract ideas to explain that the “abstract idea” exception includes the following three groupings:

1. Mathematical concepts—mathematical relationships, mathematical formulas or equations, mathematical calculations;
2. Mental processes— concepts performed in the human mind (including an observation, evaluation, judgment, opinion); and
3. Certain methods of organizing human activity—fundamental economic principles or practices (including hedging, insurance, mitigating risk); commercial or legal interactions (including agreements in the form of contracts; legal obligations; advertising, marketing or sales activities or behaviors; business relations); managing personal behavior

(b) evaluating those additional elements individually and in combination to determine whether the claim as a whole integrates the exception into a practical application. *See* 2019 Memorandum - Section III(A)(2).

or relationships or interactions between people (including social activities, teaching, and following rules or instructions).

See 2019 Memorandum, 84 Fed. Reg. at 52.

According to the 2019 Memorandum, “[c]laims that do not recite [subject] matter that falls within these enumerated groupings of abstract ideas should not be treated as reciting abstract ideas,” except in rare circumstances. Even if the claims recite any one of these three groupings of abstract ideas, these claims are still not “directed to” a judicial exception (abstract idea), and thus are patent eligible, if “the claim as a whole integrates the recited judicial exception into a practical application of that exception.” *See* 2019 Memorandum, 84 Fed. Reg. at 53.

For example, limitations that **are** indicative of *integration into a practical application* include:

1. Improvements to the functioning of a computer, or to any other technology or technical field — *see* MPEP § 2106.05(a);
2. Applying the judicial exception with, or by use of, a particular machine — *see* MPEP § 2106.05(b);
3. Effecting a transformation or reduction of a particular article to a different state or thing — *see* MPEP § 2106.05(c); and
4. Applying or using the judicial exception in some other 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(e).

In contrast, limitations that are **not** indicative of *integration into a practical application* include:

1. Adding the words “apply it” (or an equivalent) with the judicial exception, or merely include instructions to

- implement an abstract idea on a computer, or merely uses a computer as a tool to perform an abstract idea — *see* MPEP § 2106.05(f);
2. Adding insignificant extra-solution activity to the judicial exception — *see* MPEP § 2106.05(g); and
 3. Generally linking the use of the judicial exception to a particular technological environment or field of use — *see* MPEP § 2106.05(h).

See 2019 Memorandum, 84 Fed. Reg. at 54–55 (“Prong Two”).

*2019 Memorandum, Step 2A, Prong One*⁶
The Judicial Exception

Under the 2019 Memorandum, we begin our analysis by first considering whether the claims recite any judicial exceptions, including certain groupings of abstract ideas, in particular: (a) mathematical concepts, (b) mental steps, and (c) certain methods of organizing human activities.

The Examiner concludes that all claims 1 and 9–15 describe: the abstract idea of receiving an order message for a finished good and determining if the items in inventory match the received order, which is considered to be *a fundamental economic practice or an idea of itself* (i.e., taking an order and determining if there is sufficient inventory available to fill it). In the examiner's view, the claims are similar to those in the case of *Electric Power Group* in which a computer system was used in a conventional, routine manner to collect and analyze information, then perform actions based on the analysis.

Final Act. 2 (emphasis added).

⁶ Throughout this opinion, we give the claim limitations the broadest reasonable interpretation consistent with the Specification. *See In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997).

We apply the Director’s 2019 Memorandum *de novo*. In Table One below, we identify in *italics* the specific claim limitations that we conclude recite an abstract idea. We identify in **bold** the additional (non-abstract) claim elements that we find are generic computer components:

TABLE ONE

Independent Claim 1	2019 Memorandum
[a] A method comprising: ⁷	
[b] at the contract packager server maintaining a first data store in memory , the first data store storing inventory records, each respective inventory record comprising a subcomponent identifier of a subcomponent and data indicative of a quantity of the subcomponent at a production site:	<p>Maintaining a first data store in memory that stores inventory records is insignificant extra-solution activity (data gathering). 2019 Memorandum, 55 n.31; <i>see also</i> MPEP § 2106.05(g).</p> <p>The contract packager server, the first data store, and the memory are additional non-abstract limitations.</p>
[c] receiving an order message for a finished good from an enterprise management server via a network , the order message including an identifier of the finished good, quantity data indicative of the quantity of the finished good to be produced, and a	<p>Receiving an order message for a finished good is insignificant extra-solution activity (data gathering). 2019 Memorandum, 55 n.31; <i>see also</i> MPEP § 2106.05(g).</p> <p>The enterprise management server and network are additional non-abstract limitations.</p>

⁷ A method falls under the statutory subject matter class of a process. *See* 35 U.S.C. § 101 (“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.”).

Independent Claim 1	2019 Memorandum
<p>subcomponent identifier of a subcomponent included in the finished good, and a format identifier identifying a format of the order message;</p>	
<p>[d] responsive to receiving the order message, formatting the order message into a format suitable for storage in a first data store maintained in a memory connected to the contract packager server based on the format identifier, and storing the formatted order message in the first data store;</p>	<p>Formatting the order message into a format suitable for storage in a first data store maintained in a memory is insignificant extra-solution activity (data gathering). 2019 Memorandum, 55 n.31; <i>see also</i> MPEP § 2106.05(g).</p> <p>The enterprise management server, network, first data store, memory, and the contract packager server are additional non-abstract limitations.</p>
<p>[e] <i>creating a job record based on the formatted order message, the job record comprising the identifier of the finished good, the quantity data indicative of the quantity of the finished good to be produced, and the subcomponent identifier of the subcomponent included in the finished good</i>;</p>	<p><i>Abstract Idea: Creating a job record based on the formatted order message</i> is a fundamental economic practice including business relations that could be performed alternatively as a mental process. <i>See</i> 2019 Memorandum 52.</p>
<p>[f] storing the job record in the first data store;</p>	<p>Storing the job record in the first data store is insignificant extra-solution activity (data gathering). 2019 Memorandum, 55 n.31; <i>see also</i> MPEP § 2106.05(g).</p>

Independent Claim 1	2019 Memorandum
	<p>The first data store is an additional non-abstract limitation.</p>
<p>[g] retrieving an inventory record from the first data store comprising the subcomponent identifier and <i>determining whether a sufficient quantity of the subcomponent is located at the production site to produce the finished good based on the data indicative of the quantity of the subcomponent at a production site in the inventory record;</i></p>	<p>Retrieving an inventory record is insignificant extra-solution activity (data gathering). 2019 Memorandum, 55 n.31; <i>see also</i> MPEP § 2106.05(g).</p> <p><i>Abstract Idea: determining whether a sufficient quantity of the subcomponent is located at the production site to produce the finished good based on the data indicative of the quantity of the subcomponent at a production site in the inventory record is a fundamental economic practice including business relations that could be performed alternatively as a mental process. See 2019 Memorandum 52.</i></p> <p>The first data store is an additional non-abstract limitation.</p>
<p>[h] in response to determining that a sufficient quantity of the subcomponent is not located at the production site to produce the finished good, <i>generating a message and sending the message to a warehouse management server associated with a warehouse site via the network, the message</i></p>	<p><i>Abstract Idea: Generating a message and sending the message to a warehouse management server associated with a warehouse site via the network, the message including data indicative of a specified quantity of the subcomponent is a fundamental economic practice including business relations that could be performed alternatively as a</i></p>

Independent Claim 1	2019 Memorandum
<p><i>including data indicative of a specified quantity of the subcomponent;</i></p>	<p>mental process. <i>See</i> 2019 Memorandum 52.</p> <p>The warehouse management server and the network are additional non-abstract limitations.</p>
<p>[i] receiving, from the warehouse management server, input data defining a quantity of the subcomponent that has been transferred to the production site from the warehouse site;</p>	<p>Receiving input data defining a quantity of the subcomponent that has been transferred to the production site from the warehouse site is insignificant extra-solution activity (data gathering). 2019 Memorandum, 55 n.31; <i>see also</i> MPEP § 2106.05(g).</p> <p>The warehouse management server is an additional non-abstract limitation.</p>
<p>[j] responsive to receiving the input data, <i>determining whether the quantity defined by the input data matches the specified quantity of the subcomponent included in the message</i>; and,</p>	<p><i>Abstract Idea: determining whether the quantity defined by the input data matches the specified quantity of the subcomponent included in the message</i> is a fundamental economic practice including business relations that could be performed alternatively as a mental process. <i>See</i> 2019 Memorandum 52.</p>
<p>[k] when the quantity defined by the input data matches the specified quantity of the subcomponent included in the request, updating the inventory record stored in the</p>	<p>Updating the inventory record stored in the first data store comprising the subcomponent identifier, and generating and transmitting a notification message are insignificant extra-solution activities. 2019</p>

Independent Claim 1	2019 Memorandum
<p>first data store comprising the subcomponent identifier, and generating and transmitting a notification message from the contract packager server to each of the enterprise management server and the warehouse management server via the network; the notification message containing the subcomponent identifier, a location identifier of the location of the quantity of the subcomponent, the quantity of the subcomponent received at the production site;</p>	<p>Memorandum, 55 n.31; <i>see also</i> MPEP § 2106.05(g).</p> <p>The first data store, the contract packager server, the enterprise management server, the warehouse management server and the network are additional non-abstract limitations.</p>
<p>[1] wherein the notification message causes an update to a second data record representing the subcomponent maintained in a second data store at the enterprise management server and a third data record representing the subcomponent maintained in a third data store at the warehouse management server to synchronize the inventory data record stored in the first data store with the second data record stored in the enterprise management server and the third data record stored [in</p>	<p>Causing an update to a second data record representing the subcomponent maintained in a second data store at the enterprise management server and a third data record representing the subcomponent maintained in a third data store at the warehouse management server to synchronize the inventory data record stored in the first data store with the second data record stored in the enterprise management server and the third data record stored [in the] warehouse management server is an insignificant post-solution activity. 2019 Memorandum, 55 n.31; <i>see also</i> MPEP § 2106.05(g).</p>

Independent Claim 1	2019 Memorandum
the] warehouse management server.	The first data store, the second data store at the enterprise management server, the third data store at the warehouse management server, and the warehouse management server are additional non-abstract limitations.

Abstract Idea

After considering representative method claim 1 as a whole, we conclude the recited *italicized* steps shown above in Table One recite the abstract idea of a fundamental economic practice including business relations that could be performed alternatively as mental processes.⁸ See 2019 Memorandum, 84 Fed. Reg. at 52. See also “*Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1318 (Fed. Cir. 2016) (“[W]ith the exception of generic computer-implemented steps, there is nothing in the

⁸ If a method can be performed by human thought alone, or by a human using pen and paper, it is merely an abstract idea and is not patent eligible under § 101. See *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1372–73 (Fed. Cir. 2011); “That purely mental processes can be unpatentable, even when performed by a computer, was precisely the holding of the Supreme Court in *Gottschalk v. Benson*.” *CyberSource*, 654 F.3d at 1375. See also *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1146–47 (Fed. Cir. 2016). Moreover, “[u]sing a computer to accelerate an ineligible mental process does not make that process patent-eligible.” *Bancorp Servs., L.L.C. v. Sun Life Assurance Co. of Can. (U.S.)*, 687 F.3d 1266, 1279 (Fed. Cir. 2012); see also *OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1363 (Fed. Cir. 2015) (“[R]elying on a computer to perform routine tasks more quickly or more accurately is insufficient to render a claim patent eligible.”).

claims themselves that foreclose them from being performed by a human, mentally or with pen and paper.’).” 2019 Memorandum, 84 Fed. Reg. at 52 n.14.

“An abstract idea can generally be described at different levels of abstraction.” *Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1240 (Fed. Cir. 2016). Merely combining several abstract ideas does not render the combination any less abstract. *See RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d 1322, 1327 (Fed. Cir. 2017) (“Adding one abstract idea (math) to another abstract idea . . . does not render the claim non-abstract.”); *FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1093–94 (Fed. Cir. 2016) (determining the pending claims were directed to a combination of abstract ideas).

For at least these reasons, we conclude claim 1 recites the specific types of abstract ideas identified above in Table One.

Additional Elements

As emphasized in **bold** in Table One, *supra*, we note the additional generic computer components recited in claim 1: the contract packager server, memory, enterprise management server, network, first data store, second data store, warehouse management server, and third data store. We further note the supporting exemplary descriptions of generic computer components in the Specification, for example:

Network 122 can include *any suitable combination* of wired and/or wireless networks, including *but not limited to* a WAN such as the Internet, a Local Area Network (“LAN”), cell phone networks, WiFi networks, WiMax networks *and the like*.

Spec. ¶ 19 (emphasis added).

ERP server 108 and WMS server 112 are each based on *any suitable server architecture*, and can therefore each include one or more processors interconnected with memories and housed in enclosures.

Spec. ¶ 23 (emphasis added).

We emphasize that *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299 (Fed. Cir. 2016), guides: “[t]he abstract idea exception prevents patenting a *result* where ‘it matters not by what process or machinery the result is accomplished.’” 837 F.3d at 1312 (*quoting O’Reilly v. Morse*, 56 U.S. 62, 113 (1854)) (emphasis added). *See supra* Table One. Because we conclude all claims 1 and 9–15 on appeal recite an abstract idea, as identified above, under *Step 2A, Prong One*, we proceed to *Step 2A, Prong Two*.

2019 Memorandum, Step 2A, Prong Two
Integration of the Judicial Exception into a Practical Application

Pursuant to the 2019 Memorandum, we consider whether there are additional elements set forth in the claims that integrate the judicial exception into a practical application. *See* 2019 Memorandum, 84 Fed. Reg. at 54–55.

MPEP § 2106.05(a)
Improvements to the Functioning of a Computer or
to Any Other Technology or Technical Field

Appellant contends the claimed invention provides an improvement to computer functionality. In particular, Appellant submits that “the claims are directed to a technology based solution that overcomes the disadvantages of

prior art order management and warehouse management systems.” Appeal Br. 9 (emphasis added).

In support, Appellant recites the claim language (Appeal Br. 10–11), and urges:

As outlined in [Spec.] paragraph [0062], the method of claim 1 reduces the need for communication between the enterprise management server, the contract packager server, and the warehouse management server, for example to manage overlapping records, thereby managing the impact on network and system resources, for example by reducing the operational burden on the network to collect and transmit data to update and synchronize the data stores, without sacrificing the synchronization between the servers. Accordingly, the combination of elements recited in claim 1 provide technical details which lead to an improved computer functionality and are therefore inextricably tied to a server (e.g. a computer) to provide a technology-based solution that overcomes the disadvantages of prior art order management and warehouse management systems.

Claim 1 is directed to an improvement in computer functionality which, in accordance with MPEP 2106.04(a) is not abstract. Hence, claim 1 is not directed to a judicial exception and is patent eligible.

Appeal Br. 11.

However, we find Appellant has not provided sufficient details regarding **how** the recited contract packager server, memory, enterprise management server, network, first data store, second data store, warehouse management server, and third data store (claim 1) include more than mere instructions to perform the recited steps to qualify as an improvement to an existing technology. As discussed above, we conclude Appellant’s generic computer-implemented method performs steps that can be performed

alternatively as mental processes. *See* independent claim 1. Moreover, the “‘mere automation of manual processes using generic computers’ . . . ‘does not constitute a patentable improvement in computer technology,’” *Trading Techs. Int’l v. IBG LLC*, 921 F.3d 1378, 1384 (Fed. Cir. 2019) (quoting *Credit Acceptance Corp. v. Westlake Servs.*, 859 F.3d 1044, 1055 (Fed. Cir. 2017)).

Accordingly, on this record, we conclude sole independent claim 1 does not recite an improvement to the functionality of a computer or other technology or technical field. *See* MPEP § 2106.05(a).

Appellant advances no arguments that any of method claims on appeal are tied to a particular machine, or transform an article to a different state or thing. *See* MPEP § 2106.05(c).

Appellant does not advance further substantive, persuasive arguments as to any particular “meaningful” claim limitations, such as those of the types addressed under MPEP § 2106.05(e), *that impose meaningful limits on the judicial exception.*⁹

Appellant has not argued, nor do we find, that the additional generic computer, memory, data stores, network, and server limitations (bolded in Table One *supra*) do more than generally link the abstract idea (italicized in Table One) to a particular technological environment.

⁹ *See* 2019 Memorandum, 84 Fed. Reg. 55, citing MPEP § 2106.05(e): “[A]pply[ing] or us[ing] the judicial exception in some other *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.” (emphasis added).

Accordingly, on this record, we conclude representative independent claim 1 has no other argued meaningful limitations, as considered under section 2106.05(e) of the MPEP, pursuant to the 2019 Memorandum.

MPEP § 2106.05(f)
*Merely including instructions to implement
an abstract idea on a computer, or
Merely using a computer as a tool
to perform an abstract idea*

We conclude Appellant's claimed invention merely implements the abstract idea using *instructions* executed on generic computer components, as depicted in **bold** type in Table One, and as supported in our reproduction of the Specification, paragraphs 19 and 23, *supra*. Thus, we conclude Appellant's claims merely use a programmed computer as a tool to perform an abstract idea.

MPEP § 2106.05(g)
*Adding insignificant extra-solution activity
to the judicial exception*

As mapped in the right column of Table One, *supra*, we conclude that representative independent claim 1 recites extra or post-solution activities that courts have determined to be insufficient to transform judicially excepted subject matter into a patent-eligible application. *See* MPEP § 2106.05(g); 84 Fed. Reg. at 55 n.31.

MPEP § 2106.05(h)
*Generally linking the use of the judicial exception to a particular
technological environment or field of use*

The Supreme Court guides: “the prohibition against patenting abstract ideas ‘cannot be circumvented by attempting to limit the use of the formula to a particular technological environment’ or [by] adding ‘insignificant postsolution activity.’” *Bilski*, 561 U.S. at 611–12, (*quoting Diehr*, 450 U.S. at 191–92).

As noted above, Appellant argues:

the combination of elements recited in claim 1 provide technical details which lead to an improved computer functionality and are therefore inextricably tied to a server (e.g. a computer) to provide a technology-based solution that overcomes the disadvantages of prior art order management and warehouse management systems. Claim 1 is directed to an improvement in computer functionality which, in accordance with MPEP 2106.04(a) is not abstract. Hence, claim 1 is not directed to a judicial exception and is patent eligible.

Appeal Br. 11.

However, as noted above, we find Appellant has not provided sufficient details regarding how the recited contract packager server, memory, enterprise management server, network, first data store, second data store, warehouse management server, and third data store (claim 1) include more than mere instructions to perform the recited steps to qualify as an improvement to an existing technology.

Therefore, we agree with the Examiner: “The additional limitations do not constitute improvements to another technology, another technical field, or to the computer itself and are not considered to be *meaningful limitations*

beyond generally linking the use of the abstract idea to a particular technological environment.” Final Act. 3 (emphasis added).

Nor do claims 1 and 9–15 on appeal present any other issues as set forth in the 2019 Memorandum regarding a determination of whether the additional generic elements integrate the judicial exception into a practical application. *See* 2019 Memorandum, 84 Fed. Reg. at 55.

Thus, under *Step 2A, Prong Two* (MPEP §§ 2106.05(a)–(c) and (e)–(h)), we conclude claims 1 and 9–15 **do not integrate the judicial exception into a practical application**. Therefore, we proceed to *Step 2B, The Inventive Concept*.

The Inventive Concept – Step 2B

Under the 2019 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)); **or**, simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.

We find unpersuasive Appellant’s arguments that analogize the claims on appeal to the subject claims considered by the court in *Amdocs (Israel) Limited v. Openet Telecom, Inc.*, 841 F.3d 1288 (2016). Appeal Br. 18–19. In particular, Appellant submits that “the present claims are more closely aligned to the claims in *Amdocs*, in particular the ‘065 patent, which concerns ‘a system, method, and computer program for merging data in a network-based filtering and aggregating platform as well as a related apparatus for enhancing network accounting data records.’” Appeal Br. 12.

The benefits of the claims in *Amdocs* were possible because of the **distributed, remote enhancement** that produced an unconventional result - reduced data flows and the possibility of smaller databases. Similarly, the benefits of claim 1 of the present application are possible because of the combination of elements recited above that produce an unconventional result – reduced need for communications while maintaining synchronization between servers.

Appeal Br. 13 (emphasis added).

In support, Appellant recites the claim language, and urges:

Thus, the combination of elements in independent claim 1 work together in a particular manner to enhance records, which result in a technical improvement over prior art technologies and serves to improve the performance of the system itself. Further, the combination of elements cannot be regarded as being **well-understood, routine and conventional**. Rather, the claimed solution is necessarily rooted in computer technology and provides meaningful limitations that confine the claims to a particular useful application. Accordingly, Applicant submits that the combination of elements recited in independent claim 1, when viewed as a whole, amount to “significantly more” than the judicial exception and hence independent claim 1 is patent eligible (**Step 2B: Yes**).

Appeal Br. 15–16 (emphasis added).

In *Amdocs*, the Federal Circuit held that claim 1 of the '065 patent: is also like the claims in *BASCOM* because even though the system in the '065 patent relies upon some arguably generic limitations, when all limitations are considered individually and as an ordered combination, they provide an inventive concept through the use of distributed architecture. This is similar to the design in *BASCOM* which permitted the invention to have a filtering tool with the benefits of a filter on a local computer and the benefits of a filter on an ISP server. The benefits in *BASCOM* were possible because of customizable filtering features at specific locations remote from the user. Similarly,

the benefits of the '065 patent's claim 1 are possible because of *the **distributed, remote enhancement** that produced an unconventional result—reduced data flows and the possibility of smaller databases.* This arrangement is not so broadly described to cause preemption concerns. Instead, it is narrowly circumscribed to the particular system outlined. As in *BASCOM*, this is a technical improvement over prior art technologies and served to improve the performance of the system itself.

Amdocs, 841 F.3d at 1302 (emphasis added).

We are not persuaded by Appellant's reliance upon *Amdocs*, because there is nothing in Appellant's claims that provides benefits based upon a "**distributed, remote enhancement** that produce[s] an unconventional result—reduced data flows and the possibility of smaller databases," as was found by the court in *Amdocs*. *Id.* Appellant's claims are silent regarding any mention of a database, much less any indication that claim 1 provides unconventional results produced by a distributed, remote **enhancement** that reduces data flows and allows for the possibility of smaller databases, as was the case in *Amdocs*.

Berkheimer v. HP Inc., 881 F.3d 1360 (Fed. Cir. 2018)

Berkheimer was decided by the Federal Circuit on February 8, 2018. On April 19, 2018, the PTO issued the Memorandum titled: "Changes in Examination Procedure Pertaining to Subject Matter Eligibility, Recent Subject Matter Eligibility Decision (*Berkheimer v. HP, Inc.*)" (hereinafter "*Berkheimer* Memorandum").¹⁰ The *Berkheimer* Memorandum provided

¹⁰ Available at <https://www.uspto.gov/sites/default/files/documents/memo-berkheimer-20180419.PDF>.

specific requirements for an Examiner to support with evidence any finding that *claim elements* (or a *combination of elements*) are well-understood, routine, or conventional.

Under *Step 2B*, the Examiner finds, *inter alia*:

The interactions between the various servers (receiving an order, formatting the order, storing the order, sending a request for a subcomponent, etc.), as described by the applicant, are merely **conventional, routine** operations of generic computer systems (sending, receiving, and processing data). It has long been **well-known and conventional** to reformat data to enable communication between various computer systems and storage of data. These things do not provide meaningful limitations that transform the abstract idea into a patent eligible application of the abstract idea such that the claims amount to significantly more than the abstract idea itself.

Final Act. 4–5 (emphasis added).

In the Appeal Brief, filed Oct. 5, 2018, Appellant cites to *Berkheimer*. Appeal Br. 1–13. Appellant makes a demand for *Berkheimer* evidence, such as one or more of the specific types of factual evidence identified in the *USPTO Berkheimer Memorandum*: “In particular, the Examiner has failed to provide the requisite support that the above elements and combination of elements are well-understood, routine and conventional.” Appeal Br. 14.

The Examiner disagrees with Appellant, and further explains the basis for the rejection:

Lastly, the examiner gives **official notice** that the features in question (receiving an order, formatting the order, creating an order record, updating inventory records, and synchronizing multiple data records) alone and in combination are well-known, routine, and conventional matters. Furthermore, since appellant has drawn special attention in his arguments to the issue of synchronizing multiple data records, the examiner

hereby provides prior art references to support the contention that these are routine, conventional matters. **Deitz et al. (US 7,020,876)** suggest that it is common practice to synchronize multiple copies of a database in campaign management (see col. 8 line 1-12). **Sadiq et al. (US 6,029,177)** suggest that it is routine to synchronize the update of multiple databases to maintain data persistence in conventional distributed systems (see col. 1 line 43-53). Both of these references have priority dates that are well before that of the instant application.

Ans. 5 (emphasis added).

Appellant does not file a Reply Brief to further rebut the Examiner's findings, extrinsic evidence, and responsive explanations. *Id.*

Arguments not made are waived. *See* 37 C.F.R. § 41.37(c)(1)(iv).

Further, regarding the use of the recited generic computer components identified above in Table One, the Supreme Court has held “the mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention.” *Alice*, 573 U.S. at 223. Our reviewing court provides additional guidance: *See FairWarning*, 839 F.3d at 1096 (“[T]he use of generic computer elements like a microprocessor or user interface do not alone transform an otherwise abstract idea into patent-eligible subject matter.”); *OIP Techs*, 788 F.3d at 1363 (claims reciting, *inter alia*, sending messages over a network, gathering statistics, using a computerized system to automatically determine an estimated outcome, and presenting offers to potential customers found to merely recite “‘well-understood, routine conventional activit[ies],’ either by requiring conventional computer activities or routine data-gathering steps” (alteration in original)).

This reasoning is applicable here. Therefore, on the record before us, Appellant has not shown that the claims on appeal add a specific limitation

beyond the judicial exception that is not well-understood, routine, and conventional, when the claim limitations are considered both individually and as an ordered combination. *See* MPEP § 2106.05(d).

In light of the foregoing, we conclude, under the 2019 Memorandum, that each of Appellant’s claims 1 and 9–15 considered as a whole, is *directed to a patent-ineligible abstract idea that is not integrated into a practical application, and does not include an inventive concept.*

Accordingly, for the reasons discussed above, we sustain the Examiner’s Rejection under 35 U.S.C. § 101 of claims 1 and 9–15.

CONCLUSION

Under the Director’s 2019 Memorandum, as governed by relevant case law, we conclude all claims 1 and 9–15, rejected under 35 U.S.C. § 101, are directed to patent-ineligible subject matter.

DECISION SUMMARY

Claims Rejected	35 U.S.C. §	Reference(s)Basis	Affirmed	Reversed
1, 9–15	101	Eligibility	1, 9–15	

FINALITY AND RESPONSE

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). *See* 37 C.F.R. § 41.50(f).

AFFIRMED