UNITED STATES PATENT AND TRADEMARK OFFICE

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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 CHAD JEFFREY TIMM, ERICK MILES ROWE, GERALD
JOSEPH HANSON, and JURGEN RILEY SCHROEDER

_____

Appeal 2017-011232
Application 14/083,496
Technology Center 3600

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Before ST. JOHN COURTENAY III, LARRY J. HUME, and
JOHN A. EVANS, *Administrative Patent Judges*.

COURTENAY, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants[1] appeal under 35 U.S.C. § 134(a) from the Examiner's
Final Rejection of claims 1, 2, 4, 5, 7, 8, 11–14, 16–18, and 20–24, which
constitute all the claims pending in this application. Claims 3, 6, 9, 10, 15,
and 19 are cancelled. We have jurisdiction over the pending claims under
35 U.S.C. § 6(b).

> We affirm.

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[1] According to Appellants, the real party in interest is Oracle International
Corporation. App. Br. 3.

STATEMENT OF THE CASE

One embodiment of Appellants' invention relates "to a computer system, and more particularly, to *a computer system that matches invoices.*" Spec. ¶ 1 (emphasis added).

Exemplary Claim

1. A non-transitory computer-readable medium having instructions stored thereon that, when executed by a processor, cause the processor to automatically optimize a configurable invoice matching engine, the automatic optimizing comprising:

receiving a set of historical invoice matching data that comprises invoices classified by the invoice matching engine and resolution actions initiated by the invoice matching engine, wherein the invoice matching engine classifies the invoices based on a current set of invoice matching tolerance parameters and initiates the resolution actions based on a current set of invoice matching action parameters, the current set of invoice matching tolerance parameters including an exact match parameter, a tolerance match parameter and a non-match parameter, and the current set of invoice matching action parameters including:

an exact match parameter that defines an exact match resolution action that the invoice matching engine initiates in response to classifying the invoice as an exact match with the purchase document,

a tolerance match parameter that defines a tolerance resolution action that the invoice matching engine initiates in response to classifying the invoice as a match within a tolerance with the purchase document, and

a non-match parameter that defines a non-match resolution action that the invoice matching engine initiates in response to classifying the invoice as a non-match with the purchase document;

defining a processing level parameter that defines a level of granularity for calculating an overall cost, the level of

granularity including a global level, a supplier level and an item level, the global level providing improved processor performance over the supplier level and the item level, and the supplier level providing improved processor performance over the item level, the global level calculating an overall cost for all suppliers and item types, the supplier level calculating an overall cost for each supplier, and the item level calculating an overall cost for each supplier and item type;

defining a set of fixed factor parameters that define cost values associated with the invoice matching engine initiating resolution actions;

calculating a set of historical factor parameters that define metric values based on the historical invoice matching data;

calculating a current overall cost associated with the invoice matching engine initiating resolution actions based on the level of granularity, the current set of invoice matching tolerance parameters, the current set of invoice matching action parameters, the set of fixed factor parameters, and the set of historical factor parameters;

calculating a plurality of alternate overall costs, associated with the invoice matching engine initiating resolution actions, based on the level of granularity and a plurality of alternate sets of invoice matching tolerance parameters, each alternate set including at least one different tolerance parameter value;

determining an optimal set of invoice matching tolerance parameters based on comparing the current overall cost with the plurality of alternate overall costs; and

adjusting the current set of invoice matching tolerance parameters to the optimal set of invoice matching tolerance parameters.

App. Br. 22–23 (Claims Appendix).

Rejection [2]

Claims 1, 2, 4, 5, 7, 8, 11–14, 16–18, and 20–24 are rejected under 35 U.S.C. § 101, as being directed to a judicial exception, without significantly more. Final Act. 3–21.

Issue on Appeal

Did the Examiner err in rejecting claims 1, 2, 4, 5, 7, 8, 11–14, 16–18, and 20–24 under 35 U.S.C. § 101, as being directed to a judicial exception, without significantly more?

ANALYSIS

We have considered all of Appellants' arguments and any evidence presented. We highlight and address specific findings and arguments for emphasis in our analysis below.

Rejection under 35 U.S.C. § 101

Principles of Law

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*

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[2] Responsive to Appellants' arguments and amendments, the Examiner withdrew the rejection under 35 U.S.C. § 103 of all pending claims 1, 2, 4, 5, 7, 8, 11–14, 16–18, and 20–24. Final Act. 21.

and *Alice. Id.* 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, 69 (1972)). Concepts determined to be patent eligible include physical and chemical processes, such as "molding of rubber products" (*Diamond v. Diehr*, 450 U.S. 175, 192 (1981)); "tanning, dyeing, making water-proof cloth, vulcanizing India rubber, smelting ores" (*id.* at 184 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 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 176; *see also id.* at 192 ("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.*

USPTO January 7, 2019 Revised Section 101 Memorandum

The USPTO recently published revised guidance on the application of § 101. *See* 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) ("Memorandum"). *This new guidance is applied in this opinion.* Under the 2019 Memorandum guidance, we first look to whether the claim recites:

(1) any judicial exceptions, including certain groupings of abstract ideas (i.e., mathematical concepts, mental processes, or certain methods of organizing human activity such as a fundamental economic practice or

managing personal behavior or relationships or interactions between people); 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)).[3] 84 Fed. Reg. at 51–52, 55.

A claim that integrates a judicial exception into a practical application applies, relies on, or uses the judicial exception in a manner that imposes a meaningful limit on the judicial exception, such that the claim is more than a drafting effort designed to monopolize the judicial exception. 84 Fed. Reg. at 54. When the judicial exception is so integrated, then the claim is not directed to a judicial exception and is patent-eligible under § 101. 84 Fed. Reg. at 54.

Only if a claim: (1) recites a judicial exception, and (2) does not integrate that exception into a practical application, do we then evaluate whether the claim provides an inventive concept. 84 Fed. Reg. at 56; *Alice*, 134 S. Ct. at 2350, 2355. For example, we 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, and conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception. 84 Fed. Reg. at 56.

Because there is no single definition of an "abstract idea" under *Alice* step 1, the PTO has recently synthesized, for purposes of clarity,

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[3] The references to the MPEP are to the Ninth Edition, Revision 08–2017 (rev. Jan. 2018).

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

According to the Memorandum, "claims 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), **if** "the claim as a whole integrates the recited judicial exception into a practical application of that judicial exception." "Integration into a practical application" requires an additional element or a combination of additional elements in the claim to apply, rely on, or use the judicial exception in a manner that imposes a meaningful limit on the judicial exception, such that the claim is more than a drafting effort designed to monopolize the exception. *See* 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 mere instructions to implement an abstract idea on a computer, or merely using 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 Memorandum, 84 Fed. Reg. at 54–55 ("Prong Two").

The Examiner's Rejection under 35 U.S.C. § 101

The Examiner concludes under Memorandum (1): Claims 1, 2, 4, 5,

7, 8, 11–14, 16–18, and 20–24 are directed to a judicial exception:

> the claims are directed to optimizing invoice matching which is
> considered to be an abstract idea inasmuch as such activity is
> considered a method of organizing human activity similar to the
> concept of using an algorithm for determining the optimal
> number of visits by a business representative to a client which
> the courts found abstract (*In re Maucorps*), mathematical
> relationships/formulas such as concepts related to performing
> mathematical calculations similar to reducing the amount of
> calculations in known and established computations
> (*FuzzySharp*) and using an algorithm for determining the
> optimal number of visits by a business representative to a client
> which the courts found abstract (*In re Maucorps*) and abstract
> ideas of themselves similar to the concept of collecting and
> comparing known information which the courts found abstract
> in *Classen Immunotherapies Inc. v. Biogen IDEC*, obtaining
> and comparing intangible data which the courts found abstract
> in *Cybersource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366,
> 1372 (Fed. Cir. 2011), comparing new and stored information
> and using rules to identify options which the courts found
> abstract in *SmartGene Inc. v. Advanced Biological Labs.*, [4]
> using categories to organize, store and transmit information
> which the courts found abstract in *Cyberfone Systems, LLC v.
> CNN Interactive Group, Inc.*, 558 Fed. Appx. 988, 993 (Fed.

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[4] The Examiner is referring to *SmartGene, Inc. v. Advanced Biological
Laboratories, SA*, 555 F. App'x 950, 955 (Fed. Cir. 2014) ("Whatever the
boundaries of the 'abstract ideas' category, the claim at issue here involves a
mental process excluded from section 101: the mental steps of comparing
new and stored information and using rules to identify medical options.") In
SmartGene, step (c) of *Advanced Biological Laboratories'* claim 1 recites:
"generating in said computing device advisory information for one or more
therapeutic treatment regimens in said ranked listing based on said patient
information and said expert rules." *Id.* at 952. (nonprecedential).

> Cir. 2014) [5] and data recognition and storage which the courts found abstract in *Content Extraction and Transmission LLC v. Wells Fargo Bank, N.A.*, 776 F.3d 1343, 1358-59 (Fed. Cir. 2014).

Final Act. 4.

The Examiner further concludes: "a human being could carry out the mental steps of gathering invoices (invoice data), comparing the information/data contained in these invoices to any number of parameters desired and based on which category each invoice ended up, initiate some type of response/resolution." Final Act. 5.

Regarding Memorandum (2), the Examiner finds the claims do not include additional elements that amount to significantly more than the judicial exception, because:

> 18. The steps of the process are performed by a generic computing device comprising a processor executing a computer program coupled to memory and a database to carry out the abstract idea.

> 19. The elements of the instant process, when taken alone, each execute in a manner routinely and conventionally expected of these elements. For instance[,] functions such as "receiving, initiates, defining, calculating, determining and adjusting" are conventional functions of a computing system suitably programmed. The elements of the instant process, when taken in combination, together do not offer substantially more than the sum of the functions of the elements when each is taken alone.

Final Act. 10.

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[5] The Examiner is referring to *Cyberfone Systems, LLC v. CNN Interactive Group, Inc.*, 558 Fed. Appx. 988, 993 (Fed. Cir. 2014) (nonprecedential) (receiving or transmitting data over a network, e.g., using the Internet to gather data, is abstract).

Regarding Memorandum (3 and 4, i.e., the "*Berkheimer*" issues discussed further *infra*):

The Examiner finds:

That is, the elements involved in the recited process undertake their roles in performance of their activities according to their generic functionalities which are *well-understood, routine and conventional*. The elements together execute in *routinely and conventionally accepted* coordinated manners and interact with their partner elements to achieve an overall outcome which, similarly, is merely the combined and coordinated execution of generic computer functionalities which are *well-understood, routine and conventional* activities previously known to the industry.

Final Act. 10–11 (emphasis added).

The Examiner additionally finds:

The claims merely amount to the application or instructions to apply the abstract idea (i.e.[,] optimizing invoice matching) on one or more computers, and is considered to amount to nothing more than requiring a *generic computer system* (e.g.[,] processing units suitably programmed and coupled to memory and a database) to merely carry out the abstract idea itself. As such, the claims, when considered as a whole, are nothing more than the *instruction* to implement the abstract idea (i.e.[,] optimizing invoice matching) in a particular, albeit [in a] *well-understood, routine and conventional* technological environment.

Final Act. 15.

For the aforementioned reasons, the Examiner concludes that all claims 1, 2, 4, 5, 7, 8, 11–14, 16–18, and 20–24 on appeal are not patent eligible under 35 U.S.C. § 101.

**Under the revised USPTO January 7, 2019 Section 101 policy
Memorandum, we consider the following points of law:**

Memorandum (1): Are the claims directed to any **judicial exceptions**,
including certain groupings of abstract ideas (i.e., mathematical concepts,
certain methods of organizing human interactions such as a fundamental
economic practice, or mental processes)?

Regarding Memorandum (1), our view is that the Examiner did not err
in concluding that each of claims 1, 2, 4, 5, 7, 8, 11–14, 16–18, and 20–24
on appeal is directed at least to the abstract idea of "optimizing invoice
matching which is considered to be an abstract idea inasmuch as such
activity is considered a method of organizing human activity similar to the
concept[s]" used in the Examiner's list of cited case authorities. Final
Act. 4. *See also* Final Act. 13 "Furthermore, paying an invoice is a
fundamental economic practice and a method of organizing human activity
similar to creating a contractual relationship which the courts found abstract
in *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1355 (Fed. Cir. 2014)."
(emphasis added).

We note the preamble of claim 1 is expressly directed to
"automatically optimiz[ing] a configurable invoice matching engine" which
we conclude is directed to a certain method of organizing human behavior,
i.e., a fundamental economic practice. To the extent Appellants advance
arguments regarding *Alice* step one, which also fall under Memorandum (2)
(covering MPEP §§ 2106.05(a)-(c) and (e)-(h)), we address these arguments
infra.

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Relevant Argued Court Decisions

We do not find persuasive Appellants' attempt to analogize the claims to the subject claims considered by the court in *McRO, Inc. v. Bandai Namco Games America Inc.*, 837 F.3d 1299 (Fed. Cir. 2016). App. Br. 15–18.

We note the subject claim considered by the *McRO* court concerned a method for automatically animating lip synchronization and facial expressions. *McRO*, 837 F.3d at 1303. The *McRO* court concluded the subject claims did not recite an abstract idea because the computer animation *improved* the prior art through the use of *rules*, rather than artists, to set morph weights and transitions between phonemes. *Id.* at 1308. Thus, the claimed invention in *McRO* allowed for computer performance of animation steps that previously had to be performed by human animators. *Id.* at 1309. The subject claims in *McRO* used "limited *rules* in a process specifically designed to achieve an improved technological result" over "existing, manual 3-D animation techniques." *Id.* at 1316 (emphasis added).

Here, Appellants' claimed invention does not apply positively recited *rules, per se*. The invention under appeal merely adapts to a technological setting (e.g., comprising generic processors, memory, and a database) the broad concept of "adjusting the current set of invoice matching tolerance parameters to the optimal set of invoice matching tolerance parameters." *See* independent claim 1, and independent claims 13 and 17, which recite similar language of commensurate scope.

Thus, it is our view that Appellants' claims merely implement generic computer components to perform the recited functions. We emphasize that *McRO* (837 F.3d at 1312) guides that "[t]he abstract idea exception prevents

patenting a *result* where 'it matters not by what process or machinery the result is accomplished.'" (Quoting *O'Reilly v. Morse*, 56 U.S. 62, 113 (1853)) (emphasis added).

Appellants' analogy to *BASCOM* [6] is similarly unavailing. App. Br. 19. In support, Appellants urge that "the final Office Action admits that the claims are *allowable over the prior art*, which means that all of the pending claims recite an inventive concept per Step 2B, as discussed in *BASCOM*." *Id.* (emphasis added). *See supra*, n.2 (the Examiner withdrew the 35 U.S.C. § 103 rejection of all claims).

However, the Supreme Court guides: "[t]he '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." *Diehr*, 450 U.S. at 188–89 (emphasis added). Our reviewing court further emphasizes that "[e]ligibility and novelty are separate inquiries." *Two-Way Media Ltd. v. Comcast Cable Commc'ns, LLC*, 874 F.3d 1329, 1340 (Fed. Cir. 2017); *see also Affinity Labs of Tex., LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1263 (Fed. Cir. 2016) (holding that "even assuming" that a particular claimed feature was novel does not "avoid the problem of abstractness").

The Federal Circuit held in *BASCOM* that the claimed Internet content filtering, which featured an implementation "versatile enough that it could be adapted to many different users' preferences while also installed remotely in a single location," expressed an inventive concept in "the non-

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[6] *BASCOM Global Internet Servs. v. AT&T Mobility, LLC*, 827 F.3d 1341 (Fed. Cir. 2016).

conventional and non-generic arrangement of known, conventional pieces."
BASCOM, 827 F.3d at 1346, 1350.

Here, Appellants have not shown a non-conventional, non-generic arrangement regarding the generic (known, conventional) processor, memory, and database recited in system (apparatus) independent claim 17.

Therefore, we agree with the Examiner that "[t]he invention in *Bascom* was a technological solution to a technological problem (using an improved filtering technology rather than using conventional filtering technology). Appellants' invention is a business solution to a problem rooted in the abstract idea of optimizing invoice matching through the collection, analysis and calculation of data." Ans. 6. As found by the Examiner, we agree that Appellants' claims do "not involve any improvements to another technology, technical field, or improvements to the functioning of the computer itself as was seen in *Bascom*." *Id*.

Regarding Memorandum (2), and for the reasons which follow, we conclude that Appellants' claims 1, 2, 4, 5, 7, 8, 11–14, 16–18, and 20–24 **do not integrate the judicial exception into a practical application**. *See* MPEP §§ 2106.05(a)-(c) and (e)-(h).

We address these "practical application" MPEP sections seriatim:

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

This section of the MPEP guides: "In determining patent eligibility, examiners should consider whether the claim 'purport(s) to improve the functioning of the computer itself' or 'any other technology or technical field . . . . While improvements were evaluated in *Alice Corp*. as relevant to

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the search for an inventive concept (Step 2B), several decisions of the Federal Circuit have also evaluated this consideration when determining whether a claim was directed to an abstract idea (Step 2A)."

The MPEP instructs: "Thus, an [E]xaminer may evaluate whether a claim contains an improvement to the functioning of a computer or to any other technology or technical field **at Step 2A or Step 2B**, as well as when considering whether the claim has such self-evident eligibility that it qualifies for the streamlined analysis." MPEP § 2106.05(a) (emphasis added).

Appellants appear to argue that the claims on appeal provide an improvement in computer-related technology similar to the subject lip animation claims the *McRO* court held were patent eligible. We have found these arguments unpersuasive for the reasons discussed above.

In reviewing the record, we find the claims on appeal are *silent* regarding specific limitations directed to an *improved* computer system, processor, memory, network, database, or Internet. Therefore, we find Appellants' claimed invention does not provide a solution "necessarily rooted in *computer technology* in order to overcome a problem specifically arising in the realm of computer networks," such as considered by the court in *DDR Holdings LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257 (Fed. Cir. 2014) (emphasis added).

MPEP § 2106.05(b) Particular Machine, and
MPEP § 2106.05(c) Particular Transformation

At the outset, we note that the *Bilski* machine-or-transformation test is only applicable to the method (process) claims on appeal.

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Section 2106.05(c) of the MPEP guides: "Another consideration when determining whether a claim recites significantly more is whether the claim effects a transformation or reduction of a particular article to a different state or thing." "'[T]ransformation and reduction of an article 'to a different state or thing' is the clue to patentability of a process claim that does not include particular machines.'" *Bilski v. Kappos*, 561 U.S. 593, 658 (2010) (quoting *Gottschalk v. Benson*, 409 U.S. 63, 70, 175 (1972)). If such a transformation exists, the claims are likely to be significantly more than any recited judicial exception. *Bilski* emphasizes that although the transformation of an *article* is an important clue, it is not a stand-alone test for eligibility. MPEP § 2106.05(c).

However, regarding any purported transformation of *data* performed by Appellants' claims, our reviewing court guides: "[t]he mere manipulation or reorganization of data, however, does not satisfy the transformation prong." *CyberSource*, 654 F.3d at 1375. Therefore, we conclude Appellants' computer-implemented method claims 13, 14, 16, 21, and 23 fail to satisfy the transformation prong of the *Bilski* machine-or-transformation test. *See* MPEP § 2106.05(c) "Particular Transformation."

Nor do Appellants argue that the method claims on appeal are tied to a particular machine. *See* MPEP § 2106.05(b) "Particular Machine." Arguments not made are waived. *See* 37 C.F.R. § 41.37(c)(1)(iv).

MPEP § 2106.05(e) Other Meaningful Limitations

This section of the MPEP guides:

Diamond v. Diehr provides an example of a claim that recited meaningful limitations beyond generally linking the use of the

> judicial exception to a particular technological environment.
> 450 U.S. 175,209 USPQ 1 (1981). In *Diehr*, the claim was
> directed to the use of the Arrhenius equation (an abstract idea or
> law of nature) in an automated process for operating a rubber-
> molding press. 450 U.S. at 177-78, 209 USPQ at 4. The Court
> evaluated additional elements such as the steps of installing
> rubber in a press, closing the mold, constantly measuring the
> temperature in the mold, and automatically opening the press at
> the proper time, and found them to be meaningful because they
> sufficiently limited the use of the mathematical equation to the
> practical application of molding rubber products. 450 U.S. at
> 184, 187, 209 USPQ at 7, 8. In contrast, the claims in *Alice
> Corp. v. CLS Bank International* did not meaningfully limit the
> abstract idea of mitigating settlement risk. 573 U.S. 134 S. Ct.
> 2347, 110 USPQ2d 1976 (2014). In particular, the Court
> concluded that the additional elements such as the data
> processing system and communications controllers recited in
> the system claims did not meaningfully limit the abstract idea
> because they merely linked the use of the abstract idea to a
> particular technological environment (i.e., "implementation via
> computers") or were well-understood, routine, conventional
> activity.

MPEP § 2106.05(e).

The Examiner concludes that "there are *no meaningful limitations* in the claims that transform the judicial exception into a patent eligible application such that the claims amount to significantly more than the judicial exception itself." Final Act. 15 (emphasis added). In the Appeal and Reply Briefs, Appellants advance no persuasive arguments substantively addressing the Examiner specific legal conclusion. *Id.*

MPEP § 2106.05(f) Mere Instructions To Apply An Exception

For the reasons discussed above, we conclude Appellants' claims invoke generic computer components merely as a tool in which the *computer*

instructions apply the judicial exception (i.e., a fundamental economic practice — "adjusting the current set of invoice matching tolerance parameters to the optimal set of invoice matching tolerance parameters" — claim 1, which we conclude is a certain method of organizing human behavior, i.e., a fundamental economic practice. We again note the preamble of claim 1 is expressly directed to "automatically optimiz[ing] a configurable invoice matching engine," which reinforces our view that the claim considered as a whole is directed to a fundamental economic practice.

MPEP § 2106.05(g) Insignificant Extra-Solution Activity

We conclude that "receiving a set of historical invoice matching data that comprises invoices" (claim 1) is a step of data gathering. Data gathering, as performed by the steps or function in Appellants' claims, is a classic example of insignificant extra-solution activity. *See, e.g., In re Bilski*, 545 F.3d 943, 963 (Fed. Cir. 2008) (en banc), *aff'd sub nom, Bilski v. Kappos*, 561 U.S. 593 (2010).

The Supreme Court guides that 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 610–11 (quoting *Diehr*, 450 U.S. at 191–92). On this record, we are of the view that Appellants' claims do not operate the recited generic computer components in an unconventional manner to achieve an improvement in computer functionality.

Further regarding the use of the recited generic computer, processor(s) and database, 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*, at 223. Our reviewing court provides additional guidance: *See FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1096 (Fed. Cir. 2016) ("[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., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1363 (Fed. Cir. 2015) (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]'" by either requiring conventional computer activities or routine data-gathering steps (internal citation omitted)); *see also 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." (quoting *buySAFE, Inc. v. Google, Inc.*, 765 F.3d at 1355))); *Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1341 (Fed. Cir. 2017) ("Rather, the claims recite both a generic computer element—a processor—and a series of generic computer 'components' that merely restate their individual functions . . . . That is to say, they merely describe the functions of the abstract idea itself, without particularity. This is simply not enough under step two.").

MPEP § 2106.05(h) Field of Use and Technological Environment

Appellants submit that the claims recite a particular way to achieve a desired outcome, i.e., automatically optimizing a configurable invoice

matching engine, that clearly does <u>not</u> preempt other approaches that use

different parameters or different techniques. App. Br. 17–18.

In response, the Examiner further explains the basis for the rejection:

preemption is not a stand-alone test. Preemption concerns have
been addressed by the [E]xaminer through the application of the
two-step framework. Appellant's attempt to argue alternative
uses of the abstract idea outside the scope of the claims does
not change the conclusion that the claims are directed to patent
ineligible subject matter. Similarly, Appellant's attempt to show
that the recited abstract idea is a very narrow and specific one is
not persuasive. A specific abstract idea is still an abstract idea
and is not eligible for patent protection without significantly
more elements recited in the claim.

Ans. 4.

We find Appellants' contentions (App. Br. 17–18) unavailing

because: "[T]he Supreme Court has stated that, even if a claim does not

wholly preempt an abstract idea, it still will not be limited meaningfully if it

contains only insignificant or token pre- or post-solution activity—such as

identifying a relevant audience, a category of use, field of use, or

technological environment." *Ultramercial Inc. v. Hulu LLC*, 722 F.3d 1335,

1346 (Fed. Cir. 2013) (citations omitted) (emphasis added).

For at least the aforementioned reasons, we are not persuaded the

Examiner erred in concluding that each of claims 1, 2, 4, 5, 7, 8, 11–14,

16–18, and 20–24 on appeal is **directed at least to the abstract idea of**

"optimizing invoice matching" which is considered to be a method of

organizing human activity that we conclude is **a fundamental economic**

practice, that could additionally be performed as mental steps.[7] *See* Final Act. 5.

Accordingly, for the reasons discussed above, we conclude Appellants' **claims do not include additional elements that integrate the judicial exception into a practical application** (*see* MPEP §§ 2106.05(a)–(c), (e)–(h), as discussed above).

Only if a claim (1) recites a judicial exception, and (2) does not integrate that exception into a practical application, do we then look (Memorandum (3)) 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**

Memorandum (4), simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.

The Examiner finds:

the elements involved in the recited process undertake their roles in performance of their activities according to their generic functionalities which are *well-understood, routine and*

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[7] Our reviewing court guides: "a method that can be performed by human thought alone is merely an abstract idea and is not patent-eligible under § 101." *CyberSource*, 654 F.3d at 1373. *See also Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1146–47 (Fed. Cir. 2016) ("While the Supreme Court has altered the § 101 analysis since *CyberSource* in cases like *Mayo* and *Alice*, we continue to 'treat[] 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.'" (brackets in original) (quoting *Elec. Power Grp. LLC v. Alstom S.A.*, 830 F.3d 1350, 1354 (Fed. Cir. 2016)).

> *conventional*. The elements together execute in routinely and
> conventionally accepted coordinated manners and interact with
> their partner elements to achieve an overall outcome which,
> similarly, is merely the combined and coordinated execution of
> generic computer functionalities which are *well-understood,*
> *routine and conventional activities previously known to the*
> *industry.*[8]

Final Act. 10–11 (emphasis added).

We note the Examiner provides in the record a list of computer functions and a corresponding list of case authorities to support the findings that the listed generic computer functions are well-understood, routine, and convention (WURC) functions. Final Act. 11–14. We also note the Examiner's Final Action (Oct. 31, 2016) was mailed before *Berkheimer v. HP Inc.* (881 F.3d 1360 (Fed. Cir. 2018)) was decided on February 8, 2018.

Nevertheless, we find the Examiner presciently provided factual evidence that complies with the USPTO April 19, 2018 *Berkheimer* Memorandum, entitled "'Changes in Examination Procedure Pertaining to Subject Matter Eligibility, Recent Subject Matter Eligibility Decision (*Berkheimer v. HP, Inc.*)'" ("USPTO *Berkheimer* Memorandum").

See Berkheimer fact type 2: "A citation to one or more of the court decisions discussed in MPEP § 2106.05(d)(II) as noting the well-understood, routine, conventional nature of the additional element(s)." USPTO *Berkheimer* Memorandum 4.

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[8] The patent eligibility inquiry may contain underlying issues of fact. *Mortg. Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d 1314, 1325 (Fed. Cir. 2016). In particular, "[t]he question of whether a claim element or combination of elements is well-understood, routine and conventional to a skilled artisan in the relevant field is a question of fact." *Berkheimer*, 881 F.3d at 1368.

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Moreover, Appellants' Specification (¶ 15) describes the use of generic computer components:

> Processor 22 may be *any type of general* or specific purpose processor. System 10 further includes a memory 14 for storing information and instructions to be executed by processor 22. Memory 14 can be comprised of *any combination* of random access memory ("RAM"), read only memory ("ROM"), static storage such as a magnetic or optical disk, *or any other type* of machine or computer-readable medium. System 10 further includes a communication device 20, such as a network interface card or other communications interface, to provide access to a network. As a result, a user may interface with system 10 directly, or remotely through a network *or any other method.*

Spec. ¶ 15 (emphasis added).

Appellants have not substantively and persuasively traversed the Examiner's findings in the Appeal Brief or in the Reply Brief. In reviewing the record, we recognize that Appellants did not have the opportunity to argue *Berkheimer* in support of their appeal, until after *Berkheimer* was decided by the Federal Circuit on February 8, 2018, which occurred over five months after the Reply Brief was filed on August 16, 2017. Because *Berkheimer* (881 F.3d at 1369) and the USPTO *Berkheimer* Memorandum are intervening authorities, we note that Appellants will be permitted to argue any new issues related to *Berkheimer* in a Request for Rehearing, under our procedural rule. *See* 37 C.F.R. § 41.52(a)(2)("Appellant may present a new argument based upon a recent relevant decision of either the Board or a Federal Court.").

However, on the record before us, Appellants have not shown that the claims on appeal add a specific limitation beyond the judicial exception that

is not "well-understood, routine, conventional" in the field (*see* MPEP § 2106.05(d)).

In light of the foregoing, we conclude, under the USPTO Revised 101 Guidance (Memorandum), that each of Appellants' claims 1, 2, 4, 5, 7, 8, 11–14, 16–18, and 20–24, considered as a whole, is directed to *a patent-ineligible abstract idea* that is *not integrated into a practical application*.

Accordingly, for the reasons discussed above, we sustain the Examiner's rejection under 35 U.S.C. § 101 of claims 1, 2, 4, 5, 7, 8, 11–14, 16–18, and 20–24.[9]

Reply Brief

To the extent Appellants *may* advance new arguments in the Reply Brief not in response to a shift in the Examiner's position in the Answer, we note arguments raised in a Reply Brief that were not raised in the Appeal Brief or are not responsive to arguments raised in the Examiner's Answer will not be considered except for good cause. *See* 37 C.F.R. § 41.41(b)(2).

CONCLUSION

The Examiner did not err in rejecting claims 1, 2, 4, 5, 7, 8, 11–14, 16–18, and 20–24 under 35 U.S.C. § 101, as being directed to a judicial exception, without significantly more.

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[9] To the extent Appellants have 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).

DECISION

We affirm the Examiner's decision rejecting claims 1, 2, 4, 5, 7, 8, 11–14, 16–18, and 20–24 under 35 U.S.C. § 101.

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).

<u>AFFIRMED</u>