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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte VIKAS JHA, VASSILIS ARGYRUS PAPAVASSILIOU, RAJEEV BECTOR, VISHAL GOENKA, and SAILENDRA PADALA

Appeal 2018-007112
Application 11/624,618
Technology Center 3600

Before BIBHU R. MOHANTY, AMEE A. SHAH, and MATTHEW S. MEYERS, *Administrative Patent Judges*.

SHAH, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), the Appellant[1] appeals from the Examiner's decision to reject claims 1, 4–6, 10, 13, 16–18, and 20–25, which are all the pending claims. The Appellant's representative appeared for Oral Argument on March 12, 2020. We have jurisdiction under 35 U.S.C. § 6(b). We AFFIRM.

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[1] We use the word "Appellant" to refer to "applicant" as defined in 37 C.F.R. § 1.42. The Appellant identifies the real party in interest as Google LLC. Appeal Br. 2.

CLAIMED SUBJECT MATTER

The Appellant's invention "relate[s] generally to online advertising, and more particularly to the targeting of goods and services-oriented advertising to visitors of web sites." Spec. 1. Specifically, the Specification describes "[a] system, method and computer program for creating, selecting and presenting an advertisement." *Id.* at 2.

Claims 1, 13, and 20 are the independent claims on appeal. Claim 1 is illustrative of the subject matter on appeal, and is reproduced below (with added bracketing for reference):

> 1. A method for automatic creation of content items responsive to requests for content, the method comprising:
>
> [(a)] receiving, by a computer device responsive to presentation of a plurality of first content items on a plurality of client devices, data indicative of a plurality of interaction outcomes, each interaction outcome representing an interaction event with a respective first content item by a respective client device, each first content item including content related to one or more products or services of a plurality of products or services;
>
> [(b)] determining, by the computer device, a first probability distribution model representing interaction performance probabilities for a first performance metric of the plurality of products and services, the first probability distribution model determined using the received data indicative of the plurality of interaction outcomes;
>
> [(c)] determining, by the computer device, a second probability distribution model representing interaction performance probabilities for a second performance metric of a plurality of templates associated with the plurality of first content items, the second probability distribution model determined using the received data indicative of the plurality of interaction outcomes; and
>
> responsive to receiving a request for a third-party content for presentation on a specified information resource,

> [(d)] selecting, by the computer device, a template from the plurality of templates and one or more products or services from the plurality of products or services using the first probability distribution model, the second probability distribution model, and information associated with the request for the third-party content item;
>
> [(e)] retrieving, by the computer device from a catalog database, a plurality of data fields associated with the selected template and the selected one or more products or services, the catalog database including data fields transformed from a first schema specific to a content provider to a second schema defining attributes for real time generation of content items;
>
> [(f)] generating, by the computer device, a second content item using the retrieved data fields, the content item representing an advertisement for presentation on the specified information resource; and
>
> [(g)] providing, by the computer device, the generated second content item for presentation on the specified information resource.

Appeal Br. 15–16 (Claims App.).

THE REJECTION

Claims 1, 4–6, 10, 13, 16–18, and 20–25 stand rejected under 35 U.S.C. § 101 as being directed to a judicial exception without significantly more.

OPINION

The Appellant argues the claims as a group. *See* Appeal Br. 10, 13. We select claim 1 as representative of the group, with claims 4–6, 10, 13, 16–18, and 20–25 standing or falling therewith. *See* 37 C.F.R. § 41.37(c)(1)(iv) (2017).

35 U.S.C. § 101 Framework

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. *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*. *Alice*, 573 U.S. 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 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, 67 (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))).

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."). 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 (internal 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.* (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.*

After the Appellant's Briefs were filed and the Examiner's Answer mailed, the U.S. Patent and Trademark Office ("USPTO") published revised guidance on the application of § 101. 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) ("2019 Revised Guidance"). That guidance revised the USPTO's examination procedure with respect to the first step of the *Mayo*/*Alice* framework by (1) providing groupings of subject matter that are considered an abstract idea; and (2) clarifying that a claim is not "directed to" a judicial exception if the judicial exception is integrated into a practical application of that exception. *Id.* at 50. The 2019 Revised Guidance, by its terms, applies to all applications, and to all patents resulting from applications, filed before, on, or after January 7, 2019. *Id.*[2] Under the 2019 Revised 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 activity such as a fundamental economic practice, or mental processes); 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) (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:

[2] The 2019 Revised Guidance supersedes MPEP § 2106.04(II) and also supersedes all versions of the USPTO's "Eligibility Quick Reference Sheet Identifying Abstract Ideas." *See* 2019 Revised Guidance, 84 Fed. Reg. at 51 ("Eligibility-related guidance issued prior to the Ninth Edition, R-08.2017, of the MPEP (published Jan. 2018) should not be relied upon.").

> (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 2019 Revised Guidance, 84 Fed Reg. at 54, 56.

Step One of the Mayo/Alice Framework

Under the first step of the *Mayo*/*Alice* framework, the Examiner determines that claim 1 "is directed to an abstract idea of automatically creating advertisement content" (Final Act. 2) by collecting, manipulating, collecting, and displaying data (*see id.* at 2–3). When viewed through the lens of the 2019 Revised Guidance, Step 2A, Prong 1 (*see* 84 Fed. Reg. at 54), the Examiner's analysis depicts the claimed subject matter as a "[c]ertain method[] of organizing human activity–. . . commercial or legal interactions (including . . .advertising, marketing or sales activities or behaviors; business relations)" (*id.* at 52). The Examiner also determines that the elements of the claim merely use generic computer components "to perform electronic recordkeeping and transmitting data [functions]" and "do not improve the functioning of the computer itself. Final Act. 5. When viewed through the lens of the 2019 Revised Guidance, Step 2A, Prong 2 (*see* 84 Fed. Reg. at 54–55), the Examiner determines that the additional elements or combination of elements does not integrate the exception into a practical application because it "merely uses a computer as a tool to perform an abstract idea."

The Appellant contends that claim 1 is "directed to an improvement to computer-related technology and address[es] activity that has not previously been done with or without a computer." Appeal Br. 10; *see also id.* at 11.

When viewed through the lens of the 2019 Revised Guidance, the Appellant contends that under Step 2A, Prong 2, the elements of the claim integrate the abstract idea into a practical application because the combination of the elements "reflects an improvement in the functioning of a computer, or an improvement to other technology or technical field." 84 Fed. Reg. at 55. For at least the following reasons, we disagree.

Reciting a Judicial Exception

Before determining whether claim 1 is directed to an abstract idea, we first determine to what the claim is directed. The Federal Circuit has explained that "the 'directed to' inquiry applies a stage-one filter to claims, considered in light of the specification, based on whether 'their character as a whole is directed to excluded subject matter.'" *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016) (quoting *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015)). It asks whether the focus of the claim is on a specific improvement in relevant technology or on a process that itself qualifies as an "abstract idea" for which computers are invoked merely as a tool. *See id.* at 1335–36. Here, it is clear from the Specification, and the claim language, that the focus of claim 1 is on an abstract idea, and not on any improvement to technology and/or a technical field.

The Specification provides for a "SYSTEM, METHOD AND COMPUTER PROGRAM PRODUCT FOR SELECTING INTERNET-BASED ADVERTISING" (Spec., Title), and more particularly, for "[a] system, method and computer program for creating, selecting and presenting an advertisement" (*id.* at 2). In the "BACKGROUND" section, the Specification discusses that "[a] variety of methods exist for distributing

advertisements to web sites." *Id.* at 1. "In many forms of Internet advertising . . ., an ad may be identified by several keywords that play a role in deciding which advertisement to select for a given placement for a given visitor of the website." *Id.* at 2. Advertisers submit their advertisements "by creating ads and identifying each ad with specific words or phrases (keywords) related to their business." *Id.* These keywords are matched with site placement such as by matching the keywords with website content and filtering out unsuitable ads, such as competitor ads or those with objectionable content. *Id.* The described invention creates, selects, and presents advertisements using a merchant's existing product catalog. *Id.* at 2. "According to one aspect, the generation of advertisement may use presentation templates that determine the visual aspects of the rendered ad." *Id.* at 3. Embodiments of the invention "may use an algorithmic learning process to determine which products and services and/or presentation templates are likely to maximize certain measurable success parameters, when shown to a specific visitor or a group of visitors on a certain web page or a group of web pages." *Id.* The Specification also discusses that ads closely matching to website visitors' many other interests may "easily eliminated during the process of contextual matching." *Id.* at 5. The invention "addresses this issue using a machine learning algorithm to capture such interests that cannot be directly inferred from contextual matching alone." *Id.*

Corresponding with the disclosure, independent claim 1 recites "[a] method for automatic creation of content items responsive to requests for content," comprising the steps of: (1) receiving data, i.e., limitation (a) of

> receiving . . . by a computer device responsive to presentation of a plurality of first content items on a plurality of client devices, data indicative of a plurality of interaction outcomes, each interaction outcome representing an interaction event with a respective first content item by a respective client device, each first content item including content related to one or more products or services of a plurality of products or services;

(2) determining probability distribution models, i.e., limitations (b) and (c) of determining, using the received data, "a first probability distribution model representing interaction performance probabilities for a first performance metric of the plurality of products and services," and "a second probability distribution model representing interaction performance probabilities for a second performance metric of a plurality of templates associated with the plurality of first content items"; (3) selecting data responsive to a request, i.e., limitation (d) of "responsive to receiving a request for a third-party content for presentation on a specified information resource, selecting . . . a template from the plurality of templates and one or more products or services from the plurality of products or services using" the distribution models and information associated with the request;

(4) retrieving data, i.e., limitation (e) of

> retrieving . . . from a catalog database, a plurality of data fields associated with the selected template and the selected one or more products or services, the catalog database including data fields transformed from a first schema specific to a content provider to a second schema defining attributes for real time generation of content items

(we note that the transforming of the data is not positively recited as a step);

(5) generating data based on the retrieved data, i.e., limitation (f) of "generating . . . a second content item using the retrieved data fields, the content item representing an advertisement for presentation on the specified

information resource"; and (6) providing the results, i.e., limitation (g)] of "providing . . the generated second content item for presentation on the specified information resource." Appeal Br. 15–16 (Claims App.). The limitations are performed by a computer device, described in the Specification as a generic computer. *See* Spec. 34, 35, 40, 45, 46. The limitations are also recited functionally without any implementation details.

When considered collectively and under the broadest reasonable interpretation, the claim recites a method to use models to provide better advertising. We agree with the Examiner that the claim recites a method for automatically creating advertisement content by collecting, manipulating, collecting, and displaying data, which is an abstract idea of a "[c]ertain method[] of organizing human activity— . . . commercial or legal interactions (including . . . advertising, marketing or sales activities or behaviors; business relations)." 2019 Revised Guidance, 84 Fed. Reg. at 52.

The courts have held similar concepts to be abstract. For example, the Federal Circuit has held abstract the concepts of customizing information based on known user information in *Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1369–70 (Fed. Cir. 2015) ("*Capital One Bank*"), customizing a user interface based on user selections in *Affinity Labs of Texas, LLC v. Amazon.com Inc.*, 838 F.3d 1266, 1271 (Fed. Cir. 2016), collecting, analyzing, manipulating, and processing data and displaying the results of the analysis, manipulation, and processing in *Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1340 (Fed. Cir. 2017) ("*Capital One Fin.*"), "selecting certain information, analyzing it using mathematical techniques, and reporting or displaying the results of the analysis" in *SAP America, Inc. v. InvestPic*, *LLC*, 898 F.3d

1161, 1167 (Fed. Cir. 2018), and "gathering and analyzing information of a specified content, then displaying the results" in *Electric Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1354 (Fed. Cir. 2016),

Having concluded that the claim recites a judicial exception, i.e., an abstract idea, in determining whether the claim is directed to this abstract idea, we next consider whether the claim recites additional elements that integrate the judicial exception into a practical application

Integration into a Practical Application

Under Step 2A, Prong 2 of the 2019 Revised Guidance, 84 Fed. Reg. at 54, we look to whether the claims "apply, rely on, or use the judicial exception in a manner that imposes a meaningful limit on the judicial exception, such that the claim is more than a drafting effort designed to monopolize the judicial exception," i.e., "integrates a judicial exception into a practical application." We note that, as stated above, the question is whether the claim as a whole "focus[es] on a specific means or method that improves the relevant technology" or is "directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery." *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314 (Fed. Cir. 2016). Here, the additional elements recited in the claim beyond the abstract idea are "a computer device" and "a specified information resource" — elements that, as the Examiner observes (Final Act. 5), are described in the Specification as generic computing elements. *See supra*; Spec. 34, 35, 40, 45, 46. We note that the Specification does not include the term "information resource," which we interpret as a form of input and display mechanism, such as a web page with a Universal Resource Locator (URL). *See id.* at 33, 37.

The limitation of gathering data, i.e., limitation (a) of receiving data, is an extra-solution activity. *See In re Bilski*, 545 F.3d at 963 (characterizing data gathering steps as insignificant extra-solution activity). The limitations of determining data, i.e., limitations (b) and (c) of determining probability distribution models using the received data, are recited functionally without technical or technological details on how, i.e., by what algorithm or on what basis/method, the computer determines the models. The Specification provides that "the present invention enable[s] the use of a mathematical function termed as objective function to represent an outcome of the advertising process" (Spec. 11) and that "modeling step may model the objective function CTR by storing the daily impressions 310 and daily clicks 320" for product categories, ad templates, or products (*id.*at 13). Thus, the determining steps use mathematical functions, which is an abstract idea (*see Flook*, 437 U.S. at 594–95) and performs analyses of data, which can be performed mentally (*see Electric Power*, 830 F.3d at 1354; *SAP America*, 898 F.3d at 1167). The limitations of selecting and retrieving data based on received information and the results of the analyses, i.e., limitations (d) and (e) of selecting a template and retrieving associated data fields, are limitations of gathering data based on the analysis which is an extra-solution activity (*see supra*). To the extent data fields are transformed from a first schema to a second schema, this comprises using mappings and "well known XML transformation techniques" (Spec. 8), which comprises correlating and converting data, which can be performed mentally. The limitation of generating data based on the retrieved data, i.e., limitation (f) of generating a second content item, is recited functionally without technical or technological details on how, i.e., by what algorithm or on what basis or

method, the computer generates the content, and appears to be creating an advertisement by combining information (*see* Spec. 15–20), which is a mental process. The limitation of providing the results, i.e., limitation (g) of providing the generated second content item, is also recited functionally without technical or technological details on how, i.e., by what algorithm or on what basis/method, the computer system performs this step, and is a post-solution activity of outputting of the results of analyses. *See Bilski*, 561 U.S. 593, 610–11 (2010) ("*Flook* stands for the proposition that the prohibition against patenting abstract ideas 'cannot be circumvented by attempting to limit the use of the formula to a particular technological environment' or adding 'insignificant postsolution activity.'") (quoting *Diehr*, 450 U.S. at 191–92).

We find no indication in the Specification, nor does the Appellant direct us to any indication, that the operations recited in claim 1 require any specialized computer hardware or other inventive computer components, i.e., a particular machine, invoke any asserted inventive programming, or that the claimed invention is implemented using other than a generic computer to perform generic computer functions. *See DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1256 (Fed. Cir. 2014) ("[A]fter *Alice*, there can remain no doubt: recitation of generic computer limitations does not make an otherwise ineligible claim patent-eligible.").

The Appellant contends that claim 1

> solve[s] a problem arising from the fact that *'[conventional] process[es] of creating . . . [content items and associating relevant keywords . . . limit the number of . . . [content items] any business can place with . . . [content] networks'* (p 6, lines 13-9, Specification) by *'enabl[ing] the automatic generation of content of advertisements from [a] product database' and*

> *'enabl[ing] the automatic generation and selection of variable granularity advertisements [at run-time]'* (p 4, lines 5-9, and p 16, lines 25–28, Specification).

Appeal Br. 11. However, the Appellant does not address how this problem specifically arises in the realm of computer networks. As noted above, the Specification provides that the invention addresses the issue of ads matching users' other interests being easily eliminated during the process of contextual matching. Spec. 5. And, creating and providing more targeted ads in a timely manner is a problem that existed prior to the Internet, such as in television or print advertisements. *See Capital One Bank*, 792 F.3d at 1369–71 (determining that tailoring advertisements in television commercials and newspaper ads has been long prevalent and not a problem unique to the Internet).

Further, the purported solution that "'*allow[s] automatic creation of a rich set of ads for products and services from product/services feeds provided by merchants and merchant aggregators*' (p 7, lines 28-30, Specification)" (Appeal Br. 12 (alteration in original)) is not rooted in computer technology. This purported solution requires the use of a generic computer device. *See supra*; *see also Alice*, 573 U.S. at 224–26. The Appellant does not, and cannot, claim to have invented the use of the computer device. The "focus" of the claim is not "on the specific asserted improvement in computer capabilities" (*Enfish*, 822 F.3d at 1336), but rather on using the computer device as a tool to implement the abstract idea in the particular field of online advertising. That the claim allows automatic, i.e., by a computer, creation of advertisements (Appeal Br. 12) at best limits the invention to a computer environment and does not make the claim less abstract. *See Affinity Labs of Tex., LLC v. DIRECTV, LLC*, 838 F.3d 1253,

1259 (Fed. Cir. 2016) ("The Supreme Court and [the Federal Circuit] have repeatedly made clear that merely limiting the field of use of the abstract idea to a particular existing technological environment does not render the claims any less abstract."). Any improvement to creating ads lies in the process itself, an improvement in the abstract idea itself, not to any technological improvement. Allowing automatic creation of ads from merchant feeds is "not an improvement in networking or computer functionality" as is does not "enable[] a computer . . . to do things it could not do before." *Finjan, Inc. v. Blue Coat Sys., Inc.*, 879 F.3d 1299, 1305 (Fed. Cir. 2018). Rather, the claim's focus is "not a physical-realm improvement but an improvement in a wholly abstract idea," that is not eligible for patenting." *SAP Am.*, 898 F.3d 1161 at 1168; *see also Bridge & Post, Inc. v. Verizon Commc'ns, Inc.*, 778 F. App'x 882, 893 (Fed. Cir. 2019) ("The ability to run a more efficient advertising campaign, even if novel, and even if aided by conventional computers, is an advance 'entirely in the realm of abstract ideas,' which we have repeatedly held to be ineligible.") (citation omitted).

Accordingly, we conclude that claim 1 does not contain an element, or combination of elements, that imposes a meaningful limit on the abstract idea that integrates the abstract idea into a practical application. Thus, we are not persuaded of error in the Examiner's determination that claim 1 is directed to an abstract idea.

Step Two of the Mayo/Alice Framework

Under the second step in the *Alice* framework (corresponding to Step 2B of the 2019 Revised Guidance), we find supported the Examiner's determination that the limitations of claim 1, taken individually and as an

ordered combination, do not amount to significantly more than the judicial exception and "merely provide conventional computer implementation" (Final Act. 5) and that the Specification "demonstrates the well-understood, routine, conventional nature of the additional elements" (Ans. 5).

We note that the claim simply recites the functional results to be achieved by the components. The claim "provides only a result-oriented solution[] with insufficient detail for how a computer accomplishes it. Our law demands more." *Capital One Fin.*, 850 F.3d at 1342. Taking the claimed elements separately, the functions performed by the device are purely conventional. The claimed generic device operates in its ordinary and conventional capacity to perform the well-understood, routine, and conventional functions of gathering data (i.e., limitation (a)), determining data (i.e., limitations (b) and (c)), selecting and retrieving data based on received information and the results of the analyses (i.e., limitations (d) and (e)), generating data based on the retrieved data (i.e., limitation (f)), and providing the results (i.e., limitation (g)). *See* Spec. 34, 35, 40, 45, 46 (describing a generic computer device); *Electric Power*, 830 F.3d at 1354–55 (gathering, sending, monitoring, analyzing, selecting, and presenting information does not transform the abstract process into a patent-eligible invention); *Alice*, 573 U.S. at 226 ("Nearly every computer will include a 'communications controller' and 'data storage unit' capable of performing the basic calculation, storage, and transmission functions required by the method claims."); *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1349 (Fed. Cir. 2015) (combining information from a template file to form a dynamically generated online application form is a generic, conventional step); *SAP Am.*, 898 F.3d at 1170 ("an invocation of already-

available computers that are themselves plausibly asserted to be an advance, for use in carrying out improved mathematical calculation, amounts to a recitation of what is 'well-understood, routine, [and] conventional.'") (quoting *Mayo*, 566 U.S. at 73).

As an ordered combination, the components of Appellant's claim 1 add nothing that is not already present when the steps are considered separately. The sequence of gathering data, analyzing data, and performing actions (such as selecting, retrieving, and providing data) based on the analysis is equally generic and conventional or otherwise held to be abstract. *See Electric Power*, 830 F.3d at 1354–56 (holding that the sequence of gathering, analyzing, and displaying in real-time was abstract); *SAP Am.*, 898 F.3d at 1069–70 *(*holding that ordered combination of receiving data, performing a statistical analysis, and providing a report of the results was abstract). The ordered combination of the steps is, therefore, ordinary and conventional.

The Appellant appears to argue that the claim's elements amount to significantly more than the abstract idea because, like *McRO* and *BASCOM Global Internet Svcs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016), the "specific combination of the features . . . amount[s] to significantly more than an abstract idea." Appeal Br. 12. Specifically, the Appellant argues that "the present claims recite a non-conventional and non-generic arrangement that is able to '*leverage[e] existing inventory of information about individual products and services that businesses may already have, to dynamically create millions of ads with rich information about such products and services ... without any direct human intervention*' (p 6, lines 17–22, Specification)." *Id.*

The recited steps in claim 1 are distinguishable from the steps in *McRO* found to make the claim patent eligible. In *McRO*, the court found that, while the *McRO* claims involved the manipulation of data, e.g., generating morph weight sets to animate lip and facial expressions of three-dimensional characters, the claimed "automation goes beyond merely 'organizing [existing] information into a new form' or carrying out a fundamental economic practice." *McRO*, 837 F.3d at 1315 (citation omitted). Instead, the court found that the "claimed process uses a combined order of specific rules that renders information into a specific format that is then used and applied to create desired results: a sequence of synchronized, animated characters." *Id.* *McRO* found that the recited rules "are limiting in that they define morph weight sets as a function of the timing of phoneme sub-sequences." *Id*. at 1313. The claims were found to be directed to a "technological improvement over the existing, manual 3-D animation techniques." *Id*. at 1316. In finding the claims patent-eligible, *McRO* noted that the "abstract idea exception has been applied to prevent patenting of claims that abstractly cover results where 'it matters not by what process or machinery the result is accomplished.' [*O'Reilly v. Morse*, 56 U.S. (15 How.) 62, 113 (1853)]; *see also Mayo*, 132 S.Ct. at 1301." *McRO*, 837 F.3d at 1314. Here, the steps are not limited to how they are accomplished, but rather recite the result of whatever process is used to determine data, select a template, and generate a content item. As discussed above, these limitations say little about how these functions are performed. *Cf. SAP Am.*, 898 F.3d at 1167 (explaining that the claims in *McRO* "avoided being 'abstract' in another sense reflected repeatedly in our cases" because "they had the specificity required to transform a claim from one claiming only a result to

one claiming a way of achieving it"). And, as discussed above, claim 1 generally concerns creating and providing more targeted ads, not improving a technological process such as computer animation like the claims in *McRO*.

Moreover, the Appellant does not show how the claim here is similar to *BASCOM*'s "particular arrangement of elements [that] is a technical improvement over prior art ways of filtering such content." 827 F.3d at 1350. The patent at issue in *BASCOM* "claim[ed] a technology-based solution (not an abstract-idea-based solution implemented with generic technical components in a conventional way) to filter content on the Internet that overcomes existing problems with other Internet filtering systems." *Id.* at 1351. The court determined that "[b]y taking a prior art filter solution (one-size-fits-all filter at the ISP server) and making it more dynamic and efficient (providing individualized filtering at the ISP server), the claimed invention represents a 'software-based invention[ ] that improve[s] the performance of the computer system itself.'" *Id.* Here, there is no such improvement. Although the claim recites the structural element of a computer device, as discussed above, there is no claimed technological improvement to this structure or arrangement of any structures. Any improvement in the lies in the abstract idea itself, i.e., creating an advertisement.

The Appellant further contends that the Examiner's rejection, as presented in the Final Rejection and Answer, is "in contravention of the USPTO Memorandum on Changes in Examination Procedure Pertaining to Subject Matter Eligibility, Recent Subject Matter Eligibility Decision (*Berkheimer v. HP, Inc.*) promulgated to the Patent Examining Corps on

April 19, 2018 ('Berkheimer Memo')." Reply Br. 2.[3] Specifically, the Appellant argues that "[n]either the[] cited paragraphs, nor any other passages of the specification '*demonstrate[e] the well-understood, routine, or conventional nature* ***of the combination of elements***' as required by the Berkheimer Memo." *Id.* at 3.

That argument is not persuasive at least because "the relevant inquiry is not whether the claimed invention as a whole is unconventional or non-routine." *BSG Tech LLC v. BuySeasons, Inc.*, 899 F.3d 1281, 1290 (Fed. Cir. 2018). Instead, the question under step two of the *Mayo/Alice* framework (i.e., step 2B) is whether the claim includes additional elements, i.e., elements other than the abstract idea itself, that "'transform the nature of the claim' into a patent-eligible application." *Alice*, 573 U.S. at 217 (quoting *Mayo*, 566 U.S. at 79, 78).

Here, the claimed steps of receiving data, determining models, selecting a template, receiving data fields, generating a content item, and providing that item part of the abstract idea itself; they are not additional elements to be considered when determining whether claim 1 includes additional elements or a combination of elements that is sufficient to amount to significantly more than the judicial exception.

Alice is clear, as described above, that under step two of the *Mayo/Alice* framework, the elements of each claim are considered both individually and "as an ordered combination" to determine whether the additional elements, i.e., the elements other than the abstract idea itself, "transform the nature of the claim" into a patent-eligible application. *Alice*,

[3] The Reply Brief does not contain page numbers. We consider the page with the title "**REPLY BRIEF UNDER 37 CFR 1.193**" as page 1.

573 U.S. at 217; *see also Mayo*, 566 U.S. at 72–73 (requiring that "a process that focuses upon the use of a natural law also contain other elements or a combination of elements, sometimes referred to as an 'inventive concept,' sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the natural law itself") (emphasis added). In other words, the inventive concept under step two of the *Mayo/Alice* framework cannot be the abstract idea itself: "It is clear from *Mayo* that the 'inventive concept' cannot be the abstract idea itself, and *Berkheimer* . . . leave[s] untouched the numerous cases from this court which have held claims ineligible because the only alleged 'inventive concept' is the abstract idea." *Berkheimer v. HP, Inc.*, 890 F.3d 1369, 1374 (Fed. Cir. 2018) (Moore, J., concurring); *see also BSG Tech*, 899 F.3d at 1290 ("It has been clear since *Alice* that a claimed invention's use of the ineligible concept to which it is directed cannot supply the inventive concept that renders the invention 'significantly more' than that ineligible concept.") (citation omitted).

The Examiner determines here, and we agree, that the only claim element beyond the abstract idea is the computing device. *See* Final Act. 5; Ans. 5–6 (citing the Specification). We agree that the Specification indisputably shows the claimed computing element was conventional at the time of filing. *See supra*. And the Appellant does not provide any supported reasoning or explanation that the functions are not well-understood, routine, and conventional.

The Appellant cannot reasonably maintain that there is a genuine issue of material fact regarding whether operation of the claimed computer device is well-understood, routine, or conventional, where, as here, there is nothing in the Specification to indicate that the operations recited in claim 1 require

any specialized hardware or inventive computer components, or that the claimed invention is implemented using other than generic computer components to perform the generic computer functions as discussed above. Indeed, the Federal Circuit, in accordance with *Alice*, has "repeatedly recognized the absence of a genuine dispute as to eligibility" where claims have been defended as involving an inventive concept based "merely on the idea of using existing computers or the Internet to carry out conventional processes, with no alteration of computer functionality." *Berkheimer*, 890 F.3d at 1373 (Moore, J., concurring) (citations omitted); *see also BSG Tech*, 899 F.3d at 1291 ("BSG Tech does not argue that other, non-abstract features of the claimed inventions, alone or in combination, are not well-understood, routine and conventional database structures and activities. Accordingly, the district court did not err in determining that the asserted claims lack an inventive concept.").

Thus, we are not persuaded of error in the Examiner's determination that the limitations of claim 1 do not transform the claim into significantly more than the abstract idea.

We therefore sustain the Examiner's rejection under 35 U.S.C. § 101 of claim 1 and of claims 4–6, 10, 13, 16–18, and 20–25, the rejection of which stands with the rejection of claim 1.

CONCLUSION

The Examiner's decision to reject claims 1, 4–6, 10, 13, 16–18, and 20–25 under 35 U.S.C. § 101 is affirmed.

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1, 4–6, 10, 13, 16–18, 20–25	101	Eligibility	1, 4–6, 10, 13, 16–18, 20–25	

TIME PERIOD FOR RESPONSE

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

AFFIRMED