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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte NEELAKANTAN SUNDARESAN and
KARIN MAUGE'

Appeal 2018-004291
Application 14/529,757
Technology Center 2100

Before JOSEPH L. DIXON, JOHN A. JEFFERY, and
JOHNNY A. KUMAR, *Administrative Patent Judges*.

DIXON, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants¹ appeal under 35 U.S.C. § 134(a) from a rejection of claims 1–20. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

The claims are directed to generating a thematic query based on the submitted query and the determined strength score and presentation of items based on the theme. Claims 1 and 10, reproduced below, are illustrative of the claimed subject matter:

1. A system comprising:

an access module configured *to access a query submitted by a user*;

an identification module, executable by a processor and configured *to identify the submitted query* as corresponding to a theme by determining a strength score of the submitted query, the strength score indicating a pertinence of the submitted query to the theme, the theme being a descriptor of a concept that is applicable to the submitted query; and

a query module *to generate a thematic query* based on the submitted query and the determined strength score.

10. A method comprising:

accessing a query submitted by a user;

identifying the submitted query as corresponding to a theme by determining a strength score of the submitted query, the strength score indicating a pertinence of the submitted query to the theme, the theme being a descriptor of a concept that is

¹ According to Appellants, the real party in interest is eBay, Inc. (App. Br. 3).

applicable to the submitted query, the identifying being performed by a processor; and

generating a thematic query based on the submitted query and the determined strength score, the thematic query being different than the submitted query.

REFERENCES

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Loftesness	US 2008/0082518 A1	Apr. 3, 2008
Mohan	US 2009/0150214 A1	June 11, 2009

REJECTIONS

The Examiner made the following rejections:

Claims 1–20 stand rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1–21 of U.S. Patent No. 8,880,513. (Non-Final Act. 2–5 (mailed June 3, 2016)).

For claims 1–9, the Examiner provides a discussion of the claimed “modules” under 35 U.S.C. § 112, sixth paragraph and maintains that the claims contain functional limitations, which require claim interpretation in light of the corresponding structure, acts, or materials as disclosed in the Specification. (Ans. 3). Based upon the Examiner’s proffered required interpretation under 35 U.S.C. § 112, sixth paragraph, claims 1–9 stand rejected under 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor, or for pre-AIA the applicant, regards as the invention. (Ans. 6).

Claims 1–20 stand rejected under 35 U.S.C. § 101 because the claimed invention is directed to a judicial exception (i.e., a law of nature, a natural phenomenon, or an abstract idea) without significantly more. (Ans. 9).

Claims 1–20 stand rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Mohan in view of Loftesness. (Final Act. 3).

ANALYSIS

Nonstatutory Obviousness-Type Double Patenting

With respect to the nonstatutory obviousness-type double patenting rejection, the Examiner maintains that the rejection stands pending further amendment. (Final Act. 2).

Appellants “request[] to defer resolution of the double patenting rejection until the patentable subject matter is determined.” (App. Br. 10).

The Examiner does not expressly withdraw the rejection in the Examiner’s Answer, but does not expressly repeat the rejection. Therefore, the rejection stands as indicated in the Final Action, because it has not been expressly withdrawn by the Examiner, and Appellants have not responded to the rejection. As a result, we summarily sustain the nonstatutory obviousness-type double patenting rejection of claims 1–20.

35 U.S.C. § 112 (pre-AIA), second paragraph

The Examiner maintains that the various claimed “modules” are directed to claim limitations under 35 U.S.C. § 112, sixth paragraph, and

Appellants do not disclose the corresponding algorithm for these functional limitations. (Ans. 7–9).

Generic terms, such as “mechanism,” “element,” “device,” and other “nonce words” used in a claim, can also be considered as a substitute for the “means-plus-function” limitation and, as such, may invoke the application of 35 U.S.C. § 112, sixth paragraph, even without reciting the term “means,” because these generic terms or nonce words “typically do not connote sufficiently definite structure.” *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1350 (Fed. Cir. 2015) (en banc). As in *Williamson*, the claims here do not recite the term “means,” but “the [access module, identification module, query module] limitation is drafted in the same format as a traditional means-plus-function limitation, and merely replaces the term ‘means’ with ‘nonce’ word ‘[module],’ thereby connoting a generic ‘black box’ for performing the recited computer-implemented functions.” *Williamson*, 792 F.3d at 1350.

The term “module” in this context is used as a generic term tantamount to reciting a “means” because “module” provides no indication of the structure necessary to perform the recited functions. *See also* Manual of Patent Examining Procedure (“MPEP”) § 2181(I)(A). The claim limitation in question is not the “module” by itself; it includes all of the functions the module is “programmed to” perform. *See Williamson*, 792 F.3d at 1352. Specifically, at least the functions italicized above require structure beyond simply a generic processor to carry out the claimed functions. Accordingly, the presumption against applying 35 U.S.C. § 112, sixth paragraph, is overcome because the claim merely “recites ‘function without reciting sufficient structure for performing that function.’”

Williamson, 792 F.3d at 1348 (quoting *Watts v. XL Sys., Inc.*, 232 F.3d 877, 880 (Fed. Cir. 2000)).

Similarly, the prefixes “access,” “identification,” and “query” provide one of ordinary skill in the art no insight on the structure necessary to perform the recited functions. Here, as in *Williamson*, even if one of ordinary skill in the art would be capable of programming a computer to perform the recited functions, it is not sufficient to create the structure not otherwise disclosed. *Williamson*, 792 F.3d at 1351.

Even to the extent a person of ordinary skill in the art would have understood the recited “modules” to include generic computer components (e.g., a processor or device including a processor), such generic computer components without specific programming are not capable of performing each of the recited functions. *Williamson*, 792 F.3d at 1350–51 (finding the presumption against invoking 35 U.S.C. § 112, sixth paragraph, is overcome because the recitation of a “distributed learning control module” connotes insufficient structure for carrying out the recited functions). Appellants provide no argument or evidence indicating a generic processor, without the appropriate specific programming, would be capable of performing at least the claimed functions.

Even prior to *Williamson* overruling previous cases holding the presumption that § 112, sixth paragraph, is not invoked if the claim does not recite the term “means” is “strong,” 792 F.3d at 1349, the Board provided guidance on the issue before us. For example, the Board found the recitation of a generic processor configured to perform functions that would require special programming invoked § 112, sixth paragraph. *Ex parte Lakkala*, Appeal No. 2011-001526, 2013 WL 1341108, at *6 (BPAI Mar. 11, 2013)

(informative). Similarly, the Board found a claim that recited, in part, “a processor adapted to” perform various functions invoked § 112, sixth paragraph, and explained that “[t]o see whether the presumption is overcome, we look to how a skilled artisan would understand ‘processor,’ whether the limitation recites sufficient structure, material, or acts for achieving the recited functions, and whether the term ‘processor’ is modified by functional language.” *Ex parte Erol*, Appeal No. 2011-001143, 2013 WL 1341107, at *8–9 (PTAB Mar. 11, 2013) (informative); *accord Ex parte Smith*, Appeal No. 2012-007631, 2013 WL 1341109, at *6–8 (PTAB Mar. 12, 2013) (informative). The PTAB further explained that, “[t]o confirm whether the presumption against such a substitution is overcome, we look to determine whether the functions performed by the processor are typical functions found in a commercially, available off-the-shelf processor, which would weigh against invoking § 112, sixth paragraph.” *Erol*, 2013 WL 1341107, at *8.

Therefore, even though claim 1 recites a “module” rather than a “means,” we agree with the Examiner that aspects of claim 1 invoke 35 U.S.C. § 112, sixth paragraph, such that they are construed as means-plus-function limitations, because the recited “modules” would not be “understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure” that is capable of carrying out each of the recited functions. *Williamson*, 792 F.3d at 1348 (citing *Greenberg v. Ethicon Endo-Surgery, Inc.*, 91 F.3d 1580, 1583 (Fed. Cir. 1996)). *See also* MPEP 2181(I)(A).

Accordingly, we look to Appellants’ Specification to determine whether there is sufficient structure to support the recited functions. As

discussed above, we agree with the Examiner that a generic processor does not provide sufficient structure to perform each of the recited functions.

Appellants do not dispute the Examiner's finding of functional limitations, and Appellants contend that the originally filed Specification provides adequate corresponding support for these claim limitations to properly interpret the limitations under 35 U.S.C. § 112, sixth paragraph. (Reply Br. 2). Appellants identify various portions of the originally filed Specification from paragraphs 40–76 to provide adequate disclosure of the corresponding structure, materials, or acts of each of functional claim element. (Reply Br. 3–4).

We have reviewed the paragraphs identified by the Appellants and disagree with the Appellants that the originally filed Specification discloses the specific algorithms for accomplishing the various functional modules recited in the language of independent claim 1. Moreover, we find that the originally filed Specification discloses the same scope of disclosure as the claim language. Additionally, with respect to the claimed “strength score,” we find the Specification provides little detail and provides no further insight or guidance with respect to the claimed “strength score.” We further find Appellants' Specification essentially discloses that the “strength score” may be a numerical score, but provides little to no assistance in how the strength score is calculated or how the strength score is functionally used.²

² See Spec. ¶ 41:

This identification of the portion 120 includes determining a strength score of a submitted query (e.g., query 111) among the submitted queries 110. In particular, a strength score may be determined for each of the submitted queries 110, and these strength scores may be used to determine *which of the submitted*

However, the Federal Circuit has held that corresponding structure may be sufficiently disclosed in the form of an algorithm. *WMS Gaming, Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1348 (Fed. Cir. 1999) (“A general purpose computer, or microprocessor, programmed to carry out an algorithm creates ‘a new machine, because a general purpose computer in effect becomes a special purpose computer once it is programmed to perform particular functions pursuant to instructions from program software.’” (quoting *In re Alappat*, 33 F.3d 1526, 1545 (Fed. Cir. 1994))). The Specification’s disclosure that the system may be implemented using computer programs suggests the claimed “modules” may simply be software executing on generic computer components, which, without specific programming, are not capable of performing each of the recited functions.

queries 110 are more likely to be pertinent to a theme. For example, a subset of the submitted queries 110 that has high strength scores may be analyzed by the identification module 422 extract one or more themes from the search criteria (e.g., search criteria 112 and 113) contained in the subset of the submitted queries 110. Accordingly, *a particular strength score indicates a degree of influence that a particular submitted query has on the identifying of the portion 120.* In some example embodiments, the greater the strength score, the greater the degree of influence. An alternative example embodiments, the lower the strength score, the greater the degree of influence. For example, the strength score may be a numerical score with a value between zero and one, where a value of zero indicates no influence and a value of one indicates maximum influence. As another example, the strength score may take a value between one and 100, with lower numerical value (e.g., 11) indicating greater influence on the identification of the portion 120 (e.g., compared to 91).

(Emphases added).

See Spec. ¶ 86 (“For example, a hardware module may include software encompassed within a general-purpose processor or other programmable processor.”).

The “modules” in claim 1 “recite[] ‘function without reciting sufficient structure for performing that function,’” because Appellants’ system is unable to perform the recited function without specific programming. *Williamson*, 792 F.3d at 1349 (quoting *Watts*, 232 F.3d at 880). None of the identified disclosures describes details (e.g., an algorithm or other corresponding structure) on how to perform each of the recited functions. *Williamson*, 792 F.3d at 1352 (“Even if the specification discloses corresponding structure, the disclosure must be of ‘adequate’ corresponding structure to achieve the claimed function.”). Although a general purpose computer may provide sufficient structure to perform functions that do not require special programming, the same general purpose computer is insufficient structure for performing specific functions that require special programming. *In re Katz Interactive Call Processing Patent Litig.*, 639 F.3d 1303, 1316 (Fed. Cir. 2011). Therefore, based on this record, we conclude the term “module” fails “to fulfill the ‘public notice function’ of 35 U.S.C. § 112 ¶ 2 by ‘particularly pointing out and distinctly claiming’ the invention” and “exhibit the ‘overbreadth inherent in open-ended functional claims.’” *Katz*, 639 F.3d at 1315 (citing *Praxair, Inc. v. ATMI, Inc.*, 543 F.3d 1306, 1319 (Fed. Cir. 2008); quoting *Halliburton Energy Servs., Inc. v. M-I LLC*, 514 F.3d 1244, 1256 n.7 (Fed. Cir. 2008)).

Therefore, we agree with the Examiner that the Specification does not disclose the corresponding algorithm for the claimed “access module,” “identification module,” and “query module” to particularly point out and

distinctly claim the invention. For the above reasons, we agree with the Examiner that representative claim 1 is indefinite under 35 U.S.C. § 112, second paragraph, and we sustain the indefiniteness rejection of representative independent claim 1 and dependent claims 2–9 not argued separately.

35 U.S.C. § 101

Appellants do not set forth separate arguments for patent eligibility under 35 U.S.C. § 101. (Reply Br. 4). Therefore, we select independent method claim 10 as the representative claim for the group and will address Appellants’ arguments thereto. (*See* 37 C.F.R. § 41.37(c)(iv) (2016).)

The Examiner maintains that claims 1–20 “are directed to the abstract idea of generate a thematic query based on the submitted query and the determined strength score, as explained in detail below.” (Ans. 9). The Examiner further maintains that the claim recites the additional limitations of an access module, an identification module executed by a processor, and a query module that perform generic computer functions that are well-understood, routine, and conventional activities that amount to no more than implementing the abstract idea with a computerized system. (Ans. 11). The Examiner also maintains that there is no indication that the combination of elements improves the functioning of a computer or improves any other technology, and collective functions merely provide conventional computer implementation. (Ans. 11). Thus, taken alone, the additional elements do not amount to significantly more than the above-identified judicial exception (the abstract idea), and looking at the limitations as an ordered combination adds nothing that is not already present when looking at the elements taken

individually. Consequently, the Examiner maintains that there is no indication that the combination of elements improves the functioning of a computer or improves any other technology and the collective functions merely provide conventional computer implementation. (Ans. 11).

Appellants dispute the Examiner's conclusion that the pending claims are directed to patent-ineligible subject matter. (Reply Br. 4–11). In particular, Appellants argue the claims “are directed to an improvement in computer-related technology.” (Reply Br. 7 (emphasis omitted)). Appellants argue the claimed invention is not analogous to the concepts found abstract by the court decisions cited by the Office Action. (Reply Br. 5).

The Supreme Court's two-step framework guides our analysis of patent eligibility under 35 U.S.C. § 101. *Alice Corp. v. CLS Bank Int'l*, 573 U.S. 208, 217 (2014). In addition, the Office recently published revised guidance for evaluating subject matter eligibility under 35 U.S.C. § 101, specifically with respect to applying the *Alice* framework. USPTO, 2019 *Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50 (Jan. 7, 2019) (“Office Guidance”). If a claim falls within one of the statutory categories of patent eligibility (i.e., a process, machine, manufacture, or composition of matter) then the first inquiry is whether the claim is directed to one of the judicially recognized exceptions (i.e., a law of nature, a natural phenomenon, or an abstract idea). *Alice*, 573 U.S. at 217. As part of this inquiry, we must “look at the ‘focus of the claimed advance over the prior art’ to determine if the claim’s ‘character as a whole’ is directed to excluded subject matter.” *Affinity Labs of Tex., LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1257 (Fed. Cir. 2016). Per Office Guidance, this first inquiry has two

prongs of analysis: (i) does the claim recite a judicial exception (e.g., an abstract idea), and (ii) if so, is the judicial exception integrated into a practical application. 84 Fed. Reg. at 54. Under the Office Guidance, if the judicial exception is integrated into a practical application, *see infra*, the claim is patent eligible under § 101. 84 Fed. Reg. at 54–55. If the claim is directed to a judicial exception (i.e., recites a judicial exception and does not integrate the exception into a practical application), the next step is to determine whether any element, or combination of elements, amounts to significantly more than the judicial exception. *Alice*, 573 U.S. at 217; 84 Fed. Reg. at 56.

Here, Appellants’ representative claim 10 recites an abstract idea within the category of mental processes. If a claim, under its broadest reasonable interpretation, covers performance in the mind, but for the recitation of generic computer components, then it is still in the mental processes category, unless the claim cannot practically be performed in the mind. *See Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1318 (Fed. Cir. 2016) (“[W]ith the exception of generic computer-implemented steps, there is nothing in the claims themselves that foreclose them from being performed by a human, mentally or with pen and paper.”); *see also CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1375, 1372 (Fed. Cir. 2011) (holding that the incidental use of “computer” or “computer readable medium” does not make a claim otherwise directed to process that “can be performed in the human mind, or by a human using a pen and paper” patent eligible); *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 71 (2012) (explaining mental processes are not patentable); 84 Fed. Reg. at 52–53 nn.14–15.

The Examiner maintains that the claimed invention recites, in part, a system for performing the steps of accessing a submitted query, identifying the submitted query as corresponding to a theme, determining a strength score that indicating a pertinence of the submitted query to the theme, and generate a thematic query based on the submitted query and the determined strength score. These steps describe the concept of generating a thematic query based on the submitted query and the determined strength score, which corresponds to concepts identified as abstract ideas by the courts, such as remotely accessing and retrieving user-specified information (*Int. Ventures v. Erie Indemnity '002 patent*).

The claim is directed to finding a theme, such as “Thanksgiving,” for queries comprising “turkey,” “pilgrim,” “cranberry sauce,” and “pumpkin pie”, see [0017] of the instant specification. Determining a theme or category for an information request is no different than a librarian determining a category of fiction based upon specific examples of books that a library patron has previously enjoyed. Further, the claim could be performed mentally or by hand, see, *e.g.*, *Cybersource*, 654 F.3d at 1371 (invalidating patent on ground that it claimed an “unpatentable mental process - a subcategory of unpatentable abstract ideas”), and the limitations are both result-focused and recited at a high level of generality.

(Ans. 10).

In particular, Appellants’ claims generally concern finding a theme. This is consistent with how Appellants describe the claimed invention. *See* Spec. ¶¶ 2, 14, 41, Fig. 4; *see also* Abstract (“The machine generates a thematic query based on the identified portion and obtains search results by executing the thematic query.”). Generating a thematic query based on the identified portion can be performed by a human, mentally, or with pen and paper. Consistent with our Office Guidance and case law, we conclude that generating a thematic query based on the identified portion is a mental process and, thus, an abstract idea. *See* 84 Fed. Reg. at 52; *see also*

CyberSource, 654 F.3d at 1371–72 (concluding claims directed to “detecting credit card fraud based on information relating [to] past transactions” can be performed in the human mind and were drawn to a patent-ineligible mental process); *FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1093–94 (Fed. Cir. 2016) (concluding claims directed to “collecting and analyzing information to detect misuse and notifying a user when misuse is detected” to be mental processes within the abstract-idea category).

Claim 10 is reproduced below and includes the following claim limitations that recite generating a thematic query based on the submitted query and the determined strength score, emphasized in *italics*:

10. A method comprising:

accessing a query submitted by a user;

identifying the submitted query as corresponding to a theme by determining a strength score of the submitted query, the strength score indicating a pertinence of the submitted query to the theme, the theme being a descriptor of a concept that is applicable to the submitted query, the identifying being performed by a processor; and

generating a thematic query based on the submitted query and the determined strength score, the thematic query being different than the submitted query.

More particularly, the concept of generating a thematic query based on the submitted query and the determined strength score comprises (i) accessing a query submitted by a user; (ii) identifying the submitted query as corresponding to a theme by determining a strength score of the submitted query, the strength score indicating a pertinence of the submitted query to the theme, the theme being a descriptor of a concept that is applicable to the submitted query, the identifying being performed by a processor; and

(iii) generating a thematic query based on the submitted query and the determined strength score, the thematic query being different than the submitted query. We also are unpersuaded by Appellants' argument that the claims are not directed to an abstract idea because they are directed to an improvement of computer-related technology. (Reply Br. 7).

As an initial matter, we agree with the Examiner the limitations are both result-focused and recited at a high level of generality. (Ans. 10). Moreover, using a computer to perform tasks more quickly or efficiently does not confer patent eligibility on an otherwise ineligible abstract idea. *See, e.g., Bancorp Servs., L.L.C. v. Sun Life Assurance Co. of Can. (U.S.)*, 687 F.3d 1266, 1278 (Fed. Cir. 2012) (“[T]he 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.”).

Because the claim recites a judicial exception, we next determine whether the claim integrates the judicial exception into a practical application. 84 Fed. Reg. at 54. To determine whether the judicial exception is integrated into a practical application, we identify whether there are “*any additional elements recited in the claim beyond the judicial exception(s)*” and evaluate those elements to determine whether they integrate the judicial exception into a recognized practical application. 84 Fed. Reg. at 54–55 (emphasis added); *see also* MPEP §§ 2106.05(a)–(c), (e)–(h) (9th ed. Rev. 08.2017, Jan. 2018).

Here, we find the additional limitation(s) of determining a strength score and the identifying being performed by a processor do not integrate the judicial exception into a practical application. More particularly, the claims do not recite: (i) an improvement to the functionality of a computer or other

technology or technical field (*see* MPEP § 2106.05(a)); (ii) use of a “particular machine” to apply or use the judicial exception (*see* MPEP § 2106.05(b)); (iii) a particular transformation of an article to a different thing or state (*see* MPEP § 2106.05(c)); or (iv) any other meaningful limitation (*see* MPEP § 2106.05(e)). *See* 84 Fed. Reg. at 55. Rather, the additional elements merely refine elements of the abstract idea. Moreover, gathering of data as input for further processing is the type of extra-solution activities (i.e., in addition to the judicial exception) the courts have determined insufficient to transform judicially excepted subject matter into a patent-eligible application. *See* MPEP § 2106.05(g); *see also* *Bilski v. Kappos*, 561 U.S. 593, 612 (2010) (holding the use of well-known techniques to establish inputs to the abstract idea as extra-solution activity that fails to make the underlying concept patent eligible); *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1355 (Fed. Cir. 2016) (explaining that “selecting information, by content or source, for collection, analysis, and display does nothing significant to differentiate a process from ordinary mental processes”). Further, the generic recitation that the steps are performed by “one or more processors” does not integrate the judicial exception into a practical application. *See* claim 16 (reciting that operations are performed when instructions are “executed by one or more processors of a machine”).

The claims in *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299 (Fed. Cir. 2016)—unlike the claims here—recited a “specific . . . improvement in computer animation” using “unconventional rules” that related “sub-sequences of phonemes, timings, and morph weight sets” to automatically animate lip synchronization and facial expressions for three-

dimensional characters that only human animators could previously produce. *McRO*, 837 F.3d at 1302–03, 1307–08, and 1313–15. In *McRO*, “the incorporation of the claimed rules” improved an existing technological process. *McRO*, 837 F.3d at 1314. In contrast, Appellants’ claims here do not improve an existing technological process. Contrary to Appellants’ assertions (*see* Reply Br. 4–8), the claims do not improve computer technology, but instead use computers and computer-based devices to perform the claimed mental process (i.e., generating a thematic query). *See Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335–36 (Fed. Cir. 2016) (distinguishing between claims wherein the focus of the claims is on an improvement in computer capabilities and those that invoke a computer as a tool). For at least the foregoing reasons, the claims do not integrate the judicial exception into a practical application.

Because we determine the claims are directed to an abstract idea or combination of abstract ideas, we analyze the claims under step two of *Alice* to determine if there are additional limitations that individually, or as an ordered combination, ensure the claims amount to “significantly more” than the abstract idea. *Alice*, 573 U.S. at 217–18 (citing *Mayo*, 566 U.S. at 72–73, 77–79). As stated in the Office Guidance, many of the considerations to determine whether the claims amount to “significantly more” under step two of the *Alice* framework are already considered as part of determining whether the judicial exception has been integrated into a practical application. *See* 84 Fed. Reg. at 56. Thus, at this point of our analysis, we determine if the claims add a specific limitation, or combination of limitations, that is not well-understood, routine, conventional activity in the

field, or simply appends well-understood, routine, conventional activities at a high level of generality. *See* 84 Fed. Reg. at 56.

Here, Appellants' claims do not recite specific limitations (or a combination of limitations) that are not well-understood, routine, and conventional. As an initial matter, we note, as does the Examiner (*see, e.g.,* Ans. 10–11), that Appellants describe the components of the claimed invention at a high level of generality and the components perform generic functions that are well-understood, routine, and conventional. *See* Spec. ¶¶ 2, 14, 41, 88–93, Fig. 4.

For example, the claim's recitation of a method performed by “one or more processors” (independent claim 16) fails to transform a patent-ineligible concept into an eligible one. *See Mortgage Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d 1314, 1324–25 (Fed. Cir. 2016) (generic computer components, such as an “interface,” “network,” and “database,” fail to satisfy the inventive concept requirement; *Alice*, 573 U.S. at 226 (“Nearly every computer will include a ‘communications controller’ and [a] ‘data storage unit’ capable of performing the basic calculation, storage, and transmission functions required by the method claims.”)).

For the reasons discussed *supra*, we are unpersuaded of Examiner error. Accordingly, we sustain the Examiner's patent eligibility rejection of representative independent claim 10 under 35 U.S.C. § 101 and independent claims 1 and 16, not separately argued, and dependent claims 2–9, 11–15, and 17–20, not separately argued. *See* 37 C.F.R. § 41.37(c)(1)(iv).

35 U.S.C. § 103(a)

Appellants have not set forth separate arguments for patentability based upon obviousness of the independent claims in the Appeal Brief. Therefore, we select independent claim 1 as the representative claim for the group of claims not specifically argued and we will address Appellants' arguments thereto. Appellants set forth separate headings for claims 2, 3, 5, 6, 8, 12, 13, 15, 18, and 19.

Claim 1

We have reviewed Appellants' arguments in the Appeal Brief, the Examiner's rejections, and the Examiner's responses to Appellants' arguments. For at least the reasons discussed below, we agree with and adopt the Examiner's factual findings and legal conclusions, as set forth in the Final Action and Examiner's Answer. In our analysis below, we highlight and address specific findings and arguments for emphasis. Additionally, Appellants do not respond to the Examiner's clarifications and responses to the obviousness rejection in the Reply Brief. (Appellants only respond to the indefiniteness rejection and the patent eligibility rejection in the Reply Brief). Appellants set forth three points of argument in the Appeal Brief, and we address those points below.

With respect to POINT 1 of Appellants' arguments (App. Br. 15-16), the Examiner provides additional citations to paragraphs 28 and 36 of the Mohan reference that associate categories of items such as "Toys" with queries and query identification number corresponding to a particular clothing category- dresses which is identifying the submitted query as corresponding to a theme. (Ans. 18). Appellants do not respond to the

Examiner's further teachings which show identifying the submitted query as corresponding to a theme. As a result, Appellants have not shown error in the Examiner's factual findings and legal conclusions.

With respect to POINT 2 of Appellants' arguments (App. Br. 16), the Examiner provides additional citations to paragraphs 28 and 36 of the Mohan reference that teach that the number of queries recorded in a time period indicates levels of interest in a particular product category that describes the strength score indicating a pertinence of the submitted query to the theme. (Ans. 19–20). Appellants do not respond to the Examiner's further teachings which show a number of queries recorded in a time period indicates levels of interest. As a result, Appellants have not shown error in the Examiner's factual findings or conclusion of obviousness.

With respect to POINT 3 of Appellants' arguments (App. Br. 16-17), the Examiner provides additional citation to paragraph 60 of the Loftness reference that teaches the query "country music" is paired with the classification "theme-based query" and is based on the queries submitted by the users who were predominately interested in items with a thematic bearing on the topic of "country music," a query that thematically related to "country music" is generated and searched. (Ans. 20–21). Appellants do not respond to the Examiner's further teachings which show a number of queries recorded in a time period indicate levels of interest. As a result, Appellants have not shown error in the Examiner's factual findings or conclusion of obviousness. The Examiner has substantively responded to each of Appellants' three points of error and provided further detailed analysis and line of reasoning for the obviousness conclusion representative independent claim 1. (Ans. 17–21).

Consequently, we sustain the rejection of representative independent claim 1 and independent claims 10 and 16, not separately argued, and dependent claims 4, 7, 9, 11, 14, 17, and 20 not separately argued.

Dependent claims

With respect to dependent claims 2, 3, 5, 6, 8, 12, 13, 15, 18, and 19, Appellants set forth separate headings and set forth general arguments following the same general format. Appellants recite the claim language, quote the text from the Mohan reference, and generally contend that the Examiner has failed to map the claimed elements to the Mohan reference thus failing to establish a proper showing of obviousness. Appellants repeat the claim language three more times arguing that the Mohan reference and the combination of the Mohan and Loftesness references does not teach or suggest the claim limitations. (*See App. Br.* 18–31).

The Examiner substantively addresses Appellants’ general arguments and provides additional citations to the Mohan reference and additional discussions relating to the claimed limitations of each of the dependent claims. (*Ans.* 21–30). Appellants do not respond to the Examiner’s further clarifications and analysis of the obviousness rejection. As a result, we find Appellants’ arguments unavailing to show error in the Examiner’s factual findings or conclusion of obviousness of dependent claims 2, 3, 5, 6, 8, 12, 13, 15, 18, and 19.

CONCLUSIONS

The Examiner did not err in rejecting claims 1–20 based upon nonstatutory obviousness-type double patenting; the Examiner did not err in

rejecting claims 1–9 based upon indefiniteness under 35 U.S.C. § 112, second paragraph. The Examiner did not err in rejecting claims 1–20 based upon a lack of patent eligible subject matter under 35 U.S.C. § 101. The Examiner did not err in rejecting claims 1–20 as obvious under 35 U.S.C. § 103.

DECISION

For the above reasons, we sustain all of the Examiner’s rejections of claims 1–20.

DECISION SUMMARY

Claims Rejected	Basis	Affirmed	Reversed
1–20	nonstatutory obviousness-type double patenting	1–20	None
1–9	§ 112, second paragraph	1–9	None
1–20	§ 101	1–20	None
1–20	§ 103	1–20	None
Overall Outcome		1–20	None

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