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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* MUTHULAKSHMI BHANDARI, ALLISON BAINES BOTROS,  
EDWARD H B GIESEN, RAMAN HARISHANKAR,  
JAYASHREE JAISHANKAR, AHAMED JALALDEEN,  
YING TAT LEUNG, ASHISH MUNGI, SIDDHARTH N. PUROHIT,  
PHILIP G. RAINS, and JORGE L. C. SANZ

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Appeal 2019-003826  
Application 12/631,092<sup>1</sup>  
Technology Center 3600

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Before MURRIEL E. CRAWFORD, HUBERT C. LORIN, and  
SHEILA F. McSHANE, *Administrative Patent Judges*.

McSHANE, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant seeks our review under 35 U.S.C. § 134(a) of the Examiner's final decision to reject claims 1, 5–7, and 9–11. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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<sup>1</sup> We use the word Appellant to refer to “applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as International Business Machines Corporation. Appeal Br. 2.

## BACKGROUND

The invention relates to enterprise architectures and to creating and maintaining an industry business architecture model (“IBAM”). Spec. ¶ 2, Abstract. The model integrates business goals, visions, strategies, and governance principles with business operations, such as organizational structure, processes, and data. *Id.* ¶ 2.

Claims 1 and 7 are independent claims, where claim 1 is representative and is reproduced below from page 11 of the Claim Appendix. Appeal Brief, Claim Appendix (Claims App’x), 11–13.

1. A system for creating an industry business architecture model over a network, comprising:
  - a client system;
  - a server operably coupled to said client system via said network;
  - a plurality of applications executable via said server;
  - a data storage device in communication with said server via said network, the data storage device storing databases housing information and models resulting from execution of said plurality of applications, the databases including a component business model database, a process model database, a service model database, and an information model database;
  - an industry business architecture model executing on said system, said industry business architecture model performing:
    - building a component map of a plurality of business activity components;
    - collecting cost center data from an enterprise;
    - calculating values for a plurality of key performance indicators using said cost center data;
    - creating a component business model by filtering the component map of business activity components to select a heat map subset of the plurality of business activity components that

have a threshold gap between current and desired capabilities as a function of the calculated values of the plurality of key performance indicators of activity categories and target competitive levels of the respective component map business activity components;

creating a process model, a services model, and an information model;

creating update linkages between the component business model, the process model, the services model, and the information model;

creating a reference architecture and defining knowledge assets; and

storing said models, said reference architecture, and said knowledge assets in said data storage device.

In a Final Office Action, the Examiner rejects claims 1, 5–7, and 9–11 under 35 U.S.C. § 101 as directed to unpatentable subject matter. Final Action, hereafter “Final Act.,” 5–10, mailed June 29, 2018; Answer, hereafter “Ans.,” 2–8, mailed March 8, 2019.

#### DISCUSSION

#### *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. *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,

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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 include certain methods of organizing human activity, such as fundamental economic practices (*Alice*, 573 U.S. at 219–20; *Bilski*, 561 U.S. at 611); mathematical formulas (*Parker v. Flook*, 437 U.S. 584, 594–95 (1978)); and mental processes (*Gottschalk v. Benson*, 409 U.S. 63, 69 (1972)). Concepts determined to be patent eligible include physical and chemical processes, such as “molding rubber products” (*Diamond v. Diehr*, 450 U.S. 175, 191 (1981) (“*Diehr*”)); “tanning, dyeing, making water-proof cloth, vulcanizing India rubber, smelting ores” (*id.* at 182 n.7 (quoting *Corning v. Burden*, 56 U.S. 252, 267–68 (1854))); and manufacturing flour (*Benson*, 409 U.S. at 69 (citing *Cochrane v. Deener*, 94 U.S. 780, 785 (1876))). In *Diehr*, the claim at issue recited a mathematical formula, but the Supreme Court held that “[a] claim drawn to subject matter otherwise statutory does not become nonstatutory simply because it uses a mathematical formula.” *Diehr*, 450 U.S. at 176; *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.”), *see also, 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

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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 and 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.*

The USPTO recently revised guidance on the application of § 101, in accordance with judicial precedent. *2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50, 57 (Jan. 7, 2019) (“2019 Guidance”). Under the 2019 Guidance, a claim is “directed to” an abstract idea if the claim recites any of (1) mathematical concepts, (2) certain methods of organizing human activity, and (3) mental processes—without integrating such abstract idea into a “practical application,” i.e., without “apply[ing], rely[ing] on, or us[ing] 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.” *Id.* at 52–55. A claim so “directed to” an abstract idea constitutes ineligible subject matter, unless it recites an additional element (or combination of elements) amounting to significantly more than the abstract idea. *Id.* at 56.

With this context in mind, we evaluate the Examiner’s rejection of representative claim 1. The Examiner finds that claim 1 is directed to “a system for creating an industry business architecture model over a network” and creating a “component business model,” “reference architecture,” and further “defining knowledge assets.” Final Act. 6. With this, the Examiner finds that the claim is for organizing information into an “industry business

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architecture model” and is therefore drawn to abstract ideas. *Id.* (citing *Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307 (Fed. Cir. 2016); *Accenture Global Services, GmbH v. Guidewire Software*, 728 F.3d 1336 (Fed. Cir. 2013); *Electric Power Group, LLC, v. Alstom*, 830 F.3d 1350 (Fed. Cir. 2016), Federal Register, Vol. 79, 74,619–74,633 (Dec. 16, 2014) (*2014 Interim Guidance*)).

We agree with the Examiner’s findings that representative claim 1 is directed to creating an industry business architecture, which is a method of organizing human activity and is an abstract idea. *See Accenture Global.*, 728 F.3d at 1344–45 (Fed. Cir. 2013) (determining “system claims . . . [that] only contain generalized software components arranged to implement an abstract concept [of generating insurance-policy-related tasks based on rules to be completed upon the occurrence of an event] on a computer” to be patent-ineligible); *Bancorp Servs., L.L.C. v. Sun Life Assurance Co. of Can. (U.S.)*, 687 F.3d 1266, 1270, 1278, 1280 (Fed. Cir. 2012) (method and system claims for managing a stable value protected life insurance policy by performing calculations and manipulating the results held patent-ineligible). The Examiner’s findings also align with the intrinsic record. The specification states that its invention is directed to creating and maintaining an industry business architecture model. *See Spec.* ¶ 5. Because representative claim 1 recites creating an industry business architecture model, a method of organizing human activity, we find no error with the Examiner’s findings.

The next issue under the second prong of step 2A is whether additional elements in representative claim 1 integrate the judicial exception into a practical application, such as elements reflecting an improvement in

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the functioning of a computer or an improvement to other technology or technical field.<sup>2</sup>

Appellant contends that the use of generic computer components and software models is not dispositive on the issue of patentability as demonstrated in *Enfish*, *BASCOM*, and *McRO*. Appeal Br. 4–5 (citing *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016); *BASCOM Global Internet Servs. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016); *McRO, Inc. v. Bandai Namco Games America Inc.*, 837 F.3d 1299 (Fed. Cir. 2016) (“*McRO*”)); Reply Brief, hereafter “Reply Br.,” 2–4, mailed April 18, 2018. Appellant alleges that the claim provides an improvement to the technical field of automated enterprise architecture modeling by including update linkages and filtering the component map of business activity components to select a heat map subset. Appeal Br. 6–7. Appellant argues that “[s]imilar to the ‘filtering’ subject matter of *BASCOM*, the inventive concept is found in the non-conventional and non-generic arrangement of components that are otherwise individually well-known and conventional.” *Id.* at 7. Appellant further asserts that the claim elements should be considered in combination and “[a]lthough the various industry business architecture model can be created or updated at any time, the linkages *tie* each model to the others, providing *cohesion advantages* to the industry business architecture model relative to the prior art.” *Id.* at 5–6.

We are not persuaded of error by the Examiner on the issue of whether the additional elements in representative claim 1 integrate the judicial exception into a practical application. The Examiner finds, and we agree, that when considered either individually and as an ordered

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<sup>2</sup> See, e.g., *Alice*, 573 U.S. at 223, discussing *Diamond v. Diehr*, 450 U.S. 175 (1981).

combination, the steps of representative claim 1 do not include improvements to a technology or technical field, nor do they include improvements to the functioning of a computer itself. Final Act. 6–7. The Examiner finds that the depiction of data, including a heat map, provides information to a user by the display of information, but the use of computer technology to process information improves the industry business architecture model, and the model is an abstract idea. Ans. 4. The Examiner finds that improvements to the model are not technological improvements, but rather are only improvements to the model—“hence, an abstract idea.” *Id.* at 4–5.

In contrast to representative claim 1, *Enfish*, *McRO*, and *BASCOM* are all directed to improvements in technology. More specifically, in *Enfish* the claims were deemed to be patent eligible because they were directed to improvements in the way computers and networks carry out their basic functions. *See Enfish*, 822 F.3d at 1335–36 (“[T]he first step in the *Alice* inquiry . . . asks whether the focus of the claims is on the specific asserted improvement in computer capabilities . . . or, instead, on a process that qualifies as an ‘abstract idea’ for which computers are invoked merely as a tool.”). In *McRO*, the claims “focused on a specific asserted improvement in computer animation.” *McRO*, 837 F.3d at 1314. In *BASCOM*, the Federal Circuit agreed that the evidence presented for the claims at issue in that case supported that an ordered combination of the claim elements provided a specific way to filter content on the Internet to overcome existing technology problems with other Internet-filtering systems and improved the filtering performance of the computer system itself, which represented significantly more than each of the conventional elements. *BASCOM*, 827 F.3d at 1351. As the Examiner notes, *BASCOM* was directed to filtering that represented a

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technological innovation, whereas the claims here are not a technological improvement but are merely directed to “filtering” to process and display information in the form of a heat map where “the selection and manipulation of information . . . by itself does not transform the otherwise-abstract processes of information and analysis.” *Ans. 5–6* (quoting *Electric Power*, 830 F.3d at 1353, 1355). Here, we agree with the Examiner that representative claim 1 is “not directed to an improvement in the way computers operate,” or to another technological improvement, and “the focus of the claims is not on . . . an improvement in computers as tools, but on certain independently abstract ideas that use computers as tools.” *See FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1095 (Fed. Cir. 2016).

Appellant additionally argues that when the claim limitations are considered as a whole that they include specific limitations that are other than what is well-understood, routine, conventional activity in the field, and/or add unconventional steps, so as to confine the claimed inventions to particular useful applications that pose little to no risk of preemption of an abstract idea in and of itself. Appeal Br. 8. We do not find this argument persuasive because “[w]hile 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); *see also OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362-63 (Fed. Cir. 2015) (“that 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”).

As a result, we conclude that representative claim 1 does not recite additional elements that integrate the judicial exception into a practical

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application, and we find no reversible error with the Examiner's findings that representative claim 1 recites an abstract idea.

Turning to the second step of the *Alice* inquiry, we now look to whether representative claim 1 contains any inventive concept or adds anything significantly more to transform the abstract concept into a patent-eligible application. *Alice*, 573 U.S. at 216.

In addition to the additional claim elements (filtering, heat maps, linkages) that Appellant argues amount to significantly more than the judicial exception, as discussed above, Appellant additionally asserts that the Examiner fails to establish that the specific claimed combination represent well-understood, routine, and conventional activities. Appeal Br. 9–10; Reply Br. 4.

The Federal Circuit has held that, after determining that the claim is directed to an ineligible concept, we assess “whether the claim limitations, *other than the invention's use of the ineligible concept to which it was directed*, were well-understood, routine, and conventional.” *BSG Tech LLC v. BuySeasons, Inc.*, 899 F.3d 1281, 1290 (Fed. Cir. 2018) (emphasis added). Beyond the abstract idea of organizing information into an “industry business architecture model,” the Examiner finds that the model and the additional selection and manipulation of information limitations of the claim are performed by a generic computer performing generic computer functions that are well-known, routine and conventional practices. Final Act. 9 (citing Spec. ¶ 5). As discussed above, we agree that the additional selection, manipulation, and display of information are improvements to the model, and fall within abstract ideas and, thus, the limitations do not add significantly more to transform the abstract concept into a patent-eligible application. Further, Appellant does not assert that there is any

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unconventional use of a computer, and the use of generic computer components performing generic steps to implement an abstract idea has repeatedly been found to not make an abstract idea patent eligible. *See Alice*, 573 U.S. at 217–218 (Instructing one to “apply” an abstract idea and reciting no more than generic computer elements performing generic computer tasks does not make an abstract idea patent eligible.). Although Appellant argues that the Examiner fails to provide sufficient findings that additional limitations are well-understood, routine and conventional activities under *Berkheimer*, we disagree. *See* Appeal Br. 4–5, 8–10; Reply Br. 4; *Berkheimer v. HP Inc.*, 881 F.3d 1360 (Fed. Cir. 2018) (“*Berkheimer*”). The Examiner’s findings rely on established law, and under that law, conventional use of a generic computer using generic steps to implement abstract ideas does not make the abstract ideas patent eligible. *See* Final Act. 7–8; Ans. 4–7; *BSG*, 899 F.3d at 1290–91; *SAP America, Inc. v. InvestPic, LLC*, 890 F.3d 1016, 1023 (Fed. Cir. 2018) (“In accordance with the Supreme Court’s conclusion in *Alice*, . . . this court has ruled many times that ‘such invocations of computers and networks that are not even arguably inventive are insufficient to pass the test of an inventive concept in the application of an abstract idea.’”) (quoting *Electric Power*, 830 F.3d at 1353, 1355; citing *Credit Acceptance Corp. v. Westlake Servs.*, 859 F.3d 1044, 1055–56 (Fed. Cir. 2017); *Smart Sys. Innovations, LLC v. Chicago Transit Auth.*, 873 F.3d 1364, 1374-75 (Fed. Cir. 2017); *Secured Mail Solutions LLC v. Universal Wilde, Inc.*, 873 F.3d 905, 909 (Fed. Cir. 2017)). The Federal Circuit, in accordance with *Alice*, has “repeatedly recognized the absence of a genuine dispute as to eligibility” where claims have been defended as involving an inventive concept based “merely on the idea of using existing computers or the Internet to carry out conventional processes,

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with no alteration of computer functionality.” *Berkheimer*, 890 F.3d at 1373; *see also, Alice*, 573 U.S. at 225 (the “use of a computer to obtain data, adjust account balances, and issue automated instructions; all of these computer functions are ‘well-understood, routine, conventional activit[ies]’ previously known to the industry”) (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 71–73 (2012)).

Accordingly, we are not persuaded of error in the Examiner’s conclusion that representative claim 1 is directed to patent-ineligible subject matter.

#### CONCLUSION

For the above reasons, the Examiner’s 35 U.S.C § 101 rejection of claims 1, 5–7, and 9–11 is affirmed.

#### DECISION SUMMARY

In summary:

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Affirmed</b>	<b>Reversed</b>
1, 5–7, 9–11	101	1, 5–7, 9–11	

#### TIME PERIOD FOR RESPONSE

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED