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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* JAMES GELSIN MARX

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Appeal 2018-003950  
Application 14/231,348  
Technology Center 3600

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Before ST. JOHN COURTENAY III, JASON J. CHUNG, and  
MATHEW J. McNEILL, *Administrative Patent Judges*.

COURTENAY, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134(a) from a final rejection of claims 1–20, which are all the claims pending in this application.<sup>1</sup> We have jurisdiction over the pending claims under 35 U.S.C. § 6(b).

We affirm.

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<sup>1</sup> The real party in interest is appeal is James Gelsin Marx. App. Br. 4.

## STATEMENT OF THE CASE <sup>2</sup>

### *Introduction*

Appellant’s claimed invention generally relates “to workflows and, more particularly, to training or quality improvement systems for workflows.” Spec. ¶ 1.

### *Rejection*

Claims 1–20 are rejected under 35 U.S.C. § 101, as being directed to a judicial exception, without significantly more.

## ANALYSIS

We reproduce representative independent claim 1 in Table One, *infra*. 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).

### *Rejection of Claims 1–20 under 35 U.S.C. § 101*

**Issue**: Under 35 U.S.C. § 101, did the Examiner err by rejecting claims 1–20 as being directed to a judicial exception, without significantly more?

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<sup>2</sup> We herein refer to the Final Office Action, mailed Oct. 21, 2016 (“Final Act.”); Appeal Brief, filed Aug. 16, 2017 (“App. Br.”); Examiner’s Answer, mailed Dec. 19, 2017 (“Ans.”), and the Reply Brief, filed Feb. 20, 2018 (“Reply Br.”).

*Principles of Law — 35 U.S.C. § 101*

An invention is patent-eligible if it claims a “new and useful process, machine, manufacture, or composition of matter.” 35 U.S.C. § 101. However, the Supreme Court has long interpreted 35 U.S.C. § 101 to include implicit exceptions: “[L]aws of nature, natural phenomena, and abstract ideas’ are not patentable.” *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 70 (2012) (quoting *Diamond v. Diehr*, 450 U.S. 175, 185 (1981)).

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 Corp. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208, 217–18 (2014) (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.” (emphasis omitted)); *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” (*Diehr*, 450 U.S. at 193); “tanning, dyeing, making water-proof cloth, vulcanizing India rubber, smelting ores”

(*id.* at 182 n.7 (quoting *Corning v. Burden*, 56 U.S. (15 How.) 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.* (alterations in original) (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.*

*Subject Matter Eligibility — 2019 Revised Guidance*

The USPTO recently published revised guidance on the application of 35 U.S.C. § 101. *See* 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) (“2019 Revised Guidance”). *This new guidance is applied in this Opinion.* Under the 2019 Revised 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);<sup>3</sup> 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)).<sup>4, 5</sup>

*See* 2019 Revised Guidance, 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. *See* 2019

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<sup>3</sup> Referred to as “*Step 2A, Prong One*” in the Revised Guidance (hereinafter “*Step 2A, prong 1*”).

<sup>4</sup> Referred to as “*Step 2A, Prong Two*” in the Revised Guidance (hereinafter “*Step 2A, prong 2*”).

<sup>5</sup> All references to the MPEP are to the Ninth Edition, Revision 08.2017 (rev. Jan. 2018).

Revised Guidance, 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 35 U.S.C. § 101. *Id.*

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. *See* 2019 Revised Guidance, 84 Fed. Reg. at 56; *Alice*, 573 U.S. at 217–18.

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.

<sup>6</sup>

*See* 2019 Revised Guidance, 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, 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

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<sup>6</sup> Items (3) and (4) continue to be collectively referred to as “*Step 2B*” of the Supreme Court’s two-step framework, described in *Mayo* and *Alice*.

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).

*See* 2019 Revised Guidance, 84 Fed. Reg. at 52.

According to the 2019 Revised Guidance, “[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 Revised Guidance, 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 Revised Guidance, 84 Fed. Reg. at 54–55 (“Prong Two”).

*2019 Revised Guidance, Step 2A, Prong One<sup>7</sup>*  
*The Judicial Exception*

Under the 2019 Revised Guidance, 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.

We note the Examiner concludes claims 1–20 recite:

the abstract idea of comparing new and stored information and using rules to identify options. While the claims may not explicitly recite the abstract idea of comparing new and stored information and using rules to identify options, the concept of “comparing new and stored information and

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<sup>7</sup> 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).

using rules to identify options” is described, for example, by the receiving, parsing, detecting, ranking, generating, receiving, parsing, detecting, ranking, generating and determining steps as recited in the language of independent [c]laim 1.

Final Act. 3.

TABLE ONE

In the table below, we identify in *italics* the specific claim limitations that we conclude recite an abstract idea. We additionally identify in **bold** the additional (non-abstract) claim limitations that are generic computer components:

<b>Independent Claim 1</b>	<b>Revised 2019 Guidance</b>
<p>[a] A computer-implemented method for processing data generated <b>by inspection systems</b>, workflow data comprising training for users of a method, data analysis, performance analysis, data mining, or quality control systems for the workflow data, <b>the inspection systems including a plurality of inspection devices</b> comprising image modalities, each modality generating unscreened data comprising one or more patient medical image files, the method comprising:</p>	<p>A process (method) is a statutory subject matter class. <i>See</i> 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.”).</p> <p>The “inspection systems” and “plurality of inspection devices” are additional non-abstract limitations.</p>
<p>[b] with <b>a computer system comprising one or more computing devices, the</b></p>	<p>A machine (i.e., a computer system and associated computing devices) is a statutory subject matter class, and</p>

<p><b>computing devices</b> comprising:</p>	<p>an additional non-abstract limitation here. <i>See</i> 35 U.S.C. § 101.</p>
<p>[c] <b>at least one inspection device</b> comprising a plurality of image modalities each modality generating unscreened data comprising one or more patient medical image files;</p>	<p>“at least one inspection device” is an additional non-abstract limitation.</p>
<p>[d] <b>an unscreened data coordinator, comprising a computer system and a database</b> for storing information about the unscreened data, <b>the unscreened data coordinator</b> generating, by <b>the computer system</b>, a workflow;</p>	<p>“an unscreened data coordinator, comprising a computer system and a database” are additional non-abstract limitations.</p> <p>“storing information” is insignificant extra-solution activity. 2019 Revised Guidance, 55 n.31; <i>see also</i> MPEP § 2106.05(g).</p>
<p>[e] <b>a server</b> comprising: a distribution module, and a data evaluation module; <b>the server</b> configured to access the workflow of the unscreened data, the workflow comprising a plurality of sets of the unscreened data, each set comprising the one or more patient medical image files;</p>	<p>“a server” is an additional non-abstract limitation.</p> <p>Accessing the workflow is insignificant extra-solution activity. 2019 Revised Guidance, 55 n.31; <i>see also</i> MPEP § 2106.05(g).</p>
<p>[f] the distribution module, comprising <b>a processor</b> configured to execute instructions, configured to access <b>the unscreened data coordinator</b> and distribute the workflow of the</p>	<p>“a processor” is an additional non-abstract limitation, as is the “unscreened data coordinator” and the “one or more workstations.”</p>

<p>unscreened data to <b>one or more workstations each workstation</b>, comprising:</p>	
<p>[g] <b>a display</b> for providing notifications or alerts to a user, and <b>a user input device</b>, the user comprising an interpreter of the unscreened data, the user providing interpretative data to <b>the workstation</b> via <b>the user input device</b>;</p>	<p>The display, user input device, and the workstation are each an additional non-abstract limitation.</p> <p>We construe the user (person) as the interpreter, as per limitation [g] above: “the user comprising an interpreter of the unscreened data.”</p>
<p>[h] the data evaluation module comprising <b>a processor</b> configured to execute instructions to carry out the method, comprising:</p>	<p>“a processor” is an additional non-abstract limitation.<sup>8</sup></p>
<p>[i] storing a plurality of keywords that are commonly literally found in the textual characterization within the interpretation data in <b>a first database</b>, the keywords associated with the one or more patient medical image files;</p>	<p>“storing” is insignificant extra-resolution activity. 2019 Revised Guidance, 55 n.31; <i>see also</i> MPEP § 2106.05(g).</p> <p>“a first database” is an additional non-abstract limitation.</p>
<p>[j] <i>associating</i> each keyword with an interpretation score or</p>	<p>Abstract idea, i.e., <i>associating</i> could be performed alternatively as a</p>

<sup>8</sup> Because “a processor” is introduced twice (in limitation [f] and limitation [h]) in claim 1, in the event of further prosecution of this application, we leave it to the Examiner to consider a rejection of claim 1 under 35 U.S.C. § 112(b). 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.

<p>rank, wherein the interpretation score or rank is indicative of a degree of richness of the structures or findings, the degree of richness reflecting a degree of seriousness, abnormality, rarity, and/or difficulty of characterization;</p>	<p>mental process. <i>See</i> 2019 Rev. Guid. 52.</p>
<p>[k] storing a plurality of keywords that are commonly literally found in the textual characterization within requisition data in <b>a second database</b>, the keywords associated with the one or more patient medical image files;</p>	<p>“storing” is insignificant extra-solution activity. 2019 Revised Guidance, 55 n.31; <i>see also</i> MPEP § 2106.05(g).</p> <p>“a second database” is an additional non-abstract limitation.</p>
<p>[l] <i>associating</i> each keyword in <b>the second database</b> with a requisition score or rank, wherein the requisition score or rank is indicative of a criticality of the requisition data;</p>	<p>Abstract idea, i.e., “<i>associating</i>” could be performed alternatively as a mental process. <i>See</i> 2019 Rev. Guid. 52.</p>
<p>[m] receiving an electronic requisition comprising an order for an interpreter to interpret one or more files;</p>	<p>“receiving” is insignificant extra-solution activity, i.e., data gathering. 2019 Revised Guidance, 55 n.31; <i>see also</i> MPEP § 2106.05(g).</p> <p>We construe the interpreter as the user (person), as per limitation [g] above: “the user comprising an interpreter of the unscreened data.”</p>

<p>[n] parsing the electronic requisition to identify requisition words in the requisition;</p>	<p>“parsing” is insignificant extra-solution activity. 2019 Revised Guidance, 55 n.31; <i>see also</i> MPEP § 2106.05(g).</p>
<p>[o] accessing the stored keywords and associated requisition scores or ranks in <b>the second database</b>;</p>	<p>“accessing” is insignificant extra-solution activity. 2019 Revised Guidance, 55 n.31; <i>see also</i> MPEP § 2106.05(g).           “a second database” is an additional non-abstract limitation.</p>
<p>[p] <i>comparing</i> the parsed electronic requisition with the requisition keywords;</p>	<p>Abstract idea, i.e., “<i>comparing</i>” could be performed alternatively as a mental process. <i>See</i> 2019 Rev. Guid. 52.</p>
<p>[q] <i>applying a numerical ranking algorithm to the interpretation data</i> based at least on <i>a comparison</i> of the parsed keywords and the associated requisition scores or ranks, such that an aggregated requisition numerical rank is assigned to the set of the one or more patient medical image files;</p>	<p>Abstract idea, i.e., “<i>applying a numerical ranking algorithm to the interpretation data</i>” and “<i>comparing</i>” could be performed alternatively as a mental process. <i>See</i> 2019 Rev. Guid. 52.</p>
<p>[r] <i>generating</i> a cumulative requisition rank or score based on the rank(s) or score(s) of the requisition word(s) or variant(s);</p>	<p>Abstract idea, i.e., <i>generating</i> could be performed alternatively as a mental process. <i>See</i> 2019 Rev. Guid. 52.</p>
<p>[s] receiving an electronic interpretation generated by the interpreter, the electronic interpretation comprising</p>	<p>The user (person) is the interpreter          “receiving” is insignificant extra-solution activity and includes data</p>

<p>interpretation data based on the one or more files;</p>	<p>gathering. 2019 Revised Guidance, 55 n.31; <i>see also</i> MPEP § 2106.05(g).</p>
<p>[t] parsing the electronic interpretation to identify interpretation words in the interpretation;</p>	<p>“parsing” is insignificant extra-solution activity. 2019 Revised Guidance, 55 n.31; <i>see also</i> MPEP § 2106.05(g).</p>
<p>[u] accessing the stored keywords and associated interpretation scores or ranks in the first database;</p>	<p>“accessing” is insignificant extra-solution activity and includes data gathering. 2019 Revised Guidance, 55 n.31; <i>see also</i> MPEP § 2106.05(g).</p>
<p>[v] <i>comparing</i> the parsed electronic interpretation with the interpretation keywords;</p>	<p>Abstract idea, i.e., “<i>comparing</i>” could be performed alternatively as a mental process. <i>See</i> 2019 Rev. Guid. 52.</p>
<p>[w] <i>applying a numerical ranking algorithm to the interpretation data</i> based at least on a <i>comparison</i> of the parsed keywords and the associated interpretation scores or ranks, such that an aggregated interpretation numerical rank is assigned to the set of the one or more patient medical image files;</p>	<p>Abstract idea, i.e., “<i>applying a numerical ranking algorithm to the interpretation data</i>” and “<i>comparing</i>” could be performed alternatively as a mental process. <i>See</i> 2019 Rev. Guid. 52.</p>
<p>[x] <i>generating a cumulative interpretation rank or score</i> based on the rank( s) or score( s) of the interpretation word( s) or variant(s);</p>	<p>Abstract idea, i.e., “<i>generating a cumulative interpretation rank or score</i>” could be performed alternatively as a mental process. <i>See</i> 2019 Rev. Guid. 52.</p>

<p>[y] <i>determining</i> whether the cumulative interpretation rank or score meets a threshold of the cumulative requisition rank or score; and</p>	<p>Abstract idea, i.e., “<i>determining</i>” could be performed alternatively as a mental process. <i>See</i> 2019 Rev. Guid. 52.</p>
<p>[z] if the cumulative interpretation rank or score meets a threshold of the cumulative requisition rank or score, automatically adjust,<sup>9</sup> by the unscreened coordinator, the workflow of the inspection systems by halting the inspection or adjusting a rate of inspection from the imaging modalities.</p>	<p>Abstract idea, i.e., “<i>automating</i>” could be performed alternatively as a mental process. <i>See</i> 2019 Rev. Guid. 52.</p>

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<sup>9</sup> “Automation” or any increase in processing speed in the claimed method (as compared to without using computers) comes from the capabilities of the generic computer components, and not the recited process itself. *See FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1095 (Fed. Cir. 2016) (citing *Bancorp Servs., LLC v. Sun Life Assurance Co.*, 687 F.3d 1266, 1278 (Fed. Cir. 2012) (“[T]he fact that the required calculations could be performed more efficiently via a computer does not materially alter the patent eligibility of the claimed subject matter.”)); *see also Intellectual Ventures I LLC v. Erie Indemnity Co.*, 711 F. App'x 1012, 1017 (Fed. Cir. 2017) (unpublished) (“Though the claims purport to accelerate the process of finding errant files and to reduce error, we have held that speed and accuracy increases stemming from the ordinary capabilities of a general-purpose computer ‘do[ ] not materially alter the patent eligibility of the claimed subject matter.’”).

*Abstract Ideas — Mental Processes*

We conclude the *italicized* abstract idea steps identified above in Table One could be performed alternatively as mental processes under the Revised Guidance. *See* Claim 1. *See* 2019 Revised Guidance, 84 Fed. Reg. at 52.

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. *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*, 687 F.3d at 1279; *see also OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1363 (Fed. Cir. 2015) (“relying on a computer to perform routine tasks more quickly or more accurately is insufficient to render a claim patent eligible.”).

*Additional Limitations*

As emphasized in **bold** *supra*, we note the additional non-abstract limitations of generic computer components. *See* 2019 Revised Guidance, 84 Fed. Reg. at 52. We also note the supporting description of generic computer and network components in the Specification, for example:

In other embodiments, the computer can be any suitable device that allows the interpreter to interact with the system, by way of example, a personal digital assistant, a smart phone, an

electronic scanner, a computer workstation, a local area network of individual computers, an interactive wireless communications device, an interactive television, a transponder, or the like.

Spec. ¶ 51.

We emphasize that *McRO, Inc. v. Bandai Namco Games America 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).

Remaining independent claims 10 and 17 recite similar language of commensurate scope that we conclude also falls into the same abstract idea category of mental processes, as mapped above for independent claim 1. *See supra* Table One. Because we conclude all claims on appeal recite an abstract idea, as identified above, under *Step 2A, Prong One*, we proceed to *Step 2A, Prong Two*.

*2019 Revised Guidance, Step 2A, Prong Two*

*Integration of the Judicial Exception into a Practical Application*

Pursuant to the 2019 Revised Guidance, we consider whether there are additional elements set forth in the claims that integrate the judicial exception into a practical application. *See* 2019 Revised Guidance, 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*

*McRO*

Appellant contends his claimed “system is highly analogous to the claims in *McRo*.” App. Br. 34. In support, Appellant contends:

In this case, to the best of our knowledge, the use of a requisition score or rank and a corresponding threshold, as compared to each interpretation score or rank, has never been performed by a human or a computer. Thus, the computer-related technology of inspection systems has been greatly improved by the rules claimed in the present claims.

*Id.*

We find Appellant’s argument based upon *McRO* unavailing because we conclude Appellant’s computer-implemented method, system, or medium is unlike the subject claim(s) considered by the court in *McRO*.<sup>10</sup> *See* independent claims 1, 10, and 17.

The patent at issue in *McRO* describes that prior character animation and lip synchronization were accomplished by human animators, with the assistance of a computer, which involved the use of a so-called “keyframe” approach in which animators set appropriate parameters, i.e., morph weights, at certain important times, i.e., in order to produce accurate and realistic lip synchronization and facial expressions. *McRO*, 837 F.3d at 1305. Animators knew what phoneme a character pronounced at a given time from a time-aligned phonetic transcription (a “timed transcript”). *Id.*

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<sup>10</sup> Appellant is referring to *McRO, Inc. v. Bandai Namco Games America Inc.*, 837 F.3d 1299 (Fed. Cir. 2016).

In accordance with the prior technique, animators, using a computer, manually determined the appropriate morph weight sets for each keyframe based on the phoneme timings in the timed transcript. *Id. See also SAP Am. v. InvestPic, LLC*, 898 F.3d 1161, 1167 (Fed. Cir. 2018) (distinguishing *McRO*):

The claims in *McRO* were directed to the creation of something physical—namely, the display of “lip synchronization and facial expressions” of animated characters on screens for viewing by human eyes. *Id.* at 1313. *The claimed improvement was to how the physical display operated (to produce better quality images)*, unlike (what is present here) a claimed improvement in a mathematical technique with no improved display mechanism. The claims in *McRO* thus were not abstract in the sense that is dispositive here. And those claims also avoided being “abstract” in another sense reflected repeatedly in our cases (based on a contrast not with “physical” but with “concrete”): they had the specificity required to transform a claim from one claiming only a result to one claiming a way of achieving it.

*SAP*, 898 F.3d at 1167 (emphasis added).

In contrast to the claimed invention in *McRO* that *improved how a physical display operated to produce better quality images (id.)*, claim 1 merely uses a generic computer components to perform the recited steps that result in the final step of “automatically adjust[ing], by the unscreened coordinator, the workflow of the inspection systems by halting the inspection or adjusting a rate of inspection from the imaging modalities” if “if the cumulative interpretation rank or score meets a threshold of the cumulative requisition rank or score.”

Thus, Appellant’s claims on appeal do not *improve the operation of a physical display*, as was the case in *McRO*, nor the operation of any other computer component, such as the generic computer components recited in

claim 1. *See SAP*, 898 F.3d at 1167. Moreover, we conclude Appellant’s generic computer implementation in claim 1 performs steps that can be performed alternatively as mental processes, as discussed above.

*Thales*

Appellant argues “the present claims represent an improvement to another technical field, namely, the field of medical image workflow inspection systems.” App. Br. 46. Appellant cites *Thales* in support. *Id.*

The subject claims in *Thales* were found eligible at *Alice* step one, as not being directed to an abstract idea. The claims were directed to a “particular configuration of inertial sensors and a particular method of using the raw data from the sensors,” which improved the accuracy of calculating an object’s position and orientation. *Thales Visionix, Inc. v. United States*, 850 F.3d 1343, 1349 (Fed. Cir. 2017), *cited in* MPEP § 2106.05(a)(II)(vii). Although the claims recited mathematical equations, the Federal Circuit in *Thales* explained that “[t]he mathematical equations are a consequence of the arrangement of the sensors and the unconventional choice of reference frame in order to calculate position and orientation.” *Id.* The claimed system eliminated “many ‘complications’ inherent in previous solutions” for determining an object’s position and orientation. *Id.* at 1348.

Here, Appellant’s claims are distinguishable from *Thales*, because the claims on appeal are *silent* regarding any use or configuration of sensors, much less any recited mathematical equations. We conclude *Thales* is inapposite particularly because the *Thales* court expressly stated: “We have held claims ineligible as directed to an abstract idea when they merely collect electronic information, display information, or embody mental

processes that could be performed by humans.” *Id.* at 1346–47. As noted above in Table One, we conclude Appellant’s claims gather or collect information (data), display information, and perform steps or functions that could be performed alternatively as mental processes by humans.

Appellant’s claims are thus not analogous to the subject claims in *Thales* that specified “a particular configuration of inertial sensors and a particular method of using the raw data from the sensors in order to more accurately calculate the position and orientation of an object on a moving platform.” *Thales*, 850 F.3d at 1349.

#### *DDR Holdings*

Appellant urges that the claims on appeal are necessarily rooted in technology. App. Br. 51. In support, Appellant contends:

Similar to the claims in *DDR Holdings*, the claims here recite features that are not merely the performance of some business practice known from the pre-computer technology world along with the requirement to perform it using computer technology. Indeed, the claims do not recite a business practice at all. Rather, the claims are necessarily rooted in medical image workflow inspection technology.

App. Br. 51.

We disagree. We do not conclude that Appellant’s claims involve eligible subject matter, as was found by the court in *DDR Holdings, LLC v. Hotels.Com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014). *See* App. Br. 51.

Instead of a computer network operating in its normal, expected manner by sending a website visitor to a third-party website via a clicked advertisement, the claimed invention in *DDR* generated and directed the visitor to a hybrid page that presented: (1) product information from the

third party, and (2) the visual “look and feel” elements from the host website, thus retaining the visitor at the original website. *DDR*, 773 F.3d at 1258–59. Given this particular Internet-based solution, the court held that the claimed invention did not merely use the Internet to perform a business practice known from the pre-Internet world, but rather was necessarily rooted in computer technology to overcome a problem specifically arising in computer networks. *Id.* at 1257.

That is not the case here. Although Appellant’s claimed invention results in the final step of final step of “automatically adjust[ing], by the unscreened coordinator, the workflow of the inspection systems by halting the inspection or adjusting a rate of inspection from the imaging modalities” “if the cumulative interpretation rank or score meets a threshold of the cumulative requisition rank or score,” we find this conditional step could be performed alternatively as a mental process.

We additionally note that an improved abstract idea is still an abstract idea. *See Mayo*, 566 U.S. at 90 (holding that a novel and nonobvious claim directed to a purely abstract idea is, nonetheless patent-ineligible). Therefore, it is our view that Appellant’s claimed invention is not rooted in computer technology in the sense contemplated by *DDR*, in which the claimed invention solved a challenge particular to the Internet.

*Research Corp. Technologies*

Nor do we find Appellant’s claims analogous to the method for the halftoning of gray scale images, as considered by the court in *Research Corp. Technologies, Inc. v. Microsoft Corp.*, 627 F.3d 859 (Fed. Cir. 2010). Appellant’s claims do not involve: “generating a blue noise mask which,

when thresholded at any gray level  $g$ , produces a blue noise binary pattern appropriate for that gray level.” *Id.* at 872.

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

*MPEP §§ 2106.05(b) and (c)*  
*The Bilski Machine-or-Transformation test (“MoT”)*  
*as applied to method claims 41 and 42*

At the outset, we note the Supreme Court cautions that the *MoT* test is not the sole test, but may provide a useful clue:

This Court’s precedents establish that the machine-or-transformation test is a useful and important clue, an investigative tool, for determining whether some claimed inventions are processes under § 101. The machine-or-transformation test **is not the sole test** for deciding whether an invention is a patent-eligible “process.”

*Bilski*, 561 U.S. at 604 (emphasis added).

Because generic computer components are recited in computer-implemented method claim 1, we conclude method claims 1–9 do not define or rely upon a “particular machine.” *See* MPEP § 2106.05(b). Further, we conclude method claims 1–9 do not transform an article to a different state or thing. *See* MPEP § 2106.05(c).

We note Appellant advances no arguments regarding the *Bilski* Machine-or-Transformation test.

*MPEP § 2106.05(e) — Meaningful Claim Limitations*<sup>11</sup>

The Examiner finds:

The claim recites one or more computing devices, at least one inspection device, a plurality of image modalities, a server, a distribution module, a data evaluation module, a display, a user input device, a processor, a first database and a second database, which do NOT add **meaningful limitations** to the idea of comparing new and stored information and using rules to identify options beyond generally linking the method to a particular technological environment, that is, implementation via computers.

Final Act. 5. (emphasis added).

*Diehr*

Appellant disagrees with the Examiner. *Id.* As noted by Appellant, in *Diamond v. Diehr* (450 U.S. 175 (1981)), the claimed invention “related to a process of controlling a rubber molding press with a computer to precisely shape uncured material under heat and pressure and then cure the synthetic rubber in the mold to obtain a product that retains its shape.” App. Br. 44.

Appellant notes:

At the time of the invention, the usual way of operating a rubber molding process is for the operator to load and close the press manually. Closure of the press operates a timer that is preset for an estimated cure time. Due to the manual operation, the actual mold temperature may vary, and result in over cured or under cured rubber because the preset time is not equivalent to the actual time required for proper curing.

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<sup>11</sup> MPEP § 2106.05(e): “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.” (emphasis added).

App. Br. 44–45.

Appellant argues the invention on appeal is analogous to *Diehr*:

In this regard, the present case is highly analogous. Prior to the present claimed invention, to the best of Applicant's knowledge, interpreters using a workflow inspection system were either on their own to determine accuracy or subject to a manual operator of the system. No automation, computer or otherwise, for determining or monitoring accuracy was available.

App. Br. 45.

However, we do not find Appellant's claims encompass concepts similar to those determined to be patent eligible as in *Diehr* — i.e., physical and chemical processes, such as “molding rubber products” *Diehr*, 450 U.S. at 191. Therefore, we find Appellant's arguments unavailing.

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

*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*

The Examiner finds: “the claims in conjunction with the abstract idea per se amounts to no more than mere instructions to implement the idea on a computer, and/or the recitation of generic computer structure that serves to perform generic computer functions.” Final Act. 3.

Without more, we agree with the Examiner that Appellant's claimed

invention merely implements the abstract idea using generic computer components, as depicted in **bold** type in Table One, *supra*. See Claim 1.

*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 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 post solution activity.’” *Bilski v. Kappos*, 130 S. Ct. 3218 (2010), (quoting *Diamond v. Diehr*, 450 U.S. 175, 191–92 (1981)).

Appellant contends: “The highly specific claims here do not preempt any ‘building blocks of human ingenuity.’ *Alice*, 134 S. Ct. at 2354. They certainly do not preempt medical image workflow inspection systems.” App. Br. 42.

However, we note that preemption is not the sole test for patent eligibility. As our reviewing court has explained, “questions on preemption are inherent in and resolved by the § 101 analysis,” and, although

“preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility.” *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015); *cf. OIP Techs*, 788 F.3d at 1362–63 (“[T]hat the claims do not preempt all price optimization or may be limited to price optimization in the e-commerce setting do not make them any less abstract.”).

Nor do claims 1–20 on appeal present any other issues as set forth in the 2019 Revised Guidance regarding a determination of whether the additional generic elements integrate the judicial exception into a practical application. *See Revised Guidance*, 84 Fed. Reg. at 55.

Thus, under *Step 2A, Prong Two* (MPEP §§ 2106.05(a)–(c) and (e)–(h)), we conclude claims 1–20 **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 Revised Guidance, 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.

*BASCOM*<sup>12</sup>

Appellant cites to *BASCOM* in support, and urge:

Similarly, in this case, as illustrated above in the combined Figures 1 and 2, the present claims clearly define a particular arrangement of computer related elements and components. These include the modalities which produce the medical images and an unscreened data coordinator which interacts with a server and a distribution module to control the operation of the workflow inspection system. Thus, as supported by the *Bascom* decision, this claimed arrangement, set forth in detail in the claims, represents "significantly more" than any alleged abstract idea and renders the claims eligible under prong two of the *Alice* test.

App. Br. 52 (emphasis added).

We find Appellant's analogy to *BASCOM* unavailing. *See* App. Br. 52. 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-conventional and non-generic arrangement of known, conventional pieces." *BASCOM*, 827 F.3d at 1350.

Here, Appellant has not shown a non-conventional, non-generic *arrangement* regarding the non-abstract limitations of generic computer components. *See* independent claim 1. *See* 2019 Revised Guidance, 84 Fed. Reg. at 52. Therefore, it is our view that Appellant's claims do not involve any improvements to another technology, technical field, or improvements

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<sup>12</sup> *See BASCOM Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016).

to the functioning of the computer or network, as was seen by the court in *BASCOM*. Instead, we conclude Appellant’s claims 1–20 merely invoke generic computer components as a tool in which the instructions executing on the computer apply the judicial exception.

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

Appellant traverses the Examiner’s finding that certain claim limitations are well-understood, routine, and conventional. Reply Brief 3–4; *see* Final Act. 3, 5. In support, Appellant cites to *Berkheimer* and urge that because “there are no remaining § 102 or 103 rejections based on any prior art. Thus, the record establishes that there is no evidence or factual basis for finding that the claims are well-understood or routine.” Reply Brief 3–4.

However, any analysis based upon anticipation (or obviousness) is not relevant to our analysis for patent eligibility under 35 U.S.C. § 101. Although the second step in the *Alice/Mayo* test is a search for an “inventive concept,” the analysis is not directed to novelty or nonobviousness, but rather searches for elements sufficient to ensure that the claimed invention is directed to more than a patent ineligible concept, such as an abstract idea. *See Alice*, 573 U.S. at 217–18. “Groundbreaking, innovative, or even brilliant discovery does not by itself satisfy the § 101 inquiry.” *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 591 (2013); *see also Diamond v. Diehr*, 450 U.S. 175, 188–89 (1981) (“The ‘novelty’ of any element or steps in a process, or even of the process itself, is of no relevance in determining whether the subject matter of a claim falls within the § 101 categories of possibly patentable subject matter.”); *Affinity Labs of Texas, LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1263 n.3 (Fed. Cir. 2016)

(noting that an eligibility finding does not turn on the novelty of using a user-downloadable application for the particular purpose recited in the claims). Moreover, an improved abstract idea is still an abstract idea. *See Mayo*, 566 U.S. at 90 (holding that a novel and nonobvious claim directed to a purely abstract idea is, nonetheless patent-ineligible). “Generally, a claim that merely describes an ‘effect or result dissociated from any method by which [it] is accomplished’ is not directed to patent-eligible subject matter.” *Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1244 (Fed. Cir. 2016) (citing *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1348 (Fed. Cir. 2015)).

For at least the aforementioned reasons, we find Appellant’s arguments grounded on *Berkheimer* are unpersuasive.

Further, regarding the use of the recited generic computer 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” in the field (*see* MPEP § 2106.05(d)).

In light of the foregoing, we conclude, under the 2019 Revised Guidance, that each of Appellant’s claims 1–20, 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 1–20.<sup>13</sup>

#### CONCLUSION

The Examiner did not err in rejecting claims 1–20 under 35 U.S.C. § 101, as being directed to a judicial exception, without significantly more.

#### DECISION

We affirm the Examiner’s decision rejecting claims 1–20 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).

#### AFFIRMED

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<sup>13</sup> 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).