



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
**United States Patent and Trademark Office**  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/725,124	05/29/2015	Philip R. Chauvet	TUC920150031US1	4479
65384	7590	06/30/2020	EXAMINER	
TERRILE, CANNATTI & CHAMBERS, LLP			BANSAL, GURTEJ	
IBM Tucson			ART UNIT	
P.O. BOX 203518			PAPER NUMBER	
AUSTIN, TX 78720			2139	
			NOTIFICATION DATE	DELIVERY MODE
			06/30/2020	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USPTO@dockettrak.com  
tmunoz@tcciplaw.com

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE PATENT TRIAL AND APPEAL BOARD

---

*Ex parte* PHILIP R. CHAUVET, FRANKLIN E. McCUNE,  
DAVID C. REED and MAX D. SMITH

---

Appeal 2019-002301  
Application 14/725,124  
Technology Center 2100

---

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

AMUNDSON, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant<sup>1</sup> seeks our review under 35 U.S.C. § 134(a) from a final rejection of claims 1, 2, 4, 5, 7, 8, 10, 11, 13, 14, 16, and 17, i.e., all pending claims. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

---

<sup>1</sup> We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42 (2018). Appellant identifies the real party in interest as International Business Machines Corporation. Appeal Br. 1.

STATEMENT OF THE CASE

*The Invention*

According to the Specification, the invention concerns “administration of storage control blocks.” Spec. ¶ 1.<sup>2</sup> The Specification explains that “the storage used by control blocks can have an impact on performance of the system including possibly exhausting available system storage.” *Id.* ¶ 4. Hence, the invention endeavors to “provide a straightforward method for managing and profiling control blocks” to “enable limits and recovery actions to be specified by the control block administration operation.” *Id.* ¶¶ 5–6.

According to the Specification, administration of storage control blocks includes (1) identifying storage areas used as control blocks; (2) “profiling the control blocks to provide control block profile information”; (3) storing control block profile information; and (4) “administering the control blocks using the control block profile information.” Spec. ¶ 7, Fig. 3.

*Exemplary Claim*

Independent claim 1 exemplifies the claims at issue and reads as follows (with formatting added for clarity):

1. A method for administering control blocks within a data processing system, the data processing system comprising a host computer and a data storage system, the host computer comprising a control block administration module, the control

---

<sup>2</sup> This decision uses the following abbreviations: “Spec.” for the Specification, filed November May 29, 2015; “Final Act.” for the Final Office Action, mailed June 7, 2018; “Appeal Br.” for the Appeal Brief, filed October 2, 2018; “Ans.” for the Examiner’s Answer, mailed November 29, 2018; and “Reply Br.” for the Reply Brief, filed January 22, 2019.

block administration module comprising a control block profiler, the data storage system comprising a storage controller and a plurality of storage devices, the method comprising:

identifying areas of storage that are currently being used as control blocks, each control block comprising an area of storage containing information;

profiling the control blocks to provide control block profile information, the profiling determining a type of control block;

storing at least some of the control block profile information in a storage location remote from the control blocks;

administering the control blocks using the control block profile information; and,

establishing control block properties to be monitored based upon the type of control block; and

wherein the control block information includes a control block unique identifier length indicator, a location of the unique identifier of the control block, an identification of the unique identifier, secondary identifying characteristic of the control block if available, a control block length indicator of each control block, an indication of a limit to a total number of allowable control blocks of a particular type, control section (CSECT) names indicating a location from which the storage for control block is obtained, information regarding common storage task termination handling for the control block.

Appeal Br. 8 (Claims App.).

*The Rejection on Appeal*

Claims 1, 2, 4, 5, 7, 8, 10, 11, 13, 14, 16, and 17 stand rejected under 35 U.S.C. § 101 as directed to patent-ineligible subject matter. Final Act. 2-3.

## 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. 2–4; Ans. 3–5. 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”).<sup>3</sup> 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).

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

---

<sup>3</sup> In response to received public comments, the PTO issued further guidance in October 2019 clarifying the 2019 Guidance. October 2019 Update: Subject Matter Eligibility (Oct. 17, 2019) (available at [https://www.uspto.gov/sites/default/files/documents/peg\\_oct\\_2019\\_update.pdf](https://www.uspto.gov/sites/default/files/documents/peg_oct_2019_update.pdf)).

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*

Patent-ineligible abstract ideas include mental processes, mathematical formulas, and fundamental economic practices. *See, e.g., Alice*, 573 U.S. at 219–20 (fundamental economic practice of intermediated settlement); *Bilski v. Kappos*, 561 U.S. 593, 599, 611–12 (2010) (fundamental economic practice of hedging or protecting against risk in independent claim and mathematical formula in dependent claim); *Parker v. Flook*, 437 U.S. 584, 585–86, 596–98 (1978) (mathematical formula for calculating updated alarm limit); *Gottschalk v. Benson*, 409 U.S. 63, 65–67 (1972) (mental process of converting binary-coded-decimal representation to binary representation). The 2019 Guidance specifies three groupings of abstract ideas: (1) mental processes, (2) mathematical concepts, and (3) certain methods of organizing human activity. 84 Fed. Reg. at 51–52.

In *Alice*, the Supreme Court “did not establish any ‘precise contours’ for defining whether claims are directed to ‘abstract ideas’ or something else.” *Cellspin Soft, Inc. v. Fitbit, Inc.*, 927 F.3d 1306, 1315 (Fed. Cir. 2019) (citing *Alice*, 573 U.S. at 221). Further, 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 the abstract idea of “creating a profile, and using that profile to administer memory.” Final Act. 2; *see* Ans. 4. The Examiner explains that the claims encompass concepts similar to “concepts identified as an abstract ideas [sic] by the Courts,” e.g., the abstract idea of “creating an index, and using that index to access memory.” Final Act. 2 (citing *Intellectual Ventures I LLC v. Erie Indemnity Co.*, 850 F.3d 1315 (Fed. Cir. 2017) (“*Erie Indemnity*”)); *see* Ans. 3–4. The Examiner reasons that “while the claims necessarily cabin the idea [of] providing control block profile information and administering the control blocks using the control block information, these steps essentially equate to creating an index, and using the index to access memory.” Ans. 3–4.

Appellant disputes that independent claims 1, 7, and 13 are directed to an abstract idea. *See* Appeal Br. 4–6; Reply Br. 1. Appellant asserts that “the claims do not recite matter that falls within one of the enumerated groupings of abstract ideas” in the 2019 Guidance. Reply Br. 1.

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. 2–3; Ans. 3–4; *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., mental processes. *See* 84 Fed. Reg. at 51–52. The 2019 Guidance describes mental processes as “concepts performed in the human



mind,” such as “an observation, evaluation, judgment, [or] opinion.” *Id.* at 52 (footnote omitted).

Here, each independent claim recites the following limitations encompassing observations and evaluations performed by a human mentally or with pen and paper:

- “profiling the control blocks to provide control block profile information, the profiling determining a type of control block”; and
- “establishing control block properties to be monitored based upon the type of control block.”

Appeal Br. 8–11.

The “profiling” and “establishing” limitations encompass observations and evaluations performed by a human mentally or with pen and paper because someone could mentally review information about control block usage. After mentally reviewing information about control block usage, someone could mentally or with pen and paper categorize or profile the control blocks by determining different types of control blocks. As an example, someone could profile control blocks based on size as small, medium, or large. *See* Spec. ¶ 3. As another example, someone could profile control blocks based on location as residing in private storage or common storage. *Id.* ¶¶ 3, 22–23. In addition, someone could mentally or with pen and paper specify or establish control block properties to be monitored based upon the type of control block. For instance, someone could establish a first set of properties for small control blocks, a second set of properties for medium control blocks, and a third set of properties for large control blocks. *Id.* ¶¶ 21, 33.

For these reasons, the “profiling” and “establishing” limitations encompass observations and evaluations performed by a human mentally or with pen and paper. The 2019 Guidance identifies observations and evaluations performed by a human mentally or with pen and paper as mental processes, and thus an abstract idea. 84 Fed. Reg. at 52 & nn.14–15; *see also Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1318 (Fed. Cir. 2016) (“*Symantec*”) (“[W]ith the exception of generic computer-implemented steps, there is nothing in the claims themselves that foreclose them from being performed by a human, mentally or with pen and paper.”). Hence, under the 2019 Guidance, each independent claim recites an abstract idea.

Further, as the Examiner properly determines, the claims resemble the claims in *Erie Indemnity*. There, the claims covered “creating an index and using that index to search for and retrieve data.” 850 F.3d at 1327. For *Mayo/Alice* step one, the Federal Circuit reasoned that “[t]his type of activity, i.e., organizing and accessing records through the creation of an index-searchable database, includes longstanding conduct that existed well before the advent of computers and the Internet.” *Id.* The court explained that “a hardcopy-based classification system (such as library-indexing system) employs a similar concept.” *Id.* Here, the claims cover creating a profile and using that profile for “administering” data similar to the claims in *Erie Indemnity*. *See* Appeal Br. 8–11.

*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. 8–11. Specifically, method claim 1 recites a “data processing system comprising a host computer and a data storage system.” *Id.* at 8. The “data storage system compris[es] a storage controller and a plurality of storage devices.” *Id.* Similarly, system claim 7 recites a “processor,” a “data bus coupled to the processor,” a “computer-usable medium embodying computer program code,” and a “data storage system comprising a storage controller and a plurality of storage devices.” *Id.* at 9. Claim 13 recites a similar “computer-usable medium embodying computer program code” and a “data processing system comprising a host computer and a data storage system” that comprises “a storage controller and a plurality of storage devices.” *Id.* at 11.

In addition, each independent claim recites the following data-collecting and data-manipulating limitations:

- “identifying areas of storage that are currently being used as control blocks, each control block comprising an area of storage containing information”;
- “storing at least some of the control block profile information in a storage location remote from the control blocks”; and
- “administering the control blocks using the control block profile information.”

Appeal Br. 8–11.

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. 2–4; Ans. 3–5. Instead, the claimed computer-system components constitute generic computer-system components that perform generic computer functions. *See* Spec. ¶¶ 16, 28, 35, 39. Further, the data-collecting and data-manipulating limitations constitute insignificant extra-solution activity. *See, e.g., Mayo*, 566 U.S. at 79; *Bilski*, 561 U.S. at 611–12; *Apple*, 842 F.3d at 1241–42; *OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1363–64 (Fed. Cir. 2015); *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 716 (Fed. Cir. 2014); *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1370 (Fed. Cir. 2011); *In re Grams*, 888 F.2d 835, 839–40 (Fed. Cir. 1989).

As an example of insignificant extra-solution activity, in *Mayo* the Supreme Court decided that measuring metabolite levels for later analysis constituted purely “conventional or obvious” pre-solution activity. *Mayo*, 566 U.S. at 79. Similarly, the Federal Circuit has held that mere data-gathering steps “cannot make an otherwise nonstatutory claim statutory.” *CyberSource*, 654 F.3d at 1370 (quoting *Grams*, 888 F.2d at 840). The Federal Circuit has also held that (1) presenting offers to potential customers and (2) gathering statistics concerning responses were “conventional data-gathering activities that [did] not make the claims patent eligible.” *OIP Techs.*, 788 F.3d at 1363–64. Consistent with those decisions, the Manual of Patent Examining Procedure (“MPEP”) identifies “gathering data” as an example of insignificant pre-solution activity. MPEP § 2106.05(g) (9th ed. rev. 08.2017 Jan. 2018).

Here, the data-collecting limitations amount to mere data-gathering steps and require nothing unconventional or significant. *See Classen*

*Immunotherapies, Inc. v. Biogen IDEC*, 659 F.3d 1057, 1067 (Fed. Cir. 2011) (analogizing “data gathering” to “insignificant extra-solution activity”). In particular, the “identifying” and “storing” limitations in each independent claim operate to make data available for processing like the “conventional data-gathering activities” in *OIP Technologies*. See *OIP Techs.*, 788 F.3d at 1363–64; see also *Bilski*, 561 U.S. at 611–12 (establishing inputs for mathematical formula). Hence, the data-collecting limitations in each claim do not help integrate the recited abstract idea into a practical application.

Further, in *Flook* the Supreme Court decided that adjusting an alarm limit according to a mathematical formula was “post-solution activity” and insufficient to confer eligibility. *Flook*, 437 U.S. at 590, 596–98; see *Bilski*, 561 U.S. at 610–11 (discussing *Flook*). Similarly, the Federal Circuit has held that printing menu information constituted insignificant post-solution activity. *Apple*, 842 F.3d at 1241–42. Consistent with those decisions, the MPEP identifies printing “to output a report” as an example of insignificant post-solution activity. MPEP § 2106.05(g).

Here, the data-manipulating limitations require nothing unconventional or significant. Instead, the “administering” limitation in each independent claim constitutes token post-solution activity analogous to adjusting an alarm limit in *Flook*. See Ans. 3. Hence, the data-manipulating limitation in each claim does not help integrate the recited abstract idea into a practical application.

Appellant asserts that the “claims are directed to a practical application” of “administering control blocks within a data processing system” because the “claims recite a specific set of steps that improve the

functionality of a computer and address a technological problem.” Appeal Br. 4; Reply Br. 1; *see* Appeal Br. 5. Appellant similarly asserts that the “claims address an undeniably technology-based problem (monitoring control blocks within a data storage system) in an unconventional manner.” Appeal Br. 5.

We disagree that the claims are directed to a technological improvement. Similar to the claims in *Erie Indemnity*, the claims here “are not focused on *how* usage of” control block profile information to administer control blocks alters a computer or storage device “in a way that leads to an improvement in the technology” for control blocks. *See Erie Indemnity*, 850 F.3d at 1328. For example, the claims here contain no details about how administering control blocks using control block profile information achieves a technological improvement. “Claims directed to generalized steps to be performed on a computer using conventional computer activity are not patent eligible.” *Two-Way Media Ltd. v. Comcast Cable Commc’ns, LLC*, 874 F.3d 1329, 1337 (Fed. Cir. 2017).

Accordingly, the Examiner correctly determines that “the claims do not recite any improvement.” Ans. 5. As the Examiner reasons, the “claims merely amount to the profiling of information, which . . . amounts to an abstract invention with no recited improvement.” *Id.* As the Examiner also reasons, the claimed “profiling of control information, storing at least some of the profile information, [and] administering control information” includes “longstanding conduct that existed well before the advent of computers and the Internet.” *Id.* at 4.

The Specification discusses an alleged improvement to a deficiency with “known systems,” i.e., a failure to free storage associated with control

blocks residing in certain locations under certain conditions. *See* Spec. ¶¶ 4, 22–23. As broadly drafted, however, the claims do not capture that alleged improvement. Unclaimed improvements 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*, 874 F.3d at 1338–39; *Erie Indemnity*, 850 F.3d at 1331–32.

Appellant analogizes the claims here to the claims in the following cases: *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016), and *Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288 (Fed. Cir. 2016). *See* Appeal Br. 5–6. But the claims here do not resemble the claims in *Enfish* or *Amdocs*.

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 memory or 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, Inc. v. Blue Coat Sys., Inc.*, 879 F.3d 1299, 1305 (Fed. Cir. 2018).

Unlike the claims in *Enfish*, the claims here do not recite a “specific improvement to the way computers operate.” *See* Ans. 4–5. 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 the Examiner reasons, the “claims merely amount to the profiling of

information, which . . . amounts to an abstract invention with no recited improvement.” *Id.*

In *Amdocs*, the patents concerned network components “arrayed in a distributed architecture” that “collect[ed] and process[ed] data close to its source,” and thus enabled “load distribution” and reduced network congestion. *Amdocs*, 841 F.3d at 1291–92, 1300, 1303, 1306. The Federal Circuit decided that the claims satisfied § 101 under *Mayo/Alice* step two because they either (1) “entail[ed] an unconventional technological solution . . . to a technological problem” that required generic computer components to “operate in an unconventional manner to achieve an improvement in computer functionality” or (2) “recite[d] a technological solution to a technological problem specific to computer networks—an unconventional solution that was an improvement over the prior art.” *Id.* at 1299–1306.

Unlike the claims in *Amdocs*, the claims here do not provide an unconventional technological solution to a technological problem. *See* Final Act. 2–3; Ans. 4–5. For example, the claims do not require generic computer components to “operate in an unconventional manner to achieve an improvement in computer functionality.” *See* Appeal Br. 8–11.

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 MPEP §§ 2106.05(a)–(c), 2106.05(e)). 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. *RapidLitig. 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. Appeal Br. 8–11. The Specification describes the claimed computer-system components generically and evidences their conventional nature. *See Spec.* ¶¶ 16, 28, 35, 39.

As an example, the Specification explains that a “host computer” includes “a mainframe, personal computer, workstation, and combinations thereof.” Spec. ¶28. As another example, the Specification explains that a “storage system” includes “a storage system such as those available from International Business Machines under the trade designation IBM DS6000 or DS8000.” *Id.* ¶16. As yet another example, the Specification explains that a “computer readable storage medium” includes “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.” *Id.* ¶35.

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*, 409 U.S. at 64–65, 71).

Moreover, the claimed computer-system components operate to collect and manipulate data. Appeal Br. 8–11; *see* Final Act. 2–3; Ans. 3. Court decisions have recognized that generic computer-system components operating to collect and manipulate 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 Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1334 (Fed. Cir. 2015); *Ultramercial*, 772 F.3d at 715–16; *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., “host computer” or “processor”) with a “communications

controller” (e.g., “data bus”) and a “data storage unit” (e.g., a “data storage system,” “storage controller,” or “storage device”). *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. 8–11; *see* Final Act. 2–3; Ans. 3. For instance, nearly every computer system includes a “processor” for manipulating data and a “storage device” for storing data. Nothing in the claims “requires anything other than conventional computer . . . components operating according to their ordinary functions.” *See Two-Way Media*, 874 F.3d at 1339, 1341.

Hence, the claimed computer-system components do not satisfy the “inventive concept” requirement. *See, e.g., Customedia Techs., LLC v. Dish Network Corp.*, 951 F.3d 1359, 1361, 1366 (Fed. Cir. 2020) (describing the claimed “processor,” “storage device,” “programmable receiver unit,” and “remote server” as “generic computer components”); *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”).

We reach a similar conclusion concerning the data-collecting and data-manipulating limitations, i.e., the “identifying,” “storing,” and “administering” limitations. As discussed above, the data-collecting limitations amount to mere data-gathering steps and require nothing unconventional or significant. As also discussed above, the data-manipulating limitations constitute token post-solution activity and require nothing unconventional or significant. Consequently, the claimed insignificant extra-solution activity does not satisfy the “inventive concept” requirement. *See, e.g., Mayo*, 566 U.S. at 79–80; *Bilski*, 561 U.S. at 611–12; *Flook*, 437 U.S. at 590; *Apple*, 842 F.3d at 1241–42; *OIP Techs.*, 788 F.3d at 1363–64; *CyberSource*, 654 F.3d at 1370. As the Examiner reasons, “that the control blocks are stored in memory is routine and conventional since this data would need to be accessed when access[ing] the memory,” and “these control blocks must be administered, so they contain up to date data in order to access the memory.” Ans. 3.

Citing PTO guidance about *Berkheimer*,<sup>4</sup> Appellant asserts that no showing has been made that the “claimed combination of elements is . . . well-understood, routine or conventional.” Appeal Br. 4. That PTO guidance states that a “citation to one or more . . . court decisions” may demonstrate that additional elements are well understood, routine, and conventional to a skilled artisan. Apr. 19, 2018 PTO Mem. 4. As discussed above, court decisions have recognized that generic computer-system components operating to collect and manipulate 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 contends that “the claims are narrowly drawn to not preempt any and all generic enhancement of data in a similar system.” Appeal Br. 6.

Appellant’s preemption 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 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).

---

<sup>4</sup> PTO Memorandum, Changes in Examination Procedure Pertaining to Subject Matter Eligibility, Recent Subject Matter Eligibility Decision (*Berkheimer v. HP, Inc.*) (Apr. 19, 2018) (“Apr. 19, 2018 PTO Mem.”).

“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 LLC v. BuySeasons, Inc.*, 899 F.3d 1281, 1290 (Fed. Cir. 2018). Considering the claim limitations as an ordered combination adds nothing to the abstract idea that is not already present when the limitations are considered separately. *See Mayo*, 566 U.S. at 79; Final Act. 2–3. The ordered combination of limitations in each independent claim amounts to nothing more than the abstract idea implemented with generic computer-system components that perform generic computer functions. *See Alice*, 573 U.S. at 225–26; Final Act. 2–3. Hence, we conclude that the ordered combination of limitations in each independent claim does not supply an “inventive concept” that renders the claim “significantly more” than the abstract ideas. *See* Final Act. 2–3. Thus, each claim does not satisfy § 101 under *Mayo/Alice* step two.

*Summary for Independent Claims 1, 7, and 13*

For the reasons discussed above, Appellant’s arguments have not persuaded us of any error in the Examiner’s findings or conclusions under *Mayo/Alice* step one or step two. Hence, we sustain the § 101 rejection of the independent claims.

*Dependent Claims 2, 4, 5, 8, 10, 11, 14, 16, and 17*

We also sustain the § 101 rejection of dependent claims 2, 4, 5, 8, 10, 11, 14, 16, and 17 because Appellant does not argue eligibility separately for them. *See* Appeal Br. 4–6; Reply Br. 1; 37 C.F.R. § 41.37(c)(1)(iv).

CONCLUSION

We affirm the Examiner’s decision to reject claims 1, 2, 4, 5, 7, 8, 10, 11, 13, 14, 16, and 17.

In summary:

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
1, 2, 4, 5, 7, 8, 10, 11, 13, 14, 16, 17	101	Eligibility	1, 2, 4, 5, 7, 8, 10, 11, 13, 14, 16, 17	

**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)(1)(iv). *See* 37 C.F.R. § 41.50(f).

**AFFIRMED**