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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* JOHN GRAHAM TAYSOM and DAVID CLEEVELY

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Appeal 2018-000927  
Application 14/462,318  
Technology Center 3600

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Before JOHN A. JEFFERY, DENISE M. POTHIER, and  
JUSTIN BUSCH, *Administrative Patent Judges*.

POTHIER, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants<sup>1,2</sup> appeal under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1–10, 12, 15, 16, 18, 19, 21–24, 26–32, 36, and 38–47. Br. 3. Claims 11, 13, 14, 17, 20, 25, 33–35, and 37 have been canceled. *Id.* at 30–31, 33 (Claims App'x).

We affirm.

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<sup>1</sup> Throughout this Opinion, we refer to the Final Action (“Final Act.”) mailed April 27, 2016, the Appeal Brief (“Br.”) filed December 27, 2016 (supplemented September 26, 2018), and the Examiner’s Answer (“Ans.”) mailed May 10, 2017.

<sup>2</sup> As noted on page 1 of the Supplemental Appeal Brief filed September 26, 2018, Appellants identify the real party in interest as Privitar Limited.

## STATEMENT OF THE CASE

Existing proxy servers or services allow anonymous web access but forgo any personalized response unique to the user, such as preferential access speeds or private information. Spec. 2:22–34. Appellants’ invention relates to anonymizing an interaction between a user’s computing device and a service provider. *Id.* at 3:8–10. The user is assigned to a user set sharing a characteristic, including personal information relating to each user such as age, gender, health details, medical treatment, and salary. *Id.* at 3:13–14, 6:8–12. The service provider obtains information relating to the characteristic in providing the service to the user. *Id.* at 3:18–21. The provided service “is appropriate in view of the characteristics of the user entity but insufficient to identify the user entity.” *Id.* at 3:21–22.

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

1. A method of anonymising an interaction between a user entity comprising a computing device and a service provider node wishing to provide a service via a network to the user entity in dependence upon a characteristic of the user entity, said interaction having a value associated therewith, the method comprising:
  - assigning the user entity to one of a plurality of sets, each set comprising as members a plurality of user entities sharing a characteristic associated with the one set;
  - counting the number of user entities in the one set and calculating a share of said value attributable to each user entity of the one set by dividing the value by the number of user entities in the one set;
  - associating the calculated share with the user entity;
  - ensuring that said one set comprises at least a predetermined minimum number of user entities;
  - generating information regarding the characteristic which is associated with the one set;

as a result of the ensuring, providing to the service provider node, as part of the interaction, the generated information regarding the characteristic which is associated with the one set without revealing the identity of the user entity to the service provider node, the generated information enabling the service provider node to personalize the service which is provided to the user entity based upon the characteristic which is associated with the one set;

after the providing the generated information to the service provider node, receiving the service from the service provider node which is personalized to the user entity;

wherein the assigning, counting, calculating, associating, ensuring, generating, providing the generated information and receiving acts are performed at an anonymiser system disposed on a communication path between the user entity and the service provider node, the anonymiser system comprising a cooperation of nodes; and

after the receiving, providing the personalized service to the user entity via the anonymiser system as part of the interaction between the user entity and the service provider node without the identity of the user entity being revealed to the service provider node.

Br. 27–28 (Claims App’x).

### CONTENTIONS

Claims 1–10, 12, 15, 16, 18, 19, 21–24, 26–32, 36, and 38–47 are rejected under 35 U.S.C. § 101 as being directed to a judicial exception without significantly more. Final Act. 3–6. The Examiner determined that the claims are directed to an abstract idea of analyzing anonymous interactions with a service provider or a mental process. *Id.* at 3–4, 6. The Examiner added that the claims, when considered as a whole, are nothing more than an application or instruction to implement the abstract idea on a generic computer system and in a well-understood, routine, and conventional

technological environment. *Id.* at 5. Based on these determinations, the Examiner concluded that the claims are ineligible under § 101. *Id.* at 6; *see* Ans. 4–12.

Appellants argue that the claimed invention is not directed to an abstract idea. *See* Br. at 8–10. According to Appellants, the Examiner fails to account for the specific recited limitations that are not directed to an abstract idea (*id.* at 10–14), and these limitations add significantly more to the purported abstract idea to render the claims eligible (*see id.* at 14–19).

#### ISSUE

Under § 101, has the Examiner erred in rejecting the claims by determining that the claims are directed to judicially excepted, patent-ineligible subject matter?

#### PRINCIPLES OF LAW

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

In determining whether a claim falls within an excluded category, we are guided by the Supreme Court’s two-step framework, described in *Mayo* and *Alice*. *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208, 217–18 (2014) (citing *Mayo*, 566 U.S. at 75–77). In accordance with that

framework, we first determine what concept the claim is “directed to.” *See Alice*, 573 U.S. at 219 (“On their face, the claims before us are drawn to the concept of intermediated settlement, *i.e.*, the use of a third party to mitigate settlement risk.”); *see also Bilski v. Kappos*, 561 U.S. 593, 611 (2010) (“Claims 1 and 4 in petitioners’ application explain the basic concept of hedging, or protecting against risk.”).

Concepts determined to be abstract ideas, and thus patent ineligible, include certain methods of organizing human activity, such as fundamental economic practices (*Alice*, 573 U.S. at 219–20; *Bilski*, 561 U.S. at 611); mathematical formulas (*Parker v. Flook*, 437 U.S. 584, 594–95 (1978)); and mental processes (*Gottschalk v. Benson*, 409 U.S. 63, 69 (1972)). Concepts determined to be patent eligible include physical and chemical processes, such as “molding of rubber products” (*Diehr*, 450 U.S. at 193); “tanning, dyeing, making water-proof cloth, vulcanizing India rubber, smelting ores” (*id.* at 182 n.7 (quoting *Corning v. Burden*, 56 U.S. (15 How.) 252, 267–68 (1854))); and manufacturing flour (*Benson*, 409 U.S. at 69 (citing *Cochrane v. Deener*, 94 U.S. 780, 785 (1876))).

In *Diehr*, the claim at issue recited a mathematical formula, but the Supreme Court held that “[a] claim drawn to subject matter otherwise statutory does not become nonstatutory simply because it uses a mathematical formula.” *Diehr*, 450 U.S. at 187; *see also id.* at 191 (“We view respondents’ claims as nothing more than a process for molding rubber products and not as an attempt to patent a mathematical formula.”). That said, the Supreme Court also indicated that a claim “seeking patent protection for that formula in the abstract . . . is not accorded the protection of our patent laws, . . . and this principle cannot be circumvented by

attempting to limit the use of the formula to a particular technological environment.” *Id.* (citing *Benson* and *Flook*); *see, e.g., id.* at 187 (“It is now commonplace that an *application* of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection.”).

If the claim is “directed to” an abstract idea, we turn to the second step of the *Alice* and *Mayo* framework, where “we must examine the elements of the claim to determine whether it contains an ‘inventive concept’ sufficient to ‘transform’ the claimed abstract idea into a patent-eligible application.” *Alice*, 573 U.S. at 221 (quotation marks omitted). “A claim that recites an abstract idea must include ‘additional features’ to ensure ‘that the [claim] is more than a drafting effort designed to monopolize the [abstract idea].’” *Id.* (quoting *Mayo*, 566 U.S. at 77). “[M]erely requir[ing] generic computer implementation[] fail[s] to transform that abstract idea into a patent-eligible invention.” *Id.*

In January 2019, the USPTO published revised guidance on the application of § 101. *2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50 (Jan. 7, 2019) (“Revised Guidance”). Under that guidance, we first look to whether the claim recites:

- (1) any judicial exceptions, including certain groupings of abstract ideas (i.e., mathematical concepts, certain methods of organizing human activities such as a fundamental economic practice, or mental processes) (Revised Guidance, 84 Fed. Reg. at 52–54) (“Revised Step 2A - Prong 1”); and
- (2) additional elements that integrate the judicial exception into a practical application (*see* MANUAL OF PATENT EXAMINING PROCEDURE

(“MPEP”) §§ 2106.05(a)–(c), (e)–(h)) (Revised Guidance, 84 Fed. Reg. at 53–55) (“Revised Step 2A - Prong 2”).

Only if a claim (1) recites a judicial exception, and (2) does not integrate that exception into a practical application, do we then look to whether the claim:

(3) adds a specific limitation beyond the judicial exception that is not well-understood, routine, and conventional in the field (*see* MPEP § 2106.05(d)); or

(4) simply appends well-understood, routine, and conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.

*See* Revised Guidance, 84 Fed. Reg. at 56 (“Step 2B”).

## ANALYSIS

CLAIMS 1–10, 12, 15, 16, 18, 19, 21–24, 26–32, 36, 38, and 41–47

Appellants argue claims 1–10, 12, 15, 16, 18, 19, 21–24, 26–32, 36, 38, 41–47 as a group. *See* Br. 7–25.<sup>3</sup> We select independent claim 1 as representative. *See* 37 C.F.R. § 41.37(c)(1)(iv).

### *Alice Step One*

To determine whether claim 1 is eligible under § 101, we determine whether the claim as a whole is directed to a judicial exception, namely an abstract idea. *See Alice*, 573 U.S. at 217. To this end, we determine (1) whether claim 1 recites a judicial exception (Revised Step 2A - Prong 1)

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<sup>3</sup> Appellants include claims 39 and 40 (*id.* at 7) in this group but separately argue claims 39 and 40 (*id.* at 25–26). Appellants separately group claims 29–31, but present similar arguments as claims 1–10, 12, 15, 16, 18, 19, 21–24, 26–28, 32, 36, 38, and 41–47. *Compare id.* at 7–19 (addressing the immediately preceding claims), *with id.* at 19–25 (discussing claims 29–31).

and, if so, (2) whether the identified judicial exception is integrated into a practical application (Revised Step 2A – Prong 2). *See Revised Guidance*, 84 Fed. Reg. at 52–55.

*Revised Step 2A - Prong 1*

In Revised Step 2A – Prong 1, we identify claim 1’s specific limitations that recite a judicial exception, and determine whether the identified limitations fall within certain subject matter groupings, namely (a) mathematical concepts (mathematical relationships, mathematical formulas, and mathematical calculations); (b) certain methods of organizing human activity (e.g., fundamental economic principles or practices, commercial or legal interactions, and managing personal behavior or relationships or interactions between people); or (c) mental processes (e.g., concepts performed in the human mind including an observation, evaluation, judgment, or opinion). *See Revised Guidance*, 84 Fed. Reg. at 52.

We agree with the Examiner (*see* Final Act. 3–4) that claim 1 recites at least one judicial exception. The recited judicial exception can be categorized as at least one of certain methods of organizing human activity, mental processes, and a mathematical concept. Br. 27–28 (Claims App’x).

Claim 1 recites a “method of anonymising an interaction between a user entity . . . and a service provider . . . wishing to provide a service . . . to the user entity in dependence upon a characteristic of the user entity, said interaction having a value associated therewith,” the method comprising the following steps: (A) “assigning the user entity to one of a plurality of sets, each set comprising as members a plurality of user entities sharing a characteristic associated with the one set,” (B) “counting the number of user entities in the one set and calculating a share of said value attributable to

each user entity of the one set by dividing the value by the number of user entities in the one set,” (C) “associating the calculated share with the user entity,” (D) “ensuring that said one set comprises at least a predetermined minimum number of user entities,” (E) “generating information regarding the characteristic which is associated with the one set,” (F)

as a result of the ensuring, providing to the service provider . . . , as part of the interaction, the generated information regarding the characteristic which is associated with the one set without revealing the identity of the user entity to the service provider . . . , the generated information enabling the service provider . . . to personalize the service which is provided to the user entity based upon the characteristic which is associated with the one set,

(G) “after the providing the generated information to the service provider . . . , receiving the service from the service provider . . . which is personalized to the user entity,” and (H) “after the receiving, providing the personalized service to the user entity . . . as part of the interaction between the user entity and the service provider . . . without the identity of the user entity being revealed to the service provider . . . .” Br. 27–28 (Claims App’x) (“steps (A)–(H)”).

Steps (A) and (D)–(H), under their broadest reasonable interpretation, recite providing a personalized service to a user dependent on a shared characteristic while keeping the user’s interactions anonymous. *See id.*; *see also* Spec. 3:8–12; Abstract. These steps (A) and (D)–(H) recite certain methods of organizing human activity, including commercial interactions such as marketing activities directed to users having a shared characteristic, such as a characteristic based on where the users are located or a

characteristic closely associated with the advertiser’s product. *See Spec.* 13:24–28, 14:17–19, 14:31–15:3.

Notably, in *Mortgage Grader, Inc. v. First Choice Loan Services Inc.*, 811 F.3d 1314, 1318 (Fed. Cir. 2016), the court analyzed whether a system that matched a borrower’s calculated credit grading with lenders’ loan packages while the borrower remained anonymous was directed to non-statutory subject matter. The court determined this system was directed to “implementations of economic arrangements using generic computer technology” (*id.* at 1322) and its steps “could all be performed by humans without a computer” (*id.* at 1324). Similar to the claims in *Mortgage Grader*, the recited steps (A) and (D)–(H) anonymize interactions between two parties—a user entity and a service provider.

For example, “assigning the user entity to one of a plurality of sets, each set comprising . . . user entities sharing a characteristic . . .” and “ensuring that said one set comprises at least a predetermined minimum number of user entities,” as steps (A) and (D) recite, involve keeping the user entity’s identity anonymous by assigning the user entity to a set of user entities sharing a characteristic. The user entity can be identified by the shared characteristic rather than information unique to the user entity. Steps (A) and (D), which facilitate anonymous interactions between a user entity and a service provider, are like steps in *Mortgage Grader* found to implement an economic arrangement that can be performed by humans. *See id.* at 1318, 1322, 1324 (determining steps that facilitate anonymous loan shopping, including determining a credit grading distinct from a borrower’s credit score, recite an economic arrangement that can be performed by humans). Additionally, “generating information regarding the characteristic

which is associated with the one set” in step (E) involves keeping the user’s identity anonymous by generating information regarding the characteristic rather than information unique to the user entity. *See id.* (holding ineligible claims reciting calculating a credit grading for a borrower based on underwriting criteria used by lenders as part of an economic arrangement).

Also,

as a result of the ensuring, providing to the service provider . . . , as part of the interaction, the generated information regarding the characteristic which is associated with the one set without revealing the identity of the user entity to the service provider . . . , the generated information enabling the service provider . . . to personalize the service which is provided to the user entity based upon the characteristic which is associated with the one set,

“after the providing the generated information to the service provider . . . , receiving the service from the service provider . . . which is personalized to the user entity,” and “after the receiving, providing the personalized service to the user entity . . . as part of the interaction between the user entity and the service provider . . . without the identity of the user entity being revealed to the service provider,” as steps (F)–(H) recite, are activities that take place when keeping the user’s identity anonymous and providing a personalized service to the user entity. *See id.* (holding claims reciting steps that (1) enable a borrower to remain anonymous to lenders by identifying loan packages for a borrower based on a credit grading and (2) display information related to each loan package to the borrower as directed to an economic arrangement).

Moreover, courts have found tailoring or personalizing information on web pages based on information about the user (e.g., based on an

individual's location), without more, is an abstract idea. *See Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1369 (Fed. Cir. 2015) (concluding that claims directed to “customizing information based on . . . information known about the user” were no more than an abstract idea).

Accordingly, steps (A) and (D)–(H) recite commercial interactions, namely marketing activities, which is one of certain methods of organizing human activity identified in the Revised Guidance, and thus an abstract idea. *See* 84 Fed. Reg. at 52.

As for steps (B) and (C), these processes recite determining a user entity's share of the interaction's value. *See* Br. 37 (Claims App'x). These are processes that would occur normally in a human's mind when determining a user's individual share of the interaction's value. For example, “counting the number of user entities in the one set and calculating a share of said value attributable to each user entity of the one set by dividing the value by the number of user entities in the one set,” as step (B) recites, is an activity that takes place when determining a user's individual share. This is also an activity that a person can perform mentally (or with pen and paper) by (1) *evaluating* the value of an interaction between a user and a service provider (e.g., an advertisement), (2) counting the number of users in a set, and (3) dividing the value by the number of users in the set to determine the value (e.g., points) attributable to each user entity. Br. 27 (Claims App'x); *see also* Spec. 7:28–32, 15:13–26. Next, “associating the calculated share with the user entity,” as recited in step (C), involves a person associating mentally or recording (e.g., with pen and paper) the individual share with the user entity. *See Benson*, 409 U.S. at 67 (indicating converting BCD numbers to pure binary numbers can be done mentally and

that “mental processes ... are not patentable, as they are the basics tools of scientific and technological work”).

Additionally, step (B) involves “counting” a number of user entities and “calculating a share . . . by dividing the value by the number of user entities in the one set.” Br. 27 (Claims App’x); *see also* Spec. 7:16. In this regard, step (B)’s “counting” and “dividing” reduces the individual share determination to a mathematical concept (e.g., relationship, formula, or calculation) like the claims in *Bilski*. *See Bilski*, 561 U.S. at 611 (indicating “[t]he concept of hedging . . . reduced to a mathematical formula . . . is an unpatentable abstract idea[.]”); *Flook*, 437 U.S. at 594 (indicating “the discovery of [a mathematical formula] cannot support a patent unless there is some other inventive concept.”); *see also Digitech Image Techs., LLC v. Elecs. for Imaging, Inc.*, 758 F.3d 1344, 1350 (Fed. Cir. 2014) (concluding that claims to a “process of organizing information through mathematical correlations” not tied to a specific structure or machine was directed to an abstract idea). In this regard, we further determine step (B)’s “counting” and “calculating a share . . . by dividing” functions also recite a mathematical concept.

Accordingly, steps (B) and (C) recite mental processes and mathematical concepts, which are yet other judicial exception categories identified in the Revised Guidance, and thus an abstract idea. *See* 84 Fed. Reg. at 52.

For the above reasons, we determine claim 1 recites certain methods of organizing human activity, mental processes, and a mathematical concept identified in the Revised Guidance, and thus an abstract idea.

*Revised Step 2A - Prong 2*

Because claim 1 recites an abstract idea, we must determine whether the abstract idea is integrated into a practical application, namely whether the claim applies, relies on, or uses the abstract idea in a manner that imposes a meaningful limit on the abstract idea, such that the claim is more than a drafting effort designed to monopolize the abstract idea. *See Revised Guidance*, 84 Fed. Reg. at 53. To this end, we (1) identify whether there any additional, recited elements beyond the judicial exception, and (2) evaluate those elements individually and collectively to determine whether they integrate the exception into a practical application. *See id.*, 84 Fed. Reg. at 54–55.

The additional elements beyond the above-identified judicial exceptions recited in claim 1 are a “computing device,” a service provider “node,” “a network,” and “an anonymiser system disposed on a communication path between the user entity and the service provider node, the anonymiser system comprising a cooperation of nodes.” Br. 27–28 (Claims App’x). When considering these elements individually or in combination, we determine they do not integrate the above-identified judicial exceptions into a practical application.

The identified additional elements beyond the identified judicial exceptions in claim 1 do not reflect an improvement in a computer’s functioning or an improvement to other technology or technical field as set forth in MPEP § 2106.05(a) and the Revised Guidance, 84 Fed. Reg. at 55. Here, the additionally recited elements merely automate certain methods of organizing human activity, mental processes, and mathematical concepts using generic computer elements. *See Ans.* 6–9, 15–16; *see Spec.* 20:6–11,

Fig. 1. These elements are tools to perform the above-identified abstract idea, but do not improve a computer's functioning or technology. *See Credit Acceptance Corp. v. Westlake Servs.*, 859 F.3d 1044, 1055 (Fed. Cir. 2017); *see also Alice*, 573 U.S. at 222–26. For example, the claimed “anonymiser system” is merely a tool to perform steps (A)–(F) and (H). Br. 28 (Claims App'x). Claim 1, however, does not recite a limitation that improves how the “anonymiser system” functions. Br. 27–28 (Claims App'x); *see also* Spec. 7:24–26, 8:4–6, Fig. 1 (describing and showing the anonymizer system generally to include information broker(s), clustering engine(s), and an anonymiser). Thus, even though the Specification describes the anonymiser system's components performing various functions (*see, e.g.*, Spec. 9:29–31, 11:17–18, 13:9–10, and 17:22–24), claim 1 fails to recite the system's components (e.g., a broker or clustering engine) or a technological improvement of the recited “anonymiser system.”

To the extent that Appellants contend the recited steps (A)–(H) somehow improve the functioning of the additionally recited elements beyond the above-identified judicial exceptions or improve another technology or technical field, there is insufficient persuasive evidence on this record to substantiate such a contention. *See* Br. 10–19. First, we are not persuaded by Appellants' arguments (*id.* at 10–15) that the claimed invention improves the additionally recited elements' functionality, or otherwise changes the way those devices function, such as in *McRO, Inc. v. Bandai Namco Games America, Inc.*, 837 F.3d 1299 (Fed. Cir. 2016). Claim 1 as a whole and as discussed above is directed to providing personalized information to a user dependent on a shared characteristic while keeping the user's interactions anonymous. Br. 27–28 (Claims

App’x). This process may improve a commercial interaction, such as enabling marketing activities that provide personalized interactions while the user remains anonymous. *See id.* However, unlike *McRO*, claim 1’s additional elements do not reflect an improved technological result of the additionally recited elements. *See McRO*, 837 F.3d at 1316 (finding a claim recited an improved technological result over existing, manual 3-D animation techniques); *see* Ans. 15–16.

Second, we find unavailing Appellants’ contention that providing a user entity personalized service without revealing the user’s identity to a service provider node as recited in claim 1 improves a computer’s functionality, a relevant technology, or a technological field. *See* Br. 13–14 (citing *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016) and *McRO*). The *Enfish* court explained that “[t]he Supreme Court has suggested that claims ‘purport[ing] to improve the functioning of the computer itself,’ or ‘improv[ing] an existing technological process’ might not succumb to the abstract idea exception.” *Enfish*, 822 F.3d at 1335 (citing *Alice*, 573 U.S. at 222–25). The claims in *Enfish* were directed to an improved database configuration that permitted faster searching for data. *See id.* at 1330–33, 1336. In contrast, anonymizing an interaction between a user entity and a service provider node as recited in claim 1 does not describe an advance in hardware or software that, for example, improves on a computer’s functionality such as the court determined in *Enfish*. *See id.* at 1336–37 (finding a “self-referential table for a computer database” improves computer functionality itself).

Third, to the extent Appellants contend that the claimed invention is eligible because it is necessarily rooted in computer technology to overcome

a problem as in *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257 (Fed. Cir. 2014), we disagree. *See* Br. 15–16, 18 (citing *DDR*). Here, anonymizing an interaction between a user entity and a service provider node as claim 1 recites is not necessarily rooted in computer technology as previously explained. Nor does the claimed invention solve a challenge specifically arising in the realm of computer networks as in *DDR*. At best, claim 1 improves marketing activities. *See* Ans. 16 (discussing the claims solve a business problem).

Thus, claim 1’s additional elements beyond the above-identified judicial exceptions do not improve the computer itself, or another technology or technical field. *See* Revised Guidance, 84 Fed. Reg. at 55 (citing MPEP § 2106.05(a)). Nor do claim 1’s additional elements implement the identified judicial exception with or use the judicial exception in conjunction with a particular machine or a particular transformation. *See id.* (citing MPEP §§ 2106.05(a), § 2106.05(c)).

Independent claim 29 recites several more additional elements beyond the above-identified judicial exceptions than claim 1. The additional elements are “[a]n apparatus” and “a counting engine.” Br. 32 (Claims App’x). When considering these additional elements individually or in combination with the other noted additional elements, we determine they do not integrate a judicial exception into a practical application. Similar to the above discussion, these additional elements do not reflect an improvement in a computer’s functioning or an improvement to other technology or technical field. At best, these elements are used as tools to perform the identified abstract idea. We refer above for more explanation why these elements are merely tools that perform the identified abstract idea. Also, for

the above reasons, Appellants have not shown sufficiently (*see* Br. 19–25) claim 29 recites a particular machine or a particular transformation.

Lastly, Appellants contend the claimed invention does not monopolize or pre-empt the relevant technical field. *See id.* at 13–16. “While preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility” or render a claim any less abstract. *See Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015); *see OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362–63 (Fed. Cir. 2015) (“[T]hat the claims do not preempt all price optimization or may be limited to price optimization in the e-commerce setting do not make them any less abstract.”).

For the above-stated reasons, we determine the additional elements recited in independent claim 1 (or independent claim 29) beyond the judicial exceptions, whether considered alone or in combination, do not integrate the abstract idea into a practical application.

*Alice Step Two, Step 2B*

Because we determine claim 1 does not integrate the recited judicial exception into a practical application, we need to consider whether the additional elements add a specific limitation or combination of limitations that are not well-understood, routine, and conventional activity in the field. *See Revised Guidance*, 84 Fed. Reg. at 56. If so, this indicates that an inventive concept may be present. If, instead, the additional elements simply append well-understood, routine, and conventional activities previously known to the industry, specified at a high level of generality, to the judicial exceptions, this indicates that an inventive concept may not be present. *Id.*

Appellants assert all limitations of claim 1<sup>4</sup> recite an inventive concept and are not merely a routine or conventional use of technology. Br. 17–18. We are not persuaded of Examiner error.

The “computing device,” service provider “node,” “network,” and “anonymiser system disposed on a communication path between the user entity and the service provider node, the anonymiser system comprising a cooperation of nodes” are the additional elements beyond the above-identified judicial exceptions in claim 1. Br. 27–28 (Claims App’x). Thus, Appellants’ contention that *all* recitations, including “the associating, the ensuring, the providing the generated information, and the providing the personalized service” recited in claim 1 (*id.* at 17–18), are unconventional uses of technology fails to address specifically whether claim 1’s *additional elements* (e.g., the computer device, the network, the anonymizer system, and nodes) individually or in combination recite limitations that are not well-understood, routine, and unconventional activities. Also, Appellants’ assertion that the limitations “may not be fairly considered to be conventional” (*id.* at 17) and “are not merely the routine or conventional use of technology” (*id.* at 18) are conclusory statements insufficiently supported by factual evidence. *See In re Geisler*, 116 F.3d 1465, 1470 (Fed. Cir. 1997).

To the extent an attack on the entire claim amounts to an assertion that the additional elements in claim 1 are not well-understood, routine, and conventional, we are not persuaded. Claims 1’s and 29’s additional

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<sup>4</sup> Appellants refer to claim 29. Br. 17. We presume Appellants intend to refer to claim 1 because this discussion is located under claim 1’s discussion (*id.* at 8) and claim 29 is separately discussed (*id.* at 19–25).

elements beyond the above-identified judicial exceptions recite generic computer components, such as a network and a computer device, whose functionalities are well-understood, routine, and conventional. *See, e.g., Mortgage Grader*, 811 F.3d at 1324–25 (noting that components such as “interface,” “network,” and “database” are generic computer components that do not satisfy the inventive concept requirement); *see also Alice*, 573 U.S. at 225 (indicating a computer that obtains data and issues automated instructions is a generic computer performing well-understood, routine, and conventional activities). The Specification also describes components, such as a network (e.g., the recited “network”), an interface (e.g., the recited “service provider node”), and a computer (e.g., the recited “computing device”), generically. *See Spec.* 5:4, 12:13–15, 13:4 (describing the service provider node provides service to a user entity, such as a mobile service, through one or more nodes), 14:19, 14:23 (describing the network as a mobile network), 16:22–23 (describing user devices as tablet devices or mobile phones), Fig. 1. Similarly, the recited “anonymizer system” and its “cooperation of nodes” are described generically. *See Spec.* 8:4–6, Fig. 1. As for claim 29’s “counting engine,” this element too is described as no more than a generic element performing counting and calculating steps. *See, e.g., Spec.* 18:17–18.

Appellants’ additional reliance on *Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288 (Fed. Cir. 2016) is likewise unavailing. *See Br.* 17–18. The *Amdocs* court held that a claim reciting code for enhancing a record using accounting information correlated with a network accounting record was held eligible because the claim involved “an unconventional technological solution (enhancing data in a distributed fashion) to a

technological problem (massive record flows which previously required massive databases).” *Amdocs*, 841 F.3d at 1300. Although the court recognized that this solution used generic components, the recited enhancing function necessarily required these generic components to operate in an unconventional manner to achieve an improvement in computer functionality. *See id.* at 1300–01.

That is not the case here. Although the claimed invention uses conventional computing components that receive and process data, there is no persuasive evidence on this record to show that these generic components operate in an *unconventional* manner to achieve an improvement in computer functionality as in *Amdocs*. *See* Ans. 13.

Thus, Appellants do not persuasively demonstrate the additional elements in claim 1 and 29 are not well-understood, routine, and conventional. The additional recited elements—considered individually and as an ordered combination—do not add significantly more than the abstract idea to provide an inventive concept under *Alice/Mayo* step two. *See Alice*, 573 U.S. at 221; *see also* Revised Guidance, 84 Fed. Reg. at 56. For the above reasons, claim 1’s (or claim 29’s) additional elements do not add a specific limitation or combination of limitations beyond those well-understood, routine, and conventional in the field.

#### *Conclusion*

For the foregoing reasons, Appellants have not persuaded us of error in the rejection of independent claim 1 and claims 2–10, 12, 15, 16, 18, 19, 21–24, 26–32, 36, 38, and 41–47 for similar reasons.

CLAIMS 39 AND 40

Appellants argue claims 39 and 40 as a group. *See* Br. 25–26. We select independent claim 39 as representative. *See* 37 C.F.R. § 41.37(c)(1)(iv). Claim 39 depends from claim 38 and further recites “the value associated with the interaction is a value of the providing the advertising content, and the method further comprises paying the user entity based on the calculated share of said value.” Br. 34 (Claims App’x).

*Revised Step 2A - Prong 1*

Appellants argue claim 39 is not abstract because the claim is limited to an improvement that enables an anonymous user to be paid based on a calculated value for interacting with a service provider node and does not pre-empt other reimbursement arrangements. *See* Br. 25–26. We disagree.

Claim 39 recites “the value associated with the interaction is a value of the providing the advertising content, and the method further comprises paying the user entity based on the calculated share of said value.” *Id.* at 34 (Claims App’x). Claim 39, under its broadest reasonable interpretation, is directed to paying a user for interacting with provided advertising content. *See id.*; *see also* Spec. 15:19–23.

In the rejection, the Examiner finds that claim 39 is directed to an abstract idea. Final Act. 3. The recited judicial exception can be categorized as certain methods of organizing human activity, such as commercial interactions (e.g., marketing activities that pay a user for viewing an advertisement). *See* Br. 34 (Claims App’x); *see also* Spec. 15:20–23.

In *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 712 (Fed. Cir. 2014), our reviewing court analyzed whether a system that received payment

from a sponsor of an ad in response to watching the ad was directed to non-statutory subject matter. Our reviewing court determined the system was directed to “showing an advertisement before delivering free content.” *Id.* at 715. Similar to the claims in *Ultramercial*, the recited function in claim 39 is a characteristic of paying a user for viewing an advertisement. *Cf. id.* (holding ineligible claim reciting (1) displaying a sponsor message to a consumer and (2) receiving payment from a sponsor of the sponsor message displayed as directed to the abstract idea of showing an advertisement before delivering free content).

Thus, claim 39 recites a certain method of organizing human activity, which is a category of abstract idea. *See* 84 Fed. Reg. at 52.

*Revised Step 2A - Prong 2*

Claims 39 and 38, from which claim 39 depends, do not recite any additional elements beyond the above-noted abstract idea. Br. 34 (Claims App’x). Claim 38 depends on claim 1. *Id.* Thus, the only recited elements beyond the abstract idea in claim 39 are those discussed above concerning claim 1. As previously stated, claim 1’s additional elements do not integrate the abstract idea into a practical application.

The recited “paying the user entity based on the calculated share of said value” also is insignificant post-solution activity that merely outputs the results of the calculation. *See Flook*, 437 U.S. at 590 (insignificant post-solution activity held insufficient to impart patentability); *see also CyberSource*, 654 F.3d at 1371 (discussing *Flook*). *Accord* Revised Guidance, 84 Fed. Reg. at 55 (citing MPEP § 2106.05(g)).

We, therefore, agree with the Examiner that claim 39 does not integrate the abstract idea into a practical application and, therefore, is directed to an abstract idea.

*Alice Step Two, Step 2B*

Similarly, for the reasons discussed above concerning claim 1, we do not find that the additional recited elements noted previously—considered individually and as an ordered combination—add significantly more to the abstract idea to provide an inventive concept under *Alice/Mayo* step two. *See Alice*, 573 U.S. at 221; *see also* Revised Guidance, 84 Fed. Reg. at 56.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 39.

*Conclusion*

For the foregoing reasons, Appellants have not persuaded us of error in the rejection of independent claim 39 and claim 40 for similar reasons.

DECISION

We affirm the Examiner's rejection of claims 1–10, 12, 15, 16, 18, 19, 21–24, 26–32, 36, and 38–47 under § 101. No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED