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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 LIANG GOU, ADITYA PAL, FEI WANG,
and MICHELLE X. ZHOU
_____

Appeal 2018-008387
Application 14/453,081
Technology Center 3600
_____

Before KARA L. SZPONDOWSKI, SCOTT B. HOWARD, and
STEVEN M. AMUNDSON, *Administrative Patent Judges*.

AMUNDSON, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant[1] seeks our review under 35 U.S.C. § 134(a) from a final
rejection of claims 1–20, i.e., all pending claims. We have jurisdiction under
35 U.S.C. § 6(b).

We affirm.

STATEMENT OF THE CASE

The Invention

According to the Specification, the invention concerns "matching products to users in ecommerce environments." Spec. ¶ 1.[2] The Specification explains that (1) "[b]rands and users are matched by determining their personalities and pairing them based on user-brand associations"; (2) "[m]odeling parameters are estimated based on the personalities of each pair"; (3) "[a]dditional pairs of users and brands having unknown associations are identified" and scored "based on the modelling parameters"; and (4) "[b]rands and users having unknown associations are matched based on their correlations scores matching one or more criteria." *Id.* at 51 (Abstract). The Specification also explains that "[t]he greater the correlation between user characteristics that consistently and distinctively describe the user's actual or ideal identity, and those that describe a brand," the "greater the likelihood may be that the user will prefer the brand to other brands." *Id.* ¶ 2. Hence, the invention endeavors to "utilize personalities associated with a brand" to "match the brand" to "one or more users." *Id.* ¶ 3.

Exemplary Claim

Independent claim 1 exemplifies the claims at issue and reads as follows:

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[2] This decision uses the following abbreviations: "Spec." for the Specification, filed August 6, 2014; "Final Act." for the Final Office Action, mailed December 13, 2017; "Appeal Br." for the Appeal Brief, filed May 11, 2018; "Ans." for the Examiner's Answer, mailed June 27, 2018; and "Reply Br." for the Reply Brief, filed August 24, 2018.

1. A method, in a data processing system comprising at least one memory and at least one processor, the method comprising:

configuring the at least one memory with instructions, which are executed by the at least one processor and configure the at least one processor to implement a matching system for matching brands to users and a database;

determining, by a personality scale determination module executing within the matching system, personalities of a set of users and of a set of brands stored in the database;

identifying, by the matching system, a first set of user-brand pairs, wherein elements of each pair in the first set of user-brand pairs have known associations stored in the database;

estimating, by a parameter estimation module executing within the matching system, one or more modelling parameters based on the first set of user-brand pairs;

identifying, by an analytics tool executing within the matching system, a second set of user-brand pairs, wherein elements of each pair in the second set of user-brand pairs have unknown associations stored in the database;

determining, by a user-brand affinity score determination module executing within the matching system, correlations between elements of one or more pairs in the second set of user-brand pairs based on the modelling parameters;

matching, by a selection module executing within the matching system, based on the correlations, one or more of:

a select set of brands whose corresponding correlation to a given user satisfies a first threshold criteria; or

a select set of users whose corresponding correlation to a given brand satisfies a second threshold criteria;

wherein the first and second threshold criteria are identical or different;

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> generating, by a recommendation module executing within the matching system, a recommendation comprising information specifying the selected set of brands or the selected set of users; and

> transmitting, by the matching system, the recommendation to a user.

Appeal Br. 19–20 (Claims App.).

The Rejection on Appeal

Claims 1–20 stand rejected under 35 U.S.C. § 101 as directed to patent-ineligible subject matter. Final Act. 2–6.

ANALYSIS

We have reviewed the rejection in light of Appellant's arguments that the Examiner erred. For the reasons explained below, we agree with the Examiner's conclusion concerning ineligibility under § 101. We adopt the Examiner's findings and reasoning in the Final Office Action and Answer. *See* Final Act. 2–7; Ans. 3–8. We provide the following to address and emphasize specific findings and arguments.

Introduction

The Patent Act defines patent-eligible subject matter broadly: "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." 35 U.S.C. § 101. In *Mayo* and *Alice*, the Supreme Court explained that § 101 "contains an important implicit exception" for laws of nature, natural phenomena, and abstract ideas. *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 70 (2012); *Alice Corp. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014); *see Diamond v.*

Diehr, 450 U.S. 175, 185 (1981). In *Mayo* and *Alice*, the Court set forth a two-step analytical framework for evaluating patent-eligible subject matter. *Mayo*, 566 U.S. at 77–80; *Alice*, 573 U.S. at 217–18.

Under *Mayo/Alice* step one, we "determine whether the claims at issue are directed to" a judicial exception, i.e., an abstract idea, a law of nature, or a natural phenomenon. *Alice*, 573 U.S. at 217. Step one involves looking at the "focus" of the claims at issue and their "character as a whole." *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1167 (Fed. Cir. 2018).

In January 2019, the PTO issued revised guidance for determining whether claims are directed to a judicial exception. *See 2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50 (Jan. 7, 2019) ("2019 Guidance"). The 2019 Guidance applies to the Board. *Id.* at 50–51, 57 n.42; *see* 35 U.S.C. § 3(a)(2)(A) (investing the Director with responsibility "for providing policy direction" for the PTO). Neither the Examiner nor Appellant had the benefit of the 2019 Guidance when presenting their respective positions concerning subject-matter eligibility.

The 2019 Guidance specifies two prongs for the analysis under *Mayo/Alice* step one (PTO step 2A). 84 Fed. Reg. at 54–55. Prong one requires evaluating "whether the claim recites a judicial exception, *i.e.*, an abstract idea, a law of nature, or a natural phenomenon." *Id.* at 54. "If the claim does not recite a judicial exception, it is not directed to a judicial exception," and it satisfies § 101. *Id.* "If the claim does recite a judicial exception, then it requires further analysis" under prong two. *Id.* Prong two requires evaluating "whether the claim as a whole integrates the recited judicial exception into a practical application of the exception." *Id.* "When the exception is so integrated, then the claim is not directed to a judicial

exception," and it satisfies § 101. *Id.* "If the additional elements do not integrate the exception into a practical application, then the claim is directed to the judicial exception," and it "requires further analysis" under *Mayo*/*Alice* step two (PTO step 2B). *Id.*

Under *Mayo*/*Alice* step two, we "consider the elements of each claim both individually and 'as an ordered combination' to determine whether the additional elements" add enough to transform the "nature of the claim" into "significantly more" than the judicial exception. *Alice*, 573 U.S. at 217–18, 221–22 (quoting *Mayo*, 566 U.S. at 78–79). Step two involves the search for an "inventive concept." *Alice*, 573 U.S. at 217–18, 221; *Univ. of Fla. Research Found., Inc. v. Gen. Elec. Co.*, 916 F.3d 1363, 1366 (Fed. Cir. 2019). "[A]n inventive concept must be evident in the claims." *RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d 1322, 1327 (Fed. Cir. 2017).

Mayo/Alice Step One: PTO Step 2A Prong One

For *Mayo*/*Alice* step one, the Federal Circuit has noted that "[a]n abstract idea can generally be described at different levels of abstraction." *Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1240 (Fed. Cir. 2016). Here, the Examiner determines that the claims are directed to "using parameters, correlations, and personalities to match brands to users and generate recommendations." Final Act. 4–5 (emphasis omitted); *see* Ans. 5; Spec., 51 (Abstract). The Examiner explains that "such activity is considered a 'certain method of organizing human activity'" because it involves (1) "interpersonal and intrapersonal activities, such as advertising, marketing, and sales activities or behaviors," and (2) "the economy and commerce, such as the performance of financial transactions." Final Act. 4–5; *see* Ans. 5–6.

Appellant disputes that independent claims 1, 8, and 15 are directed to an abstract idea. *See* Appeal Br. 7–17; Reply Br. 2–7. Appellant asserts that the Examiner "oversimplifies and generalizes the claimed invention." Appeal Br. 8–9, 14. Appellant argues that the claims recite (1) "absolutely no human activity, interpersonal or intrapersonal activities, advertising activities, marketing activities, or sales activities" and (2) "absolutely no performance of financial transactions." *Id.* at 10. But Appellant concedes that the "claims recite advertising or marketing" by "recit[ing] outputting a recommendation to a user in the final step." *Id.*

We disagree that the Examiner errs under *Mayo/Alice* step one. In determining that the claims are directed to an abstract idea, the Examiner accurately assesses the "focus" of the claims and their "character as a whole." *See* Final Act. 4–5; Ans. 5–6; *see also SAP Am.*, 898 F.3d at 1167.

In addition, we determine that the claims recite abstract ideas falling within one of the three groupings of abstract ideas specified in the 2019 Guidance, i.e., "certain methods of organizing human activity." *See* 84 Fed. Reg. at 51–52. The 2019 Guidance explains that "certain methods of organizing human activity" include "advertising, marketing or sales activities or behaviors." *Id.* at 52. For the reasons explained below, each independent claim recites "advertising, marketing or sales activities or behaviors" in various limitations.

For instance, claim 1 recites the following limitations:

- "configuring . . . a matching system for matching brands to users";
- "determining . . . personalities of a set of users and of a set of brands";

- "identifying . . . a first set of user-brand pairs, wherein elements of each pair in the first set of user-brand pairs have known associations";

- "estimating . . . one or more modelling parameters based on the first set of user-brand pairs";

- "identifying . . . a second set of user-brand pairs, wherein elements of each pair in the second set of user-brand pairs have unknown associations";

- "determining . . . correlations between elements of one or more pairs in the second set of user-brand pairs";

- "matching . . . one or more of: a select set of brands whose corresponding correlation to a given user satisfies a first threshold criteria; or a select set of users whose corresponding correlation to a given brand satisfies a second threshold criteria; wherein the first and second threshold criteria are identical or different";

- "generating . . . a recommendation comprising information specifying the selected set of brands or the selected set of users"; and

- "transmitting . . . the recommendation to a user."

Appeal Br. 19–20. Claims 8 and 15 recite similar limitations. *Id.* at 22–23, 25–27.

The above-identified limitations encompass "advertising, marketing or sales activities or behaviors" because they (1) determine brand personalities and user personalities, (2) manipulate personality data to match brands to users, and (3) recommend a brand to a user based on personality data. In short, the limitations relate to targeted advertising.

As noted above, the 2019 Guidance identifies "advertising, marketing or sales activities or behaviors" as among the enumerated methods of organizing human activity, and thus an abstract idea. 84 Fed. Reg. at 52; *see also OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1361–63

(Fed. Cir. 2015) (deciding that the claimed concept of "offer-based price optimization" is an abstract idea "similar to other 'fundamental economic concepts' found to be abstract ideas by the Supreme Court and this court"). In addition, targeted advertising and the "tailoring of content based on information about the user . . . is an abstract idea that is as old as providing different newspaper inserts for different neighborhoods." *Affinity Labs of Tex., LLC v. Amazon.com Inc.*, 838 F.3d 1266, 1271 (Fed. Cir. 2016).

Appellant asserts that "advertising is outside the scope of the claim." Reply Br. 6. But Appellant concedes that the "claims recite advertising or marketing" by "recit[ing] outputting a recommendation to a user in the final step." Appeal Br. 10. Further, each independent claim recites "matching brands to users." *Id.* at 19, 22, 25–26. And "matching brands to users" corresponds to "advertising, marketing or sales activities or behaviors," i.e., targeted advertising.

Mayo/Alice Step One: PTO Step 2A Prong Two

Because we determine that each independent claim recites an abstract idea, we consider whether each claim as a whole integrates the recited abstract idea into a practical application. *See* 84 Fed. Reg. at 54–55. "Only when a claim recites a judicial exception and fails to integrate the exception into a practical application, is the claim 'directed to' a judicial exception . . . ." *Id.* at 51.

As additional elements, the independent claims recite computer-system components. Appeal Br. 19–20, 22–23, 25–27. Specifically, method claim 1 recites a "processor," a "memory," and a "database." *Id.* at 19–20. System claim 8 recites (1) a "computer device" with a "processor" and

a "storage device" and (2) a "database." *Id.* at 22–23. Product claim 15
recites a "processor," a "storage device," and a "database." *Id.* at 25–27.

We determine that each independent claim as a whole does not
integrate the recited abstract idea into a practical application because the
additional elements do not impose meaningful limits on the abstract idea.
See 84 Fed. Reg. at 53–54; *see also* Final Act. 3–7; Ans. 3–8. Instead, the
claimed computer-system components constitute generic computer-system
components that perform generic computer functions. *See* Final Act. 6;
Spec. ¶¶ 100–106, 111–116.

Appellant contends that the "claims are not merely generic computing
elements performing generic computing functions." Appeal. Br. 7. But the
claimed computer-system components operate in their ordinary capacities to
collect, manipulate, and communicate data. Appellant does not explain how
the claimed computer-system components do anything other than collect,
manipulate, and communicate data. *See id.* at 7–17.

Appellant argues that the "claims are directed to eliminating human
activity from the process of matching brands to users by automating that
process." Appeal Br. 8. "But the need to perform tasks automatically is not
a unique technical problem." *Cellspin Soft, Inc. v. Fitbit, Inc.*, 927 F.3d
1306 (Fed. Cir. 2019). Thus, the "mere automation of manual processes
using generic computers does not" suffice for patent eligibility. *Credit
Acceptance Corp. v. Westlake Servs.*, 859 F.3d 1044, 1055 (Fed. Cir. 2017).

Appellant contends that the claimed invention (1) "is rooted in
computer technology," (2) "addresses a problem specific to computer
technology," and (3) provides "a technological solution to a technological

problem for matching brands to users." Appeal Br. 7. But Appellant admits that "matching brands to users is not a technology." Reply Br. 7.

We agree that matching brands to users is not a technological problem. As the Examiner reasons, matching brands to users "is not a problem that specifically arose because of the creation of computers and the Internet." Ans. 4; *see* Final Act. 7; Ans. 3. And as the Examiner also reasons, "'using a personality scale determination module, one or more modelling parameters, an analytics tool, and correlations between elements of one or more pairs in the second set of user-brand pairs based on the modelling parameters to match brands to users and generate recommendations' is not a technology or technical field" for § 101 purposes. Ans. 7 (quoting Appeal Br. 12).

Additionally, in *Bilski* the Supreme Court did not view balancing risk positions as a technological problem. *See Bilski v. Kappos*, 561 U.S. 593, 599, 609–13 (2010). Moreover, in *Alice* the Court did not view mitigating settlement risk as a technological problem. *See Alice*, 573 U.S. at 212–14 & n.2, 219–23. Here, matching brands to users parallels balancing risk positions in *Bilski* and mitigating settlement risk in *Alice*.

Appellant contends that the claims concern the "the technological field of artificial intelligence." Appeal Br. 10–11; *see* Reply Br. 2, 6. Further, Appellant asserts that the claims employ "artificial intelligence" to "create a new computer tool that performs activities that would normally require human intelligence." Reply Br. 6–7.

Appellant's arguments do not persuade us of Examiner error because they rest on unclaimed features. The claims do not require "artificial intelligence." Unclaimed features do not support patent eligibility. *See*

ChargePoint, Inc. v. SemaConnect, Inc., 920 F.3d 759, 769 (Fed. Cir. 2019);
Berkheimer v. HP Inc., 881 F.3d 1360, 1369–70 (Fed. Cir. 2018); *Two-Way Media Ltd. v. Comcast Cable Commc'ns, LLC*, 874 F.3d 1329, 1338–39 (Fed. Cir. 2017); *Intellectual Ventures I LLC v. Erie Indem. Co.*, 850 F.3d 1315, 1331–32 (Fed. Cir. 2017). Consistent with the claims, the Specification does not discuss "artificial intelligence."

Appellant analogizes the claims here to the claims in the following cases: *McRO, Inc. v. Bandai Namco Games America Inc.*, 837 F.3d 1299 (Fed. Cir. 2016); *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016); and *Finjan, Inc. v. Blue Coat Systems, Inc.*, 879 F.3d 1299, 1305 (Fed. Cir. 2018). *See*, *e.g.*, Appeal Br. 11–15; Reply Br. 4–5. But the claims here do not resemble the claims in any of those cases.

In *McRO*, the claims recited a "specific . . . improvement in computer animation" using "unconventional rules" that related "sub-sequences of phonemes, timings, and morph weight sets" to automatically animate lip synchronization and facial expressions for three-dimensional characters that only human animators could previously produce. *McRO*, 837 F.3d at 1302–03, 1307–08, 1313–15. The Federal Circuit decided that the claims satisfied § 101 under *Mayo/Alice* step one because "the incorporation of the claimed rules" improved an existing technological process. *Id.* at 1314–16.

Unlike the claims in *McRO*, the claims here do not improve an existing technological process. *See Alice*, 573 U.S. at 223 (explaining that "the claims in *Diehr* were patent eligible because they improved an existing technological process"); *see also* Final Act. 6–7; Ans. 6–8. The Examiner correctly finds that the claims do not recite "an improvement in a computer"

or "an improvement in another technology or technical field." Final Act. 6; *see* Ans. 6–7.

In *Enfish*, the Federal Circuit decided that the claims satisfied § 101 under *Mayo/Alice* step one because they recited a "specific improvement to the way computers operate," i.e., an improved database configuration that permitted faster and more efficient searching. *Enfish*, 822 F.3d at 1330–33, 1336, 1339. Further, the Federal Circuit has explained that the claims in *Enfish* "did more than allow computers to perform familiar tasks with greater speed and efficiency" and "actually permitted users to launch and construct databases in a new way." *Finjan*, 879 F.3d at 1305; *see also Secured Mail Sols. LLC v. Universal Wilde, Inc.*, 873 F.3d 905, 910 (Fed. Cir. 2017) (explaining that the claims in *Enfish* "focused on an improvement to computer functionality").

In *Finjan*, the claims recited "a system and method for providing computer security by attaching a security profile to a downloadable," i.e., "an executable application program . . . downloaded from a source computer and run on [a] destination computer." *Finjan*, 879 F.3d at 1302–03. The claimed "security profile" included "details about the suspicious code in the received downloadable," such as "all potentially hostile or suspicious code operations that may be attempted by" the downloadable. *Id.* at 1304. The Federal Circuit explained that the claimed "security profile" produced "a new kind of file that enable[d] a computer security system to do things it could not do before." *Id.* at 1304–05. The court decided that the claims satisfied § 101 under *Mayo/Alice* step one because they provided an "improvement in computer functionality." *Id.* at 1305–06.

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Unlike the claims in *Enfish* and *Finjan*, the claims here do not provide
an improvement in computer functionality. *See* Final Act. 6–7; Ans. 6–8.
For instance, the claims do not recite an advance in hardware or software
that causes a processor itself or a memory itself to operate faster or more
efficiently. As discussed above, the Examiner correctly finds that the claims
do not recite "an improvement in a computer" or "an improvement in
another technology or technical field." Final Act. 6; *see* Ans. 6–7.

The 2019 Guidance identifies exemplary considerations indicating
that additional elements in claims "may have integrated the [judicial]
exception into a practical application." 84 Fed. Reg. at 55 & nn.25–29
(citing Manual of Patent Examining Procedure §§ 2106.05(a)–(c),
2106.05(e) (9th ed. rev. 08.2017 Jan. 2018)). As the above analysis
indicates, we have evaluated Appellant's arguments in light of those
exemplary considerations. For the reasons discussed above, however, we
determine that each independent claim as a whole does not integrate the
recited abstract idea into a practical application. Thus, each claim is directed
to a judicial exception and does not satisfy § 101 under *Mayo/Alice* step one.

Mayo/Alice Step Two: PTO Step 2B

Because we determine that each independent claim is directed to a
judicial exception, we "consider the elements of each claim both
individually and 'as an ordered combination' to determine whether the
additional elements" add enough to transform the "nature of the claim" into
"significantly more" than the judicial exception. *See Alice*, 573 U.S.
at 217–18, 221–22 (quoting *Mayo*, 566 U.S. at 78–79). Under *Mayo/Alice*
step two, we "look with more specificity at what the claim elements add, in
order to determine 'whether they identify an "inventive concept" in the

application of the ineligible subject matter' to which the claim is directed."
Affinity Labs of Tex., LLC v. DIRECTV, LLC, 838 F.3d 1253, 1258
(Fed. Cir. 2016) (quoting *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d
1350, 1353 (Fed. Cir. 2016)). An "inventive concept" requires more than
"well-understood, routine, conventional activity already engaged in" by the
relevant community. *Rapid Litig. Mgmt. Ltd. v. CellzDirect, Inc.*, 827 F.3d
1042, 1047 (Fed. Cir. 2016) (quoting *Mayo*, 566 U.S. at 79–80). But a
"non-conventional and non-generic arrangement of known, conventional
pieces" may provide an "inventive concept" satisfying step two. *BASCOM
Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1350
(Fed. Cir. 2016).

As discussed above, the independent claims recite computer-system
components, i.e., a "computer device," a "processor," a "memory" or
"storage device," and a "database." Appeal Br. 19–20, 22–23, 25–27. As
also discussed above, the claimed computer-system components constitute
generic computer-system components that perform generic computer
functions. *See* Final Act. 6; Spec. ¶¶ 100–106, 111–116.

The Specification describes the claimed computer-system components
generically and evidences their conventional nature. *See* Spec. ¶¶ 100–106,
111–116. As an example, the Specification describes a "computing device"
as including the following "internal components":

- "one or more processors";
- "one or more computer-readable RAMs";
- "one or more computer-readable ROMs";
- "one or more buses";
- "one or more operating systems"; and

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- "one or more computer-readable tangible storage devices."

Id. ¶ 100.

As another example, the Specification describes a "storage device" as "an electronic storage device, a magnetic storage device, an optical storage device, an electromagnetic storage device, a semiconductor storage device, or any suitable combination of the foregoing." Spec. ¶ 112. Further, the Specification identifies the following items for use as a "memory":

> a portable computer diskette, a hard disk, a random access memory (RAM), a read-only memory (ROM), an erasable programmable read-only memory (EPROM or Flash memory), a static random access memory (SRAM), a portable compact disc read-only memory (CD-ROM), a digital versatile disk (DVD), a memory stick, a floppy disk, a mechanically encoded device such as punch-cards or raised structures in a groove having instructions recorded thereon, and any suitable combination of the foregoing.

Id. In addition, the Specification describes a "processor" as part of "a general purpose computer, special purpose computer, or other programmable data processing apparatus." *Id.* ¶ 116.

Simply implementing an abstract idea using conventional machines or devices "add[s] nothing of substance." *See Alice*, 573 U.S. at 226–27; *see also Mayo*, 566 U.S. at 84–85 (explaining that "simply implementing a mathematical principle on a physical machine" does not suffice for patent eligibility) (citing *Gottschalk v. Benson*, 409 U.S. 63, 64–65, 71 (1972)).

Moreover, the claimed computer-system components operate to collect, manipulate, and communicate data. Appeal Br. 19–20, 22–23, 25–27; *see* Final Act. 6; Ans. 6–8. Court decisions have recognized that generic computer-system components operating to collect, manipulate, and

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communicate data are well understood, routine, and conventional to a skilled artisan. *See*, *e.g.*, *Alice*, 573 U.S. at 226–27; *SAP Am.*, 898 F.3d at 1164–65 & n.1, 1170; *Apple*, 842 F.3d at 1234, 1241–42; *Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1316–20 (Fed. Cir. 2016) ("*Symantec*"); *Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1334 (Fed. Cir. 2015); *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715–16 (Fed. Cir. 2014); *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1355 (Fed. Cir. 2014).

For example, the system claims in *Alice* recited a "data processing system" (e.g., a "processor") with a "communications controller" and a "data storage unit" (e.g., a "storage device," "memory," or "database"). *Alice*, 573 U.S. at 226. The Supreme Court decided that the system claims failed to satisfy § 101 because "[n]early every computer" includes those generic components for performing "basic calculation, storage, and transmission functions" and the system claims simply implemented the same abstract idea as the method claims. *Id.* at 226–27. The Court reasoned that (1) "the system claims are no different from the method claims in substance"; (2) "[t]he method claims recite the abstract idea implemented on a generic computer"; and (3) "the system claims recite a handful of generic computer components configured to implement the same idea." *Id.* at 226.

Here, the claimed computer-system components perform "basic calculation, storage, and transmission functions" that nearly every computer system performs. Appeal Br. 19–20, 22–23, 25–27; *see* Final Act. 6; Ans. 6–8. For instance, nearly every computer system includes a "processor" for manipulating data and a "storage device," "memory," or "database" for storing data. Hence, those generic computer-system components do not satisfy the "inventive concept" requirement. *See*, *e.g.*,

Mortg. Grader, Inc. v. First Choice Loan Servs. Inc., 811 F.3d 1314,
1324–25 (Fed. Cir. 2016) (holding that "generic computer components such
as an 'interface,' 'network,' and 'database'" did not satisfy the "inventive
concept" requirement); *FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d
1089, 1095–96 (Fed. Cir. 2016) (describing the claimed "microprocessor"
and "user interface" as "generic computer elements"); *Prism Techs. LLC v.
T-Mobile USA, Inc.*, 696 F. App'x 1014, 1016–17 (Fed. Cir. 2017)
(describing the claimed "authentication server," "access server," "Internet
Protocol network," "client computer device," and "database" as
"indisputably generic computer components").

Insofar as Appellant relies on the recited abstract ideas to satisfy the
"inventive concept" requirement, Appellant wrongly does so. *See*, *e.g.*,
Appeal Br. 7–17; Reply Br. 2–7. A "claimed invention's use of the
ineligible concept," e.g., an abstract idea, "cannot supply the inventive
concept that renders the invention 'significantly more' than that ineligible
concept." *BSG Tech LLC v. BuySeasons, Inc.*, 899 F.3d 1281, 1290
(Fed. Cir. 2018). "[U]nder the *Mayo/Alice* framework, a claim directed to a
newly discovered" abstract idea "cannot rely on the novelty of that discovery
for the inventive concept necessary for patent eligibility." *Genetic Techs.
Ltd. v. Merial L.L.C.*, 818 F.3d 1369, 1376 (Fed. Cir. 2016).

Appellant asserts that the "combination of elements is inventive when
compared to the cited prior art." Appeal Br. 16–17; *see* Reply Br. 7. But the
absence of anticipation and obviousness "does not resolve the question of
whether the claims embody an inventive concept" under *Mayo/Alice*
step two. *Symantec*, 838 F.3d at 1315; *see SAP Am.*, 898 F.3d at 1163. "The
search for a § 101 inventive concept" differs "from demonstrating § 102

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novelty." *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1151 (Fed. Cir. 2016); *see Two-Way Media*, 874 F.3d at 1340. "The 'novelty' of any element[s] or steps" in a claim or even the claim itself "is of no relevance in determining whether the subject matter of a claim" satisfies § 101. *Diehr*, 450 U.S. at 189–90.

Appellant quotes PTO guidance[3] about *Berkheimer*. Appeal Br. 16–17. Appellant then asserts that "[t]he Examiner has not established that the claims fail to claim significantly more than the abstract idea as a matter of fact." *Id.* at 17; *see* Reply Br. 7.

But the PTO guidance about *Berkheimer* explains that citations to court decisions may demonstrate "the well-understood, routine, conventional nature of the additional element(s)." Apr. 19, 2018 PTO Mem. 4. As discussed above, court decisions have recognized that generic computer-system components operating to collect, manipulate, and communicate data are well understood, routine, and conventional to a skilled artisan. *See*, *e.g.*, *Alice*, 573 U.S. at 226–27; *SAP Am.*, 898 F.3d at 1164–65 & n.1, 1170; *Apple*, 842 F.3d at 1234, 1241–42; *Symantec*, 838 F.3d at 1316–20; *Versata*, 793 F.3d at 1334; *Ultramercial*, 772 F.3d at 715–16; *buySAFE*, 765 F.3d at 1355.

Appellant argues that the "claims do not preempt all approaches." Appeal Br. 14. That argument does not persuade us of Examiner error. While preemption may denote patent ineligibility, its absence does not establish patent eligibility. *See FairWarning*, 839 F.3d at 1098. For claims

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[3] USPTO Memorandum, Changes in Examination Procedure Pertaining to Subject Matter Eligibility, Recent Subject Matter Eligibility Decision (*Berkheimer v. HP, Inc.*) (Apr. 19, 2018).

covering a patent-ineligible concept, preemption concerns "are fully
addressed and made moot" by an analysis under the *Mayo/Alice* framework.
Ariosa Diagnostics, Inc. v. Sequenom, Inc., 788 F.3d 1371, 1379 (Fed. Cir.
2015).

"Whether a combination of claim limitations supplies an inventive
concept that renders a claim 'significantly more' than an abstract idea to
which it is directed is a question of law." *BSG Tech*, 899 F.3d at 1290.
Given the claimed generic computer-system components that perform
generic computer functions, we conclude that the combination of limitations
in each independent claim does not supply an "inventive concept" that
renders the claim "significantly more" than an abstract idea. Thus, each
claim does not satisfy § 101 under *Mayo/Alice* step two.

Summary for the Independent Claims 1, 8, and 15

For the reasons discussed above, each independent claim fails to
satisfy § 101 under *Mayo/Alice* step one and step two. Hence, we sustain the
§ 101 rejection of the independent claims.[4]

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[4] In the event of continued prosecution, the Examiner should consider (1) the
applicability of 35 U.S.C. § 112(f) to the limitations in the apparatus claims
and (2) whether under 35 U.S.C. § 112(b) the Specification discloses
adequate corresponding structure, e.g., a suitable algorithm, for
accomplishing each function recited in a limitation. *See*, *e.g.*, *Advanced
Ground Info. Sys., Inc. v. Life360, Inc.*, 830 F.3d 1341, 1349–50 (Fed. Cir.
2016); *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1348–54 (Fed. Cir.
2015); *EON Corp. IP Holdings LLC v. AT&T Mobility LLC*, 785 F.3d 616,
624 (Fed. Cir. 2015). Where a means-plus-function limitation recites two or
more functions, the specification "must disclose adequate corresponding
structure to perform *all* of the claimed functions." *Media Rights Techs., Inc.
v. Capital One Fin. Corp.*, 800 F.3d 1366, 1374 (Fed. Cir. 2015) (emphasis
in original); *see Williamson*, 792 F.3d at 1351–52; *see also Noah Sys., Inc. v.*

Dependent Claims 2–7, 9–14, and 16–20

We also sustain the § 101 rejection of dependent claims 2–7, 9–14, and 16–20 because Appellant does not argue eligibility separately for them. *See* Appeal Br. 6–17; Reply Br. 2–7; 37 C.F.R. § 41.37(c)(1)(iv).

CONCLUSION

We affirm the Examiner's decision to reject claims 1–20.

In summary:

Claims Rejected	35 U.S.C. §	Basis	Affirmed	Reversed
1–20	101	Eligibility	1–20	

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

Intuit Inc., 675 F.3d 1302, 1318–19 (Fed. Cir. 2012) (means-plus-function limitation specifying two functions).