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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* SUSANNE M. GLISSMANN, ANA LELESCU, and  
IGNACIO G. TERRIZZANO

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Appeal 2018-000350  
Application 13/073,509  
Technology Center 3600

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Before ST. JOHN COURTENAY III, DENISE POTHIER, and  
JASON REPKO, *Administrative Patent Judges*.

COURTENAY, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants<sup>1</sup> appeal under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 1–3, 6–9, 12–15, 18, 19, and 24–27, which constitute all the claims pending in this application. Claims 4, 5, 10, 11, 16, 17, and 20–23 have been cancelled. We have jurisdiction over the pending claims under 35 U.S.C. § 6(b).

We reverse.

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<sup>1</sup> According to Appellants, the real party in interest is International Business Machines Corporation. App. Br. 3.

## STATEMENT OF THE CASE

Embodiments of Appellants' invention relate to "measurement of social media impact on a business. More specifically, the invention relates to text analytics and social media tools and their connection into components of a business architecture." Spec. ¶ 1.

### *Exemplary Claim*

1. A computer implemented method for use with a business architecture of an underlying business, the business architecture documenting and communicating a current situation of the underlying business in order to drive business actions, the method comprising:

selecting, by a processor in communication with memory, an element from a business architecture of an underlying business for evaluation, the business architecture comprising a map having one or more elements associated with one or more respective business metrics, wherein each business metric is a quantifiable component reflecting performance of an element; and

integrating, by the processor, social media data into the business architecture, the integration comprising:

creating a social media metric based on the selected element, wherein the social media metric characterizes one or more attributes of the selected element, and wherein the social media metric is a statistical measure reflecting consumer perception contained within online consumer generated data;

assigning the created social media metric to a business metric;

producing a correlation between the social media metric and the assigned business metric, and converting the produced correlation into a heat map, wherein the heat map is a graphical user interface to visually display a strength of the correlation between the social media metric and the assigned business metric;

analyzing data represented in the heat map, including receiving one or more observations associated with the selected element;

dynamically adjusting the business architecture in response to the analysis, wherein the adjustment includes:

changing a business metric target based on the received observations; and

activating an application and instructing the application for effecting modifications to the business architecture; and

executing, by the application, the modifications to the business architecture.

App. Br. 27 (Claims Appendix) (Contested limitations emphasized).

### *Rejections*

- A. Claims 1–3, 6–9, 12–15, 18, 19, and 24–27 are rejected under 35 U.S.C. § 101, as being directed to a judicial exception, without significantly more. Final Act. 6–9.
- B. Claims 7–9, 12, and 25 are rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter—i.e., a program listing per se and/or a signal per se. Final Act. 3–5.

### *Issues on Appeal*

Did the Examiner err in rejecting claims 1–3, 6–9, 12–15, 18, 19, and 24–27 under 35 U.S.C. § 101, as being directed to a judicial exception, without significantly more?

Did the Examiner err in rejecting claims 7–9, 12, and 25 under 35 U.S.C. § 101, as covering a program listing per se and/or a signal per se?

## 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.

### *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* 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 rubber products” (*Diamond v. Diehr*, 450 U.S. 175, 192 (1981)); “tanning, dyeing, making waterproof cloth, vulcanizing India rubber, smelting ores” (*id.* at 184 n.7 (quoting *Corning v. Burden*, 56 U.S. 252, 267–68 (1854))); and manufacturing flour (*Benson*, 409 U.S. at 69 (citing *Cochrane v. Deener*, 94 U.S. 780, 785 (1876))). In *Diehr*, the claim at issue recited a mathematical formula, but the Supreme Court held that “[a] claim drawn to subject matter otherwise statutory does not become nonstatutory simply because it uses a mathematical formula.” *Diehr*, 450 U.S. at 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)).<sup>2</sup> Memorandum, 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.

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<sup>2</sup> All references to the MPEP are to the Ninth Edition, Revision 08–2017 (rev. Jan. 2018).

Memorandum, 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. *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. Memorandum 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. Memorandum, 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
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), and thus are patent eligible, if “the claim as a whole integrates the recited judicial exception into a practical application of that judicial 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 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* Memorandum, 84 Fed. Reg. at 54–55 (“Prong Two”).

*Rejection A – 35 U.S.C. § 101*

*The Judicial Exception*

The Examiner concludes claims 1–3, 6–9, 12–15, 18, 19, and 24–27 are directed to a judicial exception, because the claims are directed to: “documenting and communicating a current situation of the underlying business in order to drive business actions, which is considered an idea of itself, and is thus an abstract idea.” Final Act. 6.<sup>3</sup>

The Examiner finds the claims do not include additional elements that amount to significantly more than the judicial exception, because:

the claims do not amount to an improvement to another technology or technical field; the claims do not amount to an improvement to the functioning of a computer itself; the claims do not move beyond a general link of the use of an abstract idea to a particular technological environment; the claims merely amount to the application or instructions to apply the abstract idea on a computer; and the claims amount to nothing more than requiring a generic computer to perform generic computer functions that are well-understood, routine and conventional activities previously known to the industry.

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<sup>3</sup> “Patent eligibility under § 101 presents an issue of law.” *Accenture Glob. Servs., GmbH v. Guidewire Software, Inc.*, 728 F.3d 1336, 1340–41 (Fed. Cir. 2013).

Final Act. 6.

For the aforementioned reasons, the Examiner concludes that claims 1–3, 6–9, 12–15, 18, 19, and 24–27 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 1–3, 6–9, 12–15, 18, 19, and 24–27 on appeal is directed to at least *a method of organizing human behavior* that selects and collects business metric data for correlation with social metric data (statistical measures), which are analyzed and displayed in a heat map that may be dynamically adjusted in response to the analysis to effect modifications to the business architecture, which may be performed as mental steps. Final Act. 6. As explained by the Examiner:

Each of these steps amounts to an activity that could be performed manually (e.g., generating an instruction or modification notification with pen and paper) or *mentally* (e.g., selecting, integrating, creating, assigning, producing, analyzing, adjusting, changing, activating, executing) *by a human operator*. Further, the overall thrust of the claim manages activities to determine and execute a modification to the business architecture (i.e., receiving and processing data). Accordingly, the claim is directed to an idea of itself.

Final Act. 8 (emphasis added).

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*.

*Integration of the Judicial Exception into a Practical Application*

Regarding Memorandum (2), and for the reasons which follow, we conclude that Appellants’ claims 1–3, 6–9, 12–15, 18, 19, and 24–27 **do not integrate the judicial exception into a practical application**. See MPEP §§ 2106.05(a)–(c) and (e)–(h). Applying the revised 101 Memorandum guidance, 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 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 examiner 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).

Regarding the purported *improvements* offered by the claimed invention, Appellants contend:

Appellant’s claims are similar in structure to the claims in *McRO*. In *McRO*, “[i]t is the incorporation of the claimed rules, not the use of the computer, that ‘improved [the] existing technological process’ by allowing the automation of further tasks.”<sup>□</sup> Like *McRO*, Appellant’s claims provide a *specific method* (e.g.,] rules) for *improving the existing technology* that does not cover all permutations of performing modification to the business architecture. For instance, operators in the prior art do not rely on Appellant’s social media metric or creation of a heat map. Instead, operators in the prior art rely on subjective determinations which leads to inconsistent and difficult to replicate results.<sup>□</sup> Appellant, instead, improves the existing technology by *automating* modifications to business architecture based on observations derived from a heat map to create consistent and easily to repeat results. Appellant’s claims are directed towards a specific method for automating and *improving modifications* to a business architecture and not just a business architecture modification itself. Therefore, Appellant’s claims are similar to the claims held eligible in *McRO*. Accordingly, Appellant’s claims are not directed to an abstract idea or any other judicial exception.

App. Br. 17–18 (emphasis added).

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

These claims are directed to an abstract idea. The claims merely amount to analyzing data and presenting the analyzed data. The claims do not include additional elements that are sufficient to amount to significantly more than the judicial exception because the claims *do not amount to an improvement* to another technology or technical field; the claims *do not amount to an*

*improvement* to the functioning of a computer itself; the claims do not move beyond a general link of the use of an abstract idea to a particular technological environment; the claims merely amount to the application or instructions to apply the abstract idea on a computer; and the claims amount to nothing more than requiring a generic computer to perform generic computer functions that are well-understood, routine and conventional activities previously known to the industry.

Ans. 7–8 (emphasis added).

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). Br. 14.

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 (comprising generic processors, and storage and memory devices) the concept of selecting and gathering business metrics for correlation with created social metrics (statistical measures), which are analyzed and displayed in a heat map that may be dynamically adjusted in response to the

analysis to effect modifications to the business architecture, which we conclude could be alternatively performed essentially as mental steps, with the aid of pen and paper. *See* independent claim 1, and independent claims 7, 13, and 19, which recite similar language of commensurate scope. *See* Final Act. 8 (mental steps).

Thus, we agree with the Examiner (Final Act. 6; Ans. 8) that Appellants' claims merely implement generic computer components to perform the recited functions. We emphasize that *McRO* also guides that “[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).

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*

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).

Regarding Memorandum (2), we note Appellants advance no arguments in the Briefs that are directed to the *Bilski* machine-or-transformation test, which would only be applicable to the method (process) claims on appeal.

To the extent Appellants may contend that the claims on appeal transform data by converting correlated business and social metrics into data representing a heat map, our reviewing court guides that “[t]he mere manipulation or reorganization of *data*, however, does not satisfy the transformation prong.” *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1375 (Fed. Cir. 2011) (emphasis added). Therefore, we conclude method claim 1 fails 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) (emphasis added).

The Examiner finds “there are *no meaningful limitations* in the claim that transform the exception into a patent eligible application such that the claim amounts to significantly more than the exception itself . . . .” Final Act. 13 (emphasis added).

Appellants advance no arguments in the Appeal Brief or Reply Brief pertaining specifically to purported claimed *meaningful* limitations. Based upon our review of the record, it is our view that Appellants’ claims do not

add *meaningful limitations* beyond generally linking the use of the judicial exception to a particular technological environment.

*MPEP §2106.05(f) Mere Instructions to Apply an Exception*

The Examiner concludes “the claims merely amount to the application of *instructions* to apply the abstract idea on a computer; and the claims amount to nothing more than requiring a generic computer to perform generic computer functions that are well-understood, routine and conventional activities previously known to the industry.” Final Act. 3 (emphasis added).

In the Reply Brief, Appellants respond: “The Examiner appears to be operating under the mistaken understanding that the ability to implement the invention on a generic computer preordains the claim.” Reply Brief 2. In support, Appellants cite to *Enfish, LLC v. Microsoft Corp.* (822 F.3d 1327, 1338 (Fed. Cir. 2016)). Appellants urge:

The Court of Appeals for the Federal Circuit has addressed this specific issue in *Enfish*, stating, “[m]oreover, we are not persuaded that the invention’s ability to run on a general-purpose computer dooms the claims.”<sup>1</sup> Appellant points out that the claims recited in *Enfish* can be executed using generic computing elements. At the same time, the claims in *Enfish* were found to solve a technological problem.

Reply Br. 2.

In response to Appellants’ argument analogizing the claims before us on appeal to the subject claim in *Enfish*, we note the *Enfish* court concluded “the claims at issue in this appeal are not directed to an abstract idea within the meaning of *Alice*. Rather, they are directed to a *specific improvement to*

*the way computers operate*, embodied in the self-referential table.” *Enfish*, 822 F.3d at 1336 (emphasis added).

Thus, the *Enfish* court concluded the self-referential logical table was a specific type of data structure designed to *improve the way a computer stores and retrieves data in memory*. *Id.* at 1339. Because the analysis stops if there is no abstract idea under *Alice* step 1, the *Enfish* court concluded the subject claims were patent eligible. *Id.*

Here, Appellants have not persuasively shown that any features of the claimed invention *improve* the way the recited generic computer components store and retrieve data in a manner analogous to that found by the court in *Enfish*. Moreover, Appellants’ claims 1–3, 6–9, 12–15, 18, 19, and 24–27 are silent regarding any mention of a database, much less a self-referential database table similar to the specific type of logical-table arrangement the *Enfish* court found was designed to improve the way a computer stores and retrieves data in memory. *See Enfish*, 822 F.3d at 1336.

Therefore, we are not persuaded that Appellants’ claimed invention improves the functionality or efficiency of the recited generic computer components, or otherwise changes the way the computer components function, at least in the sense contemplated by the Federal Circuit in *Enfish*.

For the reasons discussed above, we conclude Appellants’ claims 1–3, 6–9, 12–15, 18, 19, and 24–27 invoke generic computer components merely as a tool in which the *computer instructions* apply the judicial exception.

*MPEP § 2106.05(g) Insignificant Extra-Solution Activity*

Appellants advance no specific arguments in the Briefs contending the claims do not recite insignificant extra-solution activity.

However, we conclude the claimed steps or functions which collect business and social media metric data are directed to *data gathering*. Data gathering, as performed by the steps or functions recited 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).

Applying this guidance here, 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, as discussed above.

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

“[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).

Appellants advance no specific arguments in the Briefs contending the claims describe *a field of use* that limits the abstract idea to a particular *technological environment*, such that there is purportedly no preemption.

We note our reviewing court guides: “While 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); *Ultramercial*, 722 F.3d at 1346.

In light of the foregoing, we conclude, under the USPTO Revised 101 Guidance (Memorandum), that each of Appellants’ claims 1–3, 6–9, 12–15, 18, 19, and 24–27, considered as a whole, is **directed to a patent-ineligible abstract idea that is not integrated into a practical application**.

*The Inventive Concept*

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

*Berkheimer* was decided by the Federal Circuit on February 8, 2018. Appellants’ Reply Brief was filed almost four months earlier, on October 10, 2017. We note the PTO issued the memorandum titled “Changes in Examination Procedure Pertaining to Subject Matter Eligibility, Recent Subject Matter Eligibility Decision (*Berkheimer v. HP, Inc.*)” (hereinafter “*Berkheimer* Memorandum”),<sup>4</sup> on April 19, 2018, which provided specific requirements for an Examiner to support with evidence any allegation that *claim elements* (or *combination of elements*) are well-understood, routine, or

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<sup>4</sup> Available at <https://www.uspto.gov/sites/default/files/documents/memo-berkheimer-20180419.PDF>.

conventional. In reviewing the prosecution history, we recognize that Appellants have not yet had an opportunity to advance arguments based upon the change in the law effected by *Berkheimer*.

In the Reply Brief, Appellants argue:

Appellant respectfully maintains that the claim is directed to patent eligible subject matter for a number of additional reasons as articulated in the previously filed Appeal Brief. The Examiner asserts that the claims “merely amount to the application or instructions to apply the abstract idea on a computer; and the claims amount to nothing more than requiring a generic computer to perform generic computer functions that are *well-understood, routine and conventional* activities previously known to the industry.”<sup>1</sup> The Examiner appears to be operating under the mistaken understanding that the ability to implement the invention on a generic computer preordains the claim.

Reply Br. 2 (emphasis added).

We reproduce below the substantive changes to prior examination practice, as set forth in the *Berkheimer* Memorandum:

**A. *Formulating Rejections:*** In a step 2B analysis, an additional element (or combination of elements) is not well-understood, routine or conventional unless the examiner finds, and expressly supports a rejection in writing with, one or more of the following:

1. A citation to an express statement in the specification or to a statement made by an applicant during prosecution that demonstrates the well-understood, routine, conventional nature of the additional element(s). A specification demonstrates the well-understood, routine, conventional nature of additional elements when it describes the additional elements as well-understood or routine or conventional (or an equivalent term), as a commercially available product, or in a manner that indicates that the additional elements are sufficiently

well-known that the specification does not need to describe the particulars of such additional elements to satisfy 35 U.S.C. § 112(a). A finding that an element is well-understood, routine, or conventional cannot be based only on the fact that the specification is silent with respect to describing such element.

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).
3. A citation to a publication that demonstrates the well-understood, routine, conventional nature of the additional element(s). An appropriate publication could include a book, manual, review article, or other source that describes the state of the art and discusses what is well-known and in common use in the relevant industry. It does not include all items that might otherwise qualify as a “printed publication” as used in 35 U.S.C. § 102. Whether something is disclosed in a document that is considered a “printed publication” under 35 U.S.C. § 102 is a distinct inquiry from whether something is well-known, routine, conventional activity. A document may be a printed publication but still fail to establish that something it describes is well-understood, routine, conventional activity. *See Exergen Corp.*, 2018 WL 1193529, at \*4 (the single copy of a thesis written in German and located in a German university library considered to be a “printed publication” in *Hall* “would not suffice to establish that something is ‘well-understood, routine, and conventional activity previously engaged in by scientists who work in the field’”). The nature of the publication and the description of the additional elements in the publication would need to demonstrate that the additional elements are widely prevalent or in common use in the relevant field, comparable to the types of activity or elements that are so well-known that they do not need to be described in detail in a patent application to satisfy 35 U.S.C.

§ 112(a). For example, while U.S. patents and published applications are publications, merely finding the additional element in a single patent or published application would not be sufficient to demonstrate that the additional element is well-understood, routine, conventional, unless the patent or published application demonstrates that the additional element are widely prevalent or in common use in the relevant field.

4. A statement that the examiner is taking official notice of the well-understood, routine, conventional nature of the additional element(s). This option should be used **only** when the examiner is certain, based upon his or her personal knowledge, that the additional element(s) represents well-understood, routine, conventional activity engaged in by those in the relevant art, in that the additional elements are widely prevalent or in common use in the relevant field, comparable to the types of activity or elements that are so well-known that they do not need to be described in detail in a patent application to satisfy 35 U.S.C. § 112(a). Procedures for taking official notice and addressing an applicant's challenge to official notice are discussed in MPEP § 2144.03.

*Berkheimer* Memorandum 3–4 (footnote omitted).<sup>5</sup>

After reviewing record before us, we find the Examiner has not provided sufficient evidence of any of the four enumerated types of factual

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<sup>5</sup> We note that whether something is “well understood, routine, and conventional” is evaluated under step 2 of *Alice/Mayo*. See *Mayo*, 566 U.S. at 73 (“We find that the process claims at issue here do not satisfy these conditions. In particular, the steps in the claimed processes (apart from the natural laws themselves) involve *well-understood, routine, conventional activity* previously engaged in by researchers in the field. At the same time, upholding the patents would risk disproportionately tying up the use of the underlying natural laws, inhibiting their use in the making of further discoveries.”) (emphasis added).

evidence, as set forth in the *Berkheimer* Memorandum, with respect to the following “well-understood, routine, and conventional” (WURC) findings, as set forth in the Final Action and Answer. We reproduce the Examiner’s unsupported findings below:

the claims merely amount to the application or instructions to apply the abstract idea on a computer; and the claims amount to nothing more than requiring a generic computer to perform generic computer functions that are *well-understood, routine and conventional activities* previously known to the industry.

Final Act. 6 (emphasis added).

The Examiner proffers additional unsupported findings:

The claim does recite various technological elements as performers of the claim steps:

A processor in communication with memory

A heat map, wherein the heat map is a graphical user interface to visually display

However, each of the module elements merely represents a software module of a generic “processor” within a generic “server”. These modules serve to automate mental tasks (see analysis above) or perform electronic recordkeeping (e.g., selecting and integrating data), both of which have been deemed *well-understood, routine, and conventional* computer functions (see page 7 of July 2015 Update). Accordingly, they are not directed to anything more than a generic computer performing generic computer functions that are *well-understood, routine, and conventional* in the field.

Final Act. 8–9 (emphasis added).

the claims amount to nothing more than requiring a generic computer to perform generic computer functions that are *well-understood, routine and conventional activities* previously known to the industry.

Ans. 3, 8 (emphasis added).

the computer functions performed of selecting an element, integrating data, creating a metric, assigning a metric, producing a correlation, analyzing data, dynamically adjusting the business architecture, changing a metric, activating an application, and executing the modifications are merely generic computer functions that are *well-understood, routine and conventional* in the industry.

Ans. 6–7 (emphasis added).

Based upon our review of the record, we find the statements in the record by the Examiner as to what is purportedly *well-known, routine, and conventional*, without more, do not provide any of the four specific types of factual evidence required by the USPTO *Berkheimer* Memorandum (at 3–4), which implemented the controlling guidance of *Berkheimer*, 881 F.3d at 1369.

In summary, the case law and the PTO’s policy pertaining to § 101 have evolved during the period subsequent to Appellants’ filing of the Reply Brief. Therefore, in applying the controlling guidance of the USPTO *Berkheimer* Memorandum (at 3–4), we are constrained on this record to reverse the Examiner’s rejection of all claims 1–3, 6–9, 12–15, 18, 19, and 24–27, as being directed to patent-ineligible subject matter.

*Rejection B — 35 U.S.C. § 101*

The Examiner also rejected claims 7–9, 12, and 25 under 35 U.S.C. § 101 as being directed to non-statutory subject matter—i.e., a program listing per se and/or a signal per se. Final Act. 3–5. In the “Response to Arguments” section of the Final Action (10–11), and regarding the computer program product and associated medium of independent claim 7, the Examiner suggests that Appellants add the term “non-transitory” to

the claim. Final Act. 11. The Examiner further indicates that “[a]lternatively or additionally, positive recitation of physical structure such as computer hardware elements would also likely overcome this rejection under 35 U.S.C. 101.” *Id.* See also Ans. 11–12.

In reviewing the record, we agree with Appellants’ contention that because “claim 7 does not recite a computer readable medium, but rather recites a computer readable *hardware* storage medium” that the scope of claim 7 under BRI excludes transitory mediums (e.g., signals or carrier waves) and disembodied computer programs or code per se. App. Br. 25 (emphasis added). Accordingly, we also reverse the Examiner’s Rejection B under 35 U.S.C. § 101, of claims 7–9, 12, and 25.

#### CONCLUSIONS

The Examiner erred in rejecting claims 1–3, 6–9, 12–15, 18, 19, and 24–27, under 35 U.S.C. § 101, as being directed to a judicial exception, without significantly more.

The Examiner erred in rejecting claims 7–9, 12, and 25 under 35 U.S.C. § 101, as being directed to non-statutory subject matter—i.e., a program listing per se and/or a signal per se.

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DECISION

We reverse the Examiner's decision rejecting claims 1–3, 6–9, 12–15, 18, 19, and 24–27 under 35 U.S.C. § 101.

REVERSED