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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 GURURAJ SEETHARAMA, APURVA RAJIV MEHTA,
DMYTRO ANDRIYOVICH IVCHENKO, SRIRAM SANKAR,
SWETHA NAGABHUSHAN KARTHIK,
and CHRISTOS KOUFOGIANNAKIS

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Appeal 2018-000984
Application 14/788,600[1]
Technology Center 3600

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Before CARL W. WHITEHEAD JR., NABEEL U. KHAN,
and DAVID J. CUTITTA II, *Administrative Patent Judges*.

CUTITTA, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant seeks our review under 35 U.S.C. § 134(a) of the

Examiner's decision rejecting claims 1–21, all the claims pending in the

application. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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[1] LinkedIn Corporation ("Appellant") is the Applicant, as provided for
under 37 C.F.R. § 1.46, and is also identified in the Brief as the real party in
interest. *See* Appeal Br. 2.

STATEMENT OF THE CASE

Invention

Appellant's invention relates to providing "fast and efficient advertisement campaign selection using one or more search indices." Spec. ¶ 14.[2]

Exemplary Claim

Claims 1, 8, and 15 are independent. Claim 1 is exemplary and is reproduced below with bracketed material added.

1. A method comprising:

> [a] using one or more computer processors to perform the operations of:

> [b] creating a respective plurality of documents by processing targeting criteria corresponding to each of a plurality of advertising campaigns using a schema;

> [c] creating an inverted index from the plurality of documents;

> [d] determining that an advertisement is to be delivered to a member of a social networking service;

> [e] creating a search query using a member profile of the member and the schema, the search query comprising a set of respective query terms corresponding to respective member profile attributes of the member, each query term in the set of respective query terms connected by logical OR operators;

> [f] determining, using the inverted index, a result set of documents from the plurality of documents using a search

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[2] Our Decision refers to: (1) Appellant's Specification filed June 30, 2015 ("Spec."); (2) the Final Rejection mailed September 9, 2016 ("Final Act."); (3) the Appeal Brief filed March 9, 2017 ("Appeal Br."); (4) the Examiner's Answer mailed September 8, 2017 ("Ans."); and (5) the Reply Brief filed November 8, 2017 ("Reply Br.").

engine, each document in the result set containing a term that matches at least one of the set of respective query terms of the search query, the search engine calculating a number of matching terms between terms in each document in the result set and terms in the search query;

[g] determining a particular document from the result set of documents in which the corresponding number of matching terms for the particular document is equal to the number of targeting criteria in the particular document; and

[h] delivering an advertisement that corresponds to the particular document from the result set for delivery to the member.

REFERENCES AND REJECTIONS

Claims 1–21 stand rejected under 35 U.S.C. § 101 as directed to patent-ineligible subject matter. *See* Final Act. 5–7; Ans. 3–14.

Claims 1–21 stand rejected under 35 U.S.C. § 103 as being unpatentable over the combination of Shahshahani (US 2010/0030647 A1, pub. Feb. 4, 2010) ("Shahshahani"), Bohannon et al. (US 2008/0071747 A1, pub. Mar. 20, 2008) ("Bohannon") and Dogl et al. (US 2004/0103090 A1, pub. May 27, 2004) ("Dogl"). *See* Final Act. 7–19; Ans. 14–16.

Our review in this appeal is limited to the above rejections and the issues raised by Appellant. Arguments not made in the Appeal Brief are waived. *See* 37 C.F.R. § 41.37(c)(1)(iv)(2016).

ANALYSIS

I. Principles of Law

An invention is patent-eligible if it claims a "new and useful process, machine, manufacture, or composition of matter." 35 U.S.C. § 101.

However, the Supreme Court has long interpreted 35 U.S.C. § 101 to include implicit exceptions: "[l]aws of nature, natural phenomena, and abstract ideas" are not patentable. *E.g.*, *Alice Corp. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014).

In determining whether a claim falls within an excluded category, we are guided by the Supreme Court's two-step framework, described in *Mayo* and *Alice*. *Id.* at 217–18 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 75–77 (2012)). In accordance with that framework, we first determine what concept the claim is "directed to." *See id.* 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, 67–68 (1972)). Concepts determined to be patent eligible include physical and chemical processes, such as "molding rubber products" (*Diamond v. Diehr*, 450 U.S. 175, 191 (1981)); "tanning, dyeing, making water-proof cloth, vulcanizing India rubber, smelting ores" (*id.* at 182 n.7 (quoting *Corning v. Burden*, 56 U.S. 252, 267–68 (1853))); and manufacturing flour (*Benson*, 409 U.S. at 69 (citing *Cochrane v. Deener*, 94 U.S. 780, 785 (1876))).

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In *Diehr*, the claim at issue recited a mathematical formula, but the Supreme Court held that "[a] claim drawn to subject matter otherwise statutory does not become nonstatutory simply because it uses a mathematical formula." *Diehr*, 450 U.S. at 176; *see also id.* at 191 ("We view respondents' claims as nothing more than a process for molding rubber products and not as an attempt to patent a mathematical formula."). Having said that, the Supreme Court also indicated that a claim "seeking patent protection for that formula in the abstract . . . is not accorded the protection of our patent laws, . . . and this principle cannot be circumvented by attempting to limit the use of the formula to a particular technological environment." *Id.* (citing *Benson* and *Flook*); *see, e.g., id.* at 187 ("It is now commonplace that an *application* of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection.").

If the claim is "directed to" an abstract idea, we turn to the second step of the *Alice* and *Mayo* framework, where "we must examine the elements of the claim to determine whether it contains an 'inventive concept' sufficient to 'transform' the claimed abstract idea into a patent-eligible application." *Alice*, 573 U.S. at 221. "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.* (alterations in original) (quoting *Mayo*, 566 U.S. at 77). "[M]erely requir[ing] generic computer implementation[] fail[s] to transform that abstract idea into a patent-eligible invention." *Id.*

The PTO recently published revised guidance on the application of § 101. *See* 2019 Revised Patent Subject Matter Eligibility Guidance, 84

Fed. Reg. 50 (USPTO Jan. 7, 2019) ("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); and

> (2) additional elements that integrate the judicial exception into a practical application (*see* MPEP §§ 2106.05(a)–(c), (e)–(h) (9th ed. Rev. 08.2017, Jan. 2018)).

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, conventional" in the field (*see* MPEP § 2106.05(d)); or

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

See Guidance, 84 Fed. Reg. at 56.

II. The Examiner's § 101 Rejection

The Examiner determines that representative[3] claim 1 is directed to a judicial exception: an abstract idea. *See* Final Act. 5–7; Ans. 3.

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[3] Appellant argues claims 1–21 as a group. *See* Appeal Br. 8 ("The claims recite statutory subject matter under 35 U.S.C. §101" (emphases omitted)). We, thus, select independent claim 1 as representative of claims 1–21. *See* 37 C.F.R. § 41.37(c)(1)(iv).

According to the Examiner, claim 1 is "directed to the collection, organization, storage, and transmission of data" and "also directed to providing targeted content items to a user, which are all abstract ideas." Final Act. 5. The Examiner also states claim 1 is similar to claims the Federal Circuit has determined to be directed to a mental process. *See* Final Act. 6 (citing *Content Extraction & Transmission LLC v. Wells Fargo Bank, National Ass'n*, 776 F.3d 1343, 1347 (Fed. Cir. 2014) ("collecting data, . . . recognizing certain data within the collected data set, and . . . storing that recognized data in a memory."); *SmartGene, Inc. v. Advanced Biological Labs., SA*, 555 F. App'x 950 (Fed. Cir. 2014) (non-precedential)). In concluding that claim 1 is ineligible, the Examiner finds that the additional elements "are routine, conventional, and well-known." Final Act. 6.

III. Does the claim recite a judicial exception?

Analyzing the Examiner's rejection in view of the Guidance, we first consider whether the claim recites a judicial exception. Guidance, 84 Fed. Reg. at 51. The PTO has synthesized the key concepts identified by the courts as abstract ideas into three primary subject-matter groupings: mathematical concepts, certain methods of organizing human activities (e.g., a fundamental economic practice), and mental processes. *Id.* at 52. For the reasons discussed in section III below, claim 1 recites an abstract idea that falls within the Guidance's mental-processes grouping.[4]

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[4] The Examiner analogizes claim 1 to other types of abstract ideas such as "'certain methods of organizing human activity.'" *See* Ans. 3. However,

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A. Overview of Claim 1

Claim 1 recites a method, "which allow[s] for fast and efficient advertisement campaign selection," i.e., a method that enhances efficiency in providing targeted advertising. Spec. ¶ 14. We agree with the Examiner that claim 1, under the broadest reasonable interpretation, recites limitations that can be practically performed in the mind. *See* Ans. 3 ("an idea of itself") (internal quotations marks omitted). In this way, claim 1 recites a judicial exception: an abstract idea within the Guidance's mental-processes grouping.

Appellant argues that the Examiner "has violated the Federal Circuit's prohibition on overgeneralization of the claims." Appeal Br. 10. This argument does not persuade us of error in the Examiner's determination that the claims are directed to a mental process. Next, we explain how claim 1 recites limitations that can *practically* be performed in the mind or with the assistance of pen and paper. *See* Guidance, 84 Fed. Reg. at 52 n. 14 (collecting cases).

B. "creating . . . documents by processing targeting criteria"

Claim 1 recites, in part, "creating a respective plurality of documents by processing targeting criteria corresponding to each of a plurality of advertising campaigns using a schema." Appellant refers to paragraphs 17, 18, and 19 of the Specification to explain the subject matter of this limitation. *See* Appeal Br. 4. These paragraphs describe creating documents by organizing targeting criteria such as "age, gender, location, job title, employment history, educational history" for Campaigns 1, 2, and 3. *See*

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this reasoning is cumulative and in the alternative. *See id.* It is sufficient to say that claim 1 at least recites a mental process.

Spec. ¶¶ 16–18. "In some examples, the documents produced are textual documents that are formatted according to a predetermined schema." Spec. ¶ 17. For example, "[t]he schema may specify that each member targeting criteria be placed next preceded by the identifier 'targets.'" Spec. ¶ 19. The example in the Specification demonstrates only a small amount of data needs to be analyzed to create the recited documents for a mere three advertising campaigns. *See* Spec. ¶ 19. Thus, this limitation can practically be performed in the mind or with the assistance of pen and paper.

C. *"creating an inverted index from the plurality of documents"*

Claim 1 recites "creating an inverted index from the plurality of documents." Appellant refers to paragraph 22 of the Specification to explain the subject matter of this limitation. *See* Appeal Br. 4. This paragraph describes that an index may be created and the "index may be an inverted index which is a data structure that maps the terms of the entire set of campaign documents to which campaign documents those terms reside in." Spec. ¶ 22. That is, the inversion only requires mapping a small quantity of context criteria and targeting criteria to three advertising campaigns, which is also an evaluation that can practically be performed in the mind or with the assistance of pen and paper. *See id.*

D. *"determining that an advertisement is to be delivered"*

Claim 1 recites "determining that an advertisement is to be delivered to a member of a social networking service." Appellant refers to paragraph 23 of the Specification to explain the subject matter of this limitation. *See* Appeal Br. 4. This paragraph describes as an example, wherein "the social networking service may determine that it is an appropriate time to send an email, or some other type of advertisement, to the member." Spec. ¶ 23.

Limitation (d), thus, recites a decision-making processes that determines it is an appropriate time to send an advertisement. But that decision-making process "is untethered to any specific or concrete way of implementing it." *Affinity Labs of Texas, LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1258 (Fed. Cir. 2016). For example, claim 1 fails to recite a specific algorithm for "determining that an advertisement is to be delivered." Thus, the broadly recited determining can be interpreted as being accomplished merely using a subjective judgement by a person, rather than with specific technological implementation details. Therefore, this limitation recites a determination that can practically be performed in the mind.

E. "creating a search query"

Claim 1 recites "creating a search query using a member profile of the member and the schema, the search query comprising a set of respective query terms corresponding to respective member profile attributes of the member, each query term in the set of respective query terms connected by logical OR operators." Appellant refers to paragraphs 24 and 30 of the Specification to provide support for the subject matter of this limitation. *See* Appeal Br. 4. Paragraph 24 describes creating "a search query using the member profile attributes" and paragraph 30 describes that the search query "combine[s] the targeting criteria according to a logical 'OR' operator." Spec. ¶¶ 24, 30. Basing a search on a few query terms linked disjunctively can be practically be performed in the mind or with the assistance of pen and paper and is therefore within the Guidance's mental-process grouping. *See* Spec. ¶ 30.

F. *"determining , using the inverted index, a result set of documents"*

Aside from the search engine, which is discussed in section IV. B below, claim 1, recites "determining, using the inverted index, a result set of documents from the plurality of documents . . . each document in the result set containing a term that matches at least one of the set of respective query terms of the search query" and "calculating a number of matching terms between terms in each document in the result set and terms in the search query." Appellant refers to paragraphs 31 and 32 of the Specification to provide support for the subject matter of this limitation. *See* Appeal Br. 4–5. Paragraph 31 discloses "utilizing the index to determine matching campaigns . . . 1 and 2." Spec. ¶ 31. The Specification further discloses "[i]f the number of matching targeting query terms is equal to the number of targeted attributes in the corresponding campaign document, the advertising campaign is considered a match and is included in the final result set." Spec. ¶ 32.

To perform the recited determination, only a small amount of data needs to be analyzed. In fact, the example provided in the Specification uses only a handful of context criteria and targeting criteria to determine the initial result set of two campaigns. *See* Spec. ¶¶ 22–32. This determination, therefore, can practically be performed in the mind or with the assistance of pen and paper and is, therefore, within the Guidance's mental-process grouping.

G. *"determining a particular document from the result set of documents"*

Claim 1 recites "determining a particular document from the result set of documents in which the corresponding number of matching terms for the

particular document is equal to the number of targeting criteria in the particular document." Appellant refers to paragraph 32 of the Specification to support the subject matter of this limitation. *See* Appeal Br. 5. Paragraph 32 discloses that "a final set of results is determined based upon a count of the number of matching query terms for each result." Spec. ¶ 32. The Specification further discloses "[f]or campaign 2 there would be two matching targeted criteria (geographical region=California; title=software engineer) out of a total of two targeted criteria (geographical region=California; title=software engineer). Thus, because campaign 2 matched all targeted criteria, it is included in the final result set." Spec. ¶ 33.

To perform the recited determination, only a small amount of data needs to be analyzed. In fact, the example provided in the Specification merely determines one campaign document from a result set of two campaign documents. *Id.* This determination, therefore, can practically be performed in the mind and is therefore within the Guidance's mental-process grouping.

In view of our discussion in section III, we agree with the Examiner that claim 1 recites an abstract idea, namely, a mental process.

IV. Is the claim "directed to" the recited judicial exception?

Because claim 1 recites an abstract idea, we now proceed to determine whether the recited judicial exception is integrated into a practical application. Guidance, 84 Fed. Reg. at 51. When a claim recites a judicial exception and fails to integrate the exception into a practical application, the claim is "directed to" the judicial exception. *Id.*

The claim may integrate the judicial exception when, for example, it reflects an improvement to technology or a technical field. *Id.* at 55. Here, the described improvement is for providing targeted advertising on a social media platform. To solve this non-technical problem, claim 1 recites an abstract idea including limitations [b] – [g] as discussed in Section III above.

Appellant argues claim 1 is not directed to an abstract idea but instead is directed to specific improvements to the computer and "address[es] the problem of increasing computational time (and attendant diminished user experience) of social networking service computing resources when delivering ads." Appeal Br. 13.

We are unpersuaded because the solution offered by Appellant's claim 1 is not rooted in any new computer technology. Rather, providing targeted advertising, even if done so efficiently with a computer, is not a "technological process" to be improved because, as claimed, the determinations of the targeted advertisement could be made by a human using pen and paper. Appellant fails to provide persuasive evidence that claim 1 is not merely an example of implementing an abstract concept faster and more efficiently on a computer. *See* Appeal Br. 13 ("Aspects of the present inventive subject matter . . . allow for fast and efficient advertisement campaign selection."). And, "the fact that the required calculations could be performed more efficiently via a computer does not materially alter the patent eligibility of the claimed subject matter." *Bancorp Servs. v. Sun Life Assurance Co. of Can. (U.S.)*, 687 F.3d 1266, 1278 (Fed. Cir. 2012). In this way, claim 1 is unlike the technology-based integrations cited by Appellant. *See Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1337 (Fed. Cir. 2016) (holding that the patent-eligible claim was

directed to a self-referential table to improve computer databases), *cited in* Appeal Br. 11; *McRO, Inc. v. Bandai Namco Games Am.*, 837 F.3d 1299 (Fed. Cir. 2016) (explaining that the patent-eligible claim focused on a specific asserted improvement in computer animation), *cited in* Appeal Br. 13.

Considering the claim as a whole, Appellant's invention lacks a technical solution to a technical problem. The mere presence of a processor here does not necessarily indicate a technical solution. Essentially, Appellant argues that, because the claim uses a processor, it is not directed to a mental process. *See* Appeal Br. 13–16. For example, in response to "the Examiner's determination that Appellant's claims are not patentable as they do not 'describe a new type of computer processor or computer system'," Appellant argues that "[n]owhere does the Examiner cite to any authority that supports the Examiner's conclusion that an applicant must recite a new type of computer processor or computer system to be patent eligible." Appeal Br. 19. We are unpersuaded because "[c]ourts have examined claims that required the use of a computer and still found that the underlying, patent-ineligible invention could be performed via pen and paper or in a person's mind." *Versata Dev. Grp. v. SAP Am., Inc.*, 793 F.3d 1306, 1335 (Fed. Cir. 2015), *quoted in* Guidance, 84 Fed. Reg. at 52 n.14. So, although claim 1 recites a processor, this does not preclude the claim from being directed to the recited mental process.

Here, the processor, recited in the "using one or more computer processors" limitation, is an additional element. We use the term "additional elements" for "claim features, limitations, and/or steps that are recited in the claim beyond the identified judicial exception." *See* Guidance, 84

Fed. Reg. at 55 n.24 (emphasis omitted). Claim 1's additional elements also include the search engine and the step of "delivering an advertisement that corresponds to the particular document from the result set for delivery to the member." In the analysis below, we consider these additional elements— individually and in combination—and conclude that claim 1 as a whole does not integrate the recited judicial exception into a practical application. *See* Guidance, 84 Fed. Reg. at 55 nn.25 & 27–32 (citing MPEP §§ 2106.05(a)– (c), (e)–(h)).

A. *"using one or more computer processors"*

An additional element may integrate a judicial exception into a practical application when, for example, the "additional element implements a judicial exception with, or uses a judicial exception in conjunction with, a particular machine or manufacture that is integral to the claim." *Id.* at 55. In this case, claim 1 lacks such a machine. Instead, the claimed "one or more computer processors" simply executes the mental process recited in limitations [b] – [g]. Notably, the claimed processor can be a "general-purpose hardware [computer]." Spec. ¶ 50. But a general-purpose processor that merely executes the judicial exception is not a particular machine. *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 716–17 (Fed. Cir. 2014), *cited in* MPEP § 2106.05(b)(I).

Considering the processor in combination with the other recited limitations, the processor is merely a token addition. To be sure, the recited processor may perform the calculations faster than a human could mentally. Yet, as previously noted, using a computer to achieve a solution more quickly may not be sufficient to show an improvement to computer technology. *See Versata*, 793 F.3d at 1335; *see also* MPEP § 2106.05(a)(II)

(instructing examiners that a "commonplace business method being applied on a general purpose computer" may not be sufficient to show an improvement). Here, claim 1 broadly recites delivering an advertisement without any particular technical improvement to how the processor carries out these operations. In this way, the recited processor is merely used to perform calculations that, for the reasons discussed above, can practically be performed in the mind.

For these reasons, the claimed method does not use the processor in a way that indicates that the judicial exception has been integrated into a practical application.

B. "search engine"

Claim 1 recites "determining . . . a result set of documents . . . using a search engine. Appellant does not provide persuasive evidence that the technology of the search engine, itself, has been altered or improved. *See generally* Appeal Br. Rather, the claim is directed towards determining a result set of documents more efficiently by automating these tasks through the use of a "general-purpose" computer. Spec. ¶ 50. Furthermore, Appellant's Specification indicates that the search engine used to implement the claimed abstract idea is conventional. *See* Spec. ¶¶ 14, 31.

C. "delivering an advertisement"

Claim 1 recites "delivering an advertisement that corresponds to the particular document from the result set for delivery to the member." Such broadly recited outputting of data is insignificant post-solution activity. *Flook*, 437 U.S. at 590 ("[t]he notion that post-solution activity, no matter how conventional or obvious in itself, can transform an unpatentable principle into a patentable process exalts form over substance.).

Claim 1, therefore, is not directed to a specific asserted improvement in computer technological implementation or otherwise integrated into a practical application.

D. Other Indicia of Integration

The Guidance lists other indicia of integration. Guidance, 84 Fed. Reg. at 55. None are present in claim 1.

For example, "[t]ransformation and reduction of an *article* 'to a different state or thing' is the clue to the patentability of a process claim that does not include particular machines." *Bilski*, 561 U.S. at 604 (emphasis added), *quoted in* MPEP § 2106.05(c). Yet "not all transformations . . . infuse an otherwise ineligible claim with an 'inventive concept.'" *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1256 (Fed. Cir. 2014).

Claim 1's method does not transform a physical object or substance. In this way, the claim is unlike the transformations found in some eligible claims. *See, e.g., Diehr*, 450 U.S. at 184 (a process that transforms rubber).

Accordingly, on this record, claim 1 is **directed to** the identified abstract idea. *See* Ans. 4–5.

V. Does the claim provide an inventive concept?

To determine whether a claim provides an inventive concept, the additional elements are considered—individually and in combination—to determine whether they (1) add a specific limitation beyond the judicial exception that is not "well-understood, routine, conventional" in the field or (2) simply append well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception. Guidance, 84 Fed. Reg. at 56. Also, we reevaluate

our conclusions about the additional elements discussed in the previous step. *Id.*

A. *"by a processor"*

Using a computer "only for its most basic function, the performance of repetitive calculations," may not impose meaningful limits on the claim's scope. *Bancorp*, 687 F.3d at 1278. Similarly, the MPEP instructs examiners that courts recognize that using a computer for performing repetitive calculations may be well-understood, routine, and conventional when claimed generically. MPEP § 2106.05(d)(II)(ii) (citing *Flook*, 437 U.S. at 594; *Bancorp*, 687 F.3d at 1278).

Claim 1's method uses the processor for implementing the abstract idea. The Examiner finds claim 1 "recite[s] only common computer elements" and thus "taken alone, the additional elements do not amount to significantly more than the above-identified judicial exception (the abstract idea)." Ans. 6–7. We agree with the Examiner's findings, which are adequately supported by this record. Specifically, as discussed, limitations [b] – [g] recite operations that can be performed mentally, which suggests that the method only requires a computer with basic functions. In fact, the Specification discloses that the processor itself may be a general-purpose hardware computer. Spec. ¶ 50. Thus, the claim uses a general-purpose processor to execute the abstract idea. For these reasons, the recited processor adds nothing more than well-understood, routine, conventional activities, specified at a high level of generality, to the abstract mental process. *See* MPEP § 2106.05(d)(II)(ii).

We also reevaluate our conclusions about whether the recited processor integrates the abstract idea into a practical application. *See supra*

§ IV.A. Because the recited processor adds nothing more than well-understood, routine, conventional activities, those conclusions stand. Considering both our previous conclusions and the findings about well-understood, routine, and conventional activity, we determine that the claimed method does not use the processor in a way that indicates that the claim provides an inventive concept. *See* Ans. 6 ("The instant claims do not require any specialized hardware. The instant claims recite only common computer elements.").

B. "search engine"

Claim 1 recites "determining . . . a result set of documents . . . using a search engine. The claimed invention implements an abstract search methodology via a conventional search engine implemented with a generic computer processor. The improvement, therefore, is to the abstract search methodology, not to the search engine. Appellant's Specification confirms that the search engine used to implement the claimed abstract idea is conventional. *See* Spec. ¶¶ 14, 31.

C. "delivering an advertisement"

Claim 1 recites "delivering an advertisement that corresponds to the particular document from the result set for delivery to the member."

Such broadly recited outputting of data is insignificant post-solution activity. *Flook*, 437 U.S. 584 at 590 ("[t]he notion that post-solution activity, no matter how conventional or obvious in itself, can transform an unpatentable principle into a patentable process exalts form over substance.).

Claim 1 does not recite any specific technical features for delivering the advertisement in an unconventional way. In this regard, the claim

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delivers the advertisement generically and the recited limitation is well-understood, routine, and conventional. *See* MPEP § 2106.05(d)(II)(iv).

We also reevaluate our conclusions about whether the recited delivering integrates the abstract idea into a practical application. *See supra* § IV.B. Because the recited limitation adds nothing more than well-understood, routine, conventional activities, those conclusions stand. Considering both our previous conclusions and the findings about well-understood, routine, and conventional activity, we determine that the claimed method does not deliver the advertisement in a way that indicates that the claim provides an inventive concept. *See* Ans. 6–12.

D. The Combination

"[A] new combination of steps in a process may be patentable even though all the constituents of the combination were well known and in common use before the combination was made." *Diehr*, 450 U.S. at 188. For example, the claims in *BASCOM Global Internet Services, Inc. v. AT&T Mobility LLC* involved an inventive distribution of function between a local computer and a server. *See* 827 F.3d 1341, 1350–51 (Fed. Cir. 2016). The Federal Circuit noted "[t]he inventive concept described and claimed in the '606 patent is the installation of a filtering tool at a specific location, remote from the end-users, with customizable filtering features specific to each end user." *Id.* at 1350. "Because the filtering tool on the ISP server contains each user's customized filtering mechanism, the filtering tool working in combination with the ISP server can apply a specific user's filtering mechanism to the websites requested by that user." *Id.* at 1345.

Appellant does not identify any inventive concept in the recited combination of steps here or any specific arrangement of components.

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Indeed, the claim's focus is on delivering a targeted advertisement, not on a specific configuration of the processor. In the claimed arrangement, the processor simply performs the recited abstract idea.

Appellant argues claim 1 "solve[s] a computer based problem with an improvement to the functioning of the computer by providing targeted advertisements to members of a social networking service much faster than current systems using specifically recited solutions." Appeal Br. 16.

Yet the claimed solution is the abstract idea itself. "What is needed is an inventive concept in the non-abstract application realm." *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1168 (Fed. Cir. 2018). "[A] claim for a new abstract idea is still an abstract idea." *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1151 (Fed. Cir. 2016) (emphasis omitted). Here, the limitations on the mental process itself do not make claim 1 any less abstract. None of these limitations provide an inventive concept in the non-abstract application realm. Unlike *BASCOM*, claim 1 is simply an "abstract-idea-based solution implemented with generic technical components in a conventional way." 827 F.3d at 1351. As noted by the Examiner, other than the abstract idea and the generic hardware, claim 1 is "directed to the collection, organization, storage, and transmission of data." Final Act. 5. We agree with the Examiner that the sequence of data reception—storage—modification, and transmission, when broadly claimed, is generic and conventional or otherwise held to be abstract. *See Ultramercial*, 772 F.3d at 715 (sequence of receiving, selecting, offering for exchange, display, allowing access, and receiving payment recited an abstraction).

On this record, the limitations—considered individually and in combination—do not provide an inventive concept. *See* Ans. 6–12; Final Act. 5.

VI. Other Arguments

Appellant argues that claim 1 does not "preempt all ways of collection, organization, storage, and transmission of data; or targeted advertisement; rather, [the claim recites] a specific, discrete implementation of selecting advertisement[s]." Appeal Br. 20 (internal quotations omitted). "While preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility." *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015). "[Q]uestions on preemption are inherent in and resolved by the § 101 analysis," which has been applied here. *Id.*

VII. Conclusion

We sustain the rejection of representative claim 1 under 35 U.S.C. § 101. We also sustain the rejection of claims 2–21, which are argued together with claim 1.

VIII. The Examiner's § 103 Rejection

In support of the 35 U.S.C. § 103 rejection of claim 1, the Examiner relies on Dogl's claim 17 to teach or suggest "determining a particular document from the result set of documents in which the corresponding number of matching terms for the particular document is equal to the

number of targeting criteria in the particular document." *See* Final Act. 9; Ans. 14–15.

Dogl's claim 17 recites "[t]he method of claim 16, wherein the match properties include the number of matching search terms (concepts), the frequency of matching search terms, content related properties like a document title, document URL or links to other documents." Dogl's claim 16, in relevant part, recites, "[a] document search method in a communication network, comprising the steps of: . . . providing a user interface for controlling the graphical representation of the search result dependent on the match properties and/or the result properties."

Appellant argues Dogl's claim 17 "does not select a particular document based upon the number of matching terms equaling the number of targeting criteria. All Dogl appears to disclose is ranking results based upon the strength of [a] match." Appeal Br. 30 (citing Dogl ¶¶ 13–15, 59 and claim 16, 17).

The Examiner responds:

> Dogl teaches search results that are determined from matching
> properties of the search, including the frequency of search terms
> (Claim 17, wherein the search results are dependent on match
> properties, "targeting criteria," which include the number of
> matching search terms, "number of matching terms," results
> that have the set number of matching search terms, "equal to the
> number of targeting criteria," are displayed). Here, Dogl
> teaches that a document that fulfill the requirements of the
> search, in this case the number of matching search terms, and
> satisfy the properties of the query is selected and provided.

Ans. 14–15.

We find Appellant's arguments persuasive. The Examiner does not, on the record before us, show that Dogl's discussion of providing a user

interface for controlling the graphical representation of the search result dependent on the number of matching search terms teaches or suggests "determining a particular document from the result set of documents in which the corresponding number of matching terms for the particular document is equal to the number of targeting criteria in the particular document," as recited in claim 1. *See* Final Act. 7–9; Ans. 14–16. In other words, Dogl's claims 16 and 17 discuss providing a user interface that is varied based on the number of matching search terms, but do not teach selecting a document based on the number of matching terms. The Examiner also does not sufficiently explain how Dogl's claim 17 specifically teaches "targeting criteria," as claimed.

Accordingly, the Examiner has not shown how Dogl, alone or in combination with the other cited references, teaches or suggests the disputed limitation. Because we agree with at least one of the dispositive arguments advanced by Appellant for claim 1, we need not reach the merits of Appellant's other contentions. We, therefore, do not sustain the Examiner's 35 U.S.C. § 103 rejection of claim 1. We also do not sustain the rejection of independent claims 8 and 15, which recite limitations commensurate in scope with claim 1. We, likewise, do not sustain the rejections of dependent claims 2–7, 9–14, and 16–21.

DECISION

We affirm the Examiner's decision to reject claims 1–21 under 35 U.S.C. § 101.

We reverse the Examiner's decision to reject claims 1–21 under 35 U.S.C. § 103.

Because we affirm at least one ground of rejection with respect to each claim on appeal, we affirm the Examiner's decision to reject all of the pending claims.

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).

<u>AFFIRMED</u>