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BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte BEHNAM A. REZAEI, RICCARDO BOSCOLO,
NIMA KHAJEHNOURI, VWANI P. ROYCHOWDHURY,
and HIMAWAN GUNADHI

Appeal 2018-000110
Application 12/476,205
Technology Center 3600

Before JOSEPH L. DIXON, JAMES W. DEJMEK, and
STEPHEN E. BELISLE, *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 1–21, 24, and 25. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

The claims are directed to a behavioral targeting for tracking, aggregating, and predicting online behavior. Claim 1, reproduced below, is illustrative of the claimed subject matter:²

1. A computer implemented method comprising:

correlating, by a computer system, one or more online events of a user with one or more features of a pre-computed concept map representing a plurality of concepts, concept metadata, and relationships between the plurality of concepts, wherein the relationships are represented by an edge, and wherein correlating the one or more online events of a user with one or more features of a pre-computed concept map comprises determining a list of features matching the one or more online events and mapping the list of features to nodes and information in the concept map;

aggregating, by the computer system, a concept map history of the user to obtain online behavior of the user over time based on the correlating;

aggregating, by the computer system, the online behavior of the user with online behavior of the one or more other users to obtain aggregated online user behavior;

updating the pre-computed concept map based on the [sic, the] aggregated online user behavior, wherein the

¹ Appellants indicate Netseer Acquisition, Inc. is the real party in interest. (App. Br. 3).

² We note that Appellants attempt to amend the “updating” limitation in independent claim 1, but claim amendments are inappropriate in the Appendix to the Appeal Brief. Appellants should request amendment in any further prosecution on the merits. *See* 37 CFR 41.37(c)(2); MPEP § 1206.

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updating includes modifying an edge between two of the plurality of concepts in the pre-computed concept map;

tagging at least one edge in the pre-computed concept map with a user intention or action category based on the aggregated online user behavior; and

predicting, by the computer system, future online behavior of the user using the concept map and based at least in part on the online behavior of the user over time and the aggregated online user behavior.

App. Br. 26 (Claims Appendix).

REJECTION

The Examiner made the following rejection:

Claims 1–21, 24, and 25 stand rejected under 35 U.S.C. § 101 because the claimed invention is directed to patent-ineligible subject matter

ANALYSIS

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. Pty. Ltd. 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 Alice*, 573

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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 [P]etitioners’ 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, 192 (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 (1854))); and manufacturing flour (*Benson*, 409 U.S. at 69 (citing *Cochrane v. Deener*, 94 U.S. 780, 785 (1876))).

In *Diehr*, the claim at issue recited a mathematical formula, but the Supreme Court held that “[a] claim drawn to subject matter otherwise statutory does not become nonstatutory simply because it uses a mathematical formula.” *Diehr*, 450 U.S. at 176, 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*), and *id.* at 187 (“It is now

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commonplace that an *application* of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection.”).

If the claim is “directed to” an abstract idea, we turn to the second step of the *Alice* and *Mayo* framework, where “we must examine the elements of the claim to determine whether it contains an ‘inventive concept’ sufficient to ‘transform’ the claimed abstract idea into a patent eligible application.” *Alice*, 573 U.S. at 221 (quotation 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.* (alteration 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.*

USPTO Guidance

The PTO recently published revised guidance in the Federal Register concerning the application of § 101. *2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50 (January 7, 2019) (hereinafter “Guidance”) (<https://www.govinfo.gov/content/pkg/FR-2019-01-07/pdf/2018-28282.pdf>).

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 activity such as a fundamental economic practice, or mental processes);³ and

³ Referred to as “*Revised Step 2A, Prong I*” in the Guidance (hereinafter “*Step 2A(i)*”).

(2) additional elements that integrate the judicial exception into a practical application (*see* MPEP § 2106.05(a)–(c), (e)–(h)).⁴

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 are 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.⁵

See Guidance.

Step 2A(i) – Abstract Idea

Informed by our judicial precedent, the recent Guidance extracts and synthesizes key concepts identified by the courts as abstract ideas to explain that the abstract idea exception includes the following groupings of subject matter, when recited as such in a claim limitation:

(a) Mathematical concepts—mathematical relationships, mathematical formulas or equations, mathematical calculations;

(b) Certain methods of organizing human activity — fundamental economic principles or practices (including hedging, insurance, mitigating risk); commercial or legal interactions (including agreements in the form of contracts; legal obligations; advertising, marketing or sales activities or

⁴ Referred to as “*Revised Step 2A, Prong 2*” in the Guidance (hereinafter “*Step 2A(ii)*”).

⁵ Items (3) and (4) continue to be collectively referred to as “*Step 2B*” of the Supreme Court’s two-step framework, described in *Mayo* and *Alice*.

behaviors; business relations); managing personal behavior or relationships or interactions between people (including social activities, teaching, and following rules or instructions); and

(c) Mental processes—concepts performed in the human mind (including an observation, evaluation, judgment, opinion).

Under the Guidance, if the claim does not recite a judicial exception (a law of nature, natural phenomenon, or subject matter within the enumerated groupings of abstract ideas above), then the claim is patent eligible at *Step 2A(i)*. This determination concludes the eligibility analysis, except in situations identified in the Guidance.

However, if the claim recites a judicial exception (i.e., an abstract idea enumerated above, a law of nature, or a natural phenomenon), the claim requires further analysis for a practical application of the judicial exception in *Step 2A(ii)*.

Step 2A(ii) – Practical Application

If a claim recites a judicial exception in *Step 2A(i)*, we determine whether the recited judicial exception is integrated into a practical application of that exception in *Step 2A(ii)* by: (a) identifying whether there are any additional elements recited in the claim beyond the judicial exception(s); and (b) evaluating those additional elements individually and in combination to determine whether they integrate the exception into a practical application.

The seven identified “practical application” sections of the MPEP, cited in the Guidance under *Step 2A(ii)*, are:

- (1) MPEP § 2106.05(a) Improvements to the Functioning of a Computer or To Any Other Technology or Technical Field
- (2) MPEP § 2106.05(b) Particular Machine

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- (3) MPEP § 2106.05(c) Particular Transformation
- (4) MPEP § 2106.05(e) Other Meaningful Limitations
- (5) MPEP § 2106.05(f) Mere Instructions To Apply An Exception
- (6) MPEP § 2106.05(g) Insignificant Extra-Solution Activity
- (7) MPEP § 2106.05(h) Field of Use and Technological

Environment

See MPEP § 2106.05(a)–(c), (e)–(h). Citations to the MPEP herein refer to revision [R-08.2017].

If the recited judicial exception is integrated into a practical application as determined under one or more of the MPEP sections cited above, then the claim is not directed to the judicial exception, and the patent-eligibility inquiry ends. If not, then analysis proceeds to *Step 2B*.

Step 2B – “Inventive Concept” or “Significantly More”

Under our precedent, it is possible that a claim that does not “integrate” a recited judicial exception under *Step 2A(ii)* is nonetheless patent eligible. For example, the claim may recite additional elements that render the claim patent eligible even though a judicial exception is recited in a separate claim element.⁶ The Federal Circuit has held claims eligible at the second step of the *Alice/Mayo* test (USPTO *Step 2B*) because the additional elements recited in the claims provided “significantly more” than the recited judicial exception (e.g., because the additional elements were unconventional in combination).⁷ Therefore, if a claim has been determined

⁶ See, e.g., *Diehr*, 450 U.S. at 187.

⁷ See, e.g., *Amdocs (Israel), Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1300, 1304 (Fed. Cir. 2016); *BASCOM Global Internet Services, Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1349–52 (Fed. Cir. 2016); *DDR Holdings v. Hotels.com*, 773 F.3d 1245, 1257–59 (Fed. Cir. 2014).

to be directed to a judicial exception under *Revised Step 2A*, we must evaluate the additional elements individually and in combination under *Step 2B* to determine whether they provide an inventive concept (i.e., whether the additional elements amount to significantly more than the exception itself).⁸

Under the Guidance, we must consider in *Step 2B* whether an additional element or combination of elements: (1) “Adds a specific limitation or combination of limitations that are not well-understood, routine, conventional activity in the field, which is indicative that an inventive concept may be present;” or (2) “simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception, which is indicative that an inventive concept may not be present.” *See* Guidance, III.B.⁹

In the *Step 2B* analysis, an additional element (or combination of elements) is not well-understood, routine, or conventional unless the

⁸ We note the patent eligibility inquiry may contain underlying issues of fact. *Mortg. Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d 1314, 1325 (Fed. Cir. 2016). In particular, “[t]he question of whether a claim element or combination of elements is well-understood, routine and conventional to a skilled artisan in the relevant field is a question of fact.” *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1368 (Fed. Cir. 2018).

⁹ In accordance with existing *Step 2B* Guidance, an Examiner’s conclusion that an additional element (or combination of elements) is well understood, routine, conventional activity must be supported with a factual determination. For more information concerning evaluation of well-understood, routine, conventional activity, *see* MPEP § 2106.05(d), as modified by the USPTO *Berkheimer* Memorandum (USPTO Commissioner for Patents Memorandum dated Apr. 9, 2018, “Changes in Examination Procedure Pertaining to Subject Matter Eligibility, Recent Subject Matter Eligibility Decision (*Berkheimer v. HP, Inc.*)” (hereinafter “*Berkheimer Memo*”).

examiner finds an evidentiary basis, and expressly supports a rejection in writing with, one or more of the following:

1. A citation to an express statement in the specification or to a statement made by an applicant during prosecution that demonstrates the well-understood, routine, conventional nature of the additional element(s).
2. A citation to one or more of the court decisions discussed in MPEP § 2106.05(d)(II) as noting the well-understood, routine, conventional nature of the additional element(s).
3. A citation to a publication that demonstrates the well-understood, routine, conventional nature of the additional element(s).
4. A statement that the examiner is taking official notice of the well-understood, routine, conventional nature of the additional element(s).

See Berkheimer Memo.

The analysis in *Step 2B* further determines whether an additional element or combination of elements:

(a) Adds a specific limitation or combination of limitations that are not well-understood, routine, conventional activity in the field, which is indicative that an inventive concept may be present; or

(b) simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception, which is indicative that an inventive concept may not be present.

Guidance, and *see Berkheimer Memo.*

If the Examiner or the Board determines under *Step 2B* that the element (or combination of elements) amounts to significantly more than the exception itself, the claim is eligible, thereby concluding the eligibility analysis.

However, if a determination is made that the element and combination of elements does not amount to significantly more than the exception itself, the claim is ineligible under *Step 2B*, and the claim should be rejected for lack of subject matter eligibility.

35 U.S.C. § 101

With respect to claims 1–4, 7–12, and 22, Appellants do not set forth separate arguments and argue the claims together. (App. Br. 8–20). Therefore, we select independent claim 1 as the representative claim for the group and will address Appellants’ arguments thereto. 37 C.F.R. § 41.37(c)(1)(iv). Arguments which Appellants could have made but did not make in the Briefs are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(iv).

Step 1

Claim 1, as a method claim, recites one of the enumerated categories of statutory subject matter in 35 U.S.C. § 101. Therefore, the issue before us is whether it is directed to a judicial exception without significantly more.

Step 2A(i): Does the Claim Recite a Judicial Exception?

The Examiner determines the claims are patent ineligible under 35 U.S.C. § 101, because

Claims 1–21 and 24–25 are directed to targeted advertising comprising, establishing data sets of online user behavior and using the data sets for targeting advertisements, which is considered an idea in and of itself. The courts have indicated that comparing new and stored information and using rules to identify options (SmartGene); using categories to organize, store and transmit information (Cyberfone); organizing information through mathematical correlations (Digitech); and ideas in and of themselves (Bilski and Alice) are all examples of judicial exceptions, particularly abstract ideas. Because all of the

functional aspects of the claims reflect these same procedures, the claims are directed to abstract[] ideas.

Further the claims as a whole disclose only the abstract idea of providing targeted advertising (i.e. a fundamental economic practice) using the conventional technology available to and relying on information generally available to such conventional technology (web click advertising systems).

(Final Act. 3).

Based upon the 2019 Guidance, we refine the Examiner’s statement of the abstract idea to characterize the abstract idea as the “predicting . . . future online behavior of the user using the concept map and based at least in part on the online behavior of the user over time and the aggregated online user behavior” step of independent claim 1, which is a mental process that can be performed in the human mind and/or by pen and paper. We find this type of activity, i.e., “predicting . . . future online behavior of the user,” from prior behavior and aggregated behavior history for example, includes longstanding conduct that existed well before the advent of computers and the Internet, and could be carried out by a human with pen and paper. *See CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1375 (Fed. Cir. 2011) (“That purely mental processes can be unpatentable, even when performed by a computer, was precisely the holding of the Supreme Court in *Gottschalk v. Benson.*”).¹⁰

Additionally, we find the Specification discloses the pre-computed “concept map” “represents *concepts*, concept metadata, and relationships between the plurality of concepts.” (Spec. ¶ 11) (emphasis added). We find the concept map, under its broadest reasonable interpretation, recites merely

¹⁰ *CyberSource* further guides that “a method that can be performed by human thought alone is merely an abstract idea and is not patent-eligible under § 101.” *CyberSource*, 654 F.3d at 1373.

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“concepts” which are mental processes that can be performed in the human mind and/or by pen and paper.

Moreover, we find the additional elements of independent claim 1 , under their broadest reasonable interpretation, recite the additional elements/steps of “correlating,” “aggregating,” “updating,” and “tagging” are steps used in analysis for determining targeted advertising as indicated by the Examiner and evidenced by dependent claim 2 (“further comprising targeting one or more ads to the user based at least in part on the predicted future online behavior of the user.”) These additional steps are certain methods of organizing human activity and are also mental processes that can be performed in the human mind and/or by pen and paper. Accordingly, we conclude the claims recite a mental process which is one of the certain sub-groupings of abstract ideas identified by the Revised Guidance and is thus “directed to” an abstract idea.

Our reviewing court has previously held other patent claims ineligible for reciting similar abstract concepts. For example, although the Supreme Court has enhanced the § 101 analysis since *CyberSource* in cases like *Mayo* and *Alice*, the Federal Circuit continues to “treat[] analyzing information by steps people go through in their minds, . . . without more, as essentially mental processes within the abstract-idea category.” *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1146–47 (Fed. Cir. 2016) (quoting *Elec. Power Grp. v. Alstom S.A.*, 830 F.3d 1350, 1354 (Fed. Cir. 2016)).

*Step 2A(ii): Judicial Exception Integrated
into a Practical Application?*

If the claims recite a judicial exception, as we conclude above, we proceed to the “practical application” *Step 2A(ii)* in which we determine whether the recited judicial exception is integrated into a practical

application of that exception by: (a) identifying whether there are any additional elements recited in the claim beyond the judicial exception(s); and (b) evaluating those additional elements individually and in combination to determine whether they integrate the exception into a practical application.

In addition to the abstract idea of “predicting . . . future online behavior of the user . . .” identified in *Step 2A(i)*, *supra*, claim 1 recites the additional elements/steps of “correlating,” “aggregating,” “updating,” and “tagging.”

As to these specific limitations, we find these limitations broadly recite additional abstract ideas relating to organizing human activity and fundamental economic principles or practices in advertising (based upon dependent claim 2 “targeting one or more ads”) along with additional abstract ideas of mental process that can be performed in the human mind and/or by pen and paper and insignificant data gathering. *See* MPEP § 2106.05(g). In addition, data gathering, as performed by the steps or function in Appellants’ claims, is a classic example of insignificant extra-solution activity. *See, e.g., In re Bilski*, 545 F.3d 943, 963 (Fed. Cir. 2008) (*en banc*), *aff’d sub nom, Bilski v. Kappos*, 561 U.S. 593 (2010).

On this record, we are of the view that Appellants’ claims do not operate the recited generic computer components in an unconventional manner to achieve an improvement in computer functionality. *See* MPEP § 2106.05(a). Appellants’ Specification identifies Figure 12 “a computer system suitable for implementing aspects of the present invention” (Spec. ¶ 13) and corresponding description in paragraphs 64–82 which describes only generic well-known components. (App. Br. 3–6 citing Spec. ¶¶ 23, 66, 67, 84, 89, 90, 107 (but we note that the originally filed Specification, filed

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June 1, 2009, ends at ¶ 82 and it appears that Appellants reference the published application, dated December 3, 2009)).

Accordingly, we conclude the recited judicial exception is not integrated into a practical application as determined under one or more of the MPEP sections cited above, such that the claim is directed to the judicial exception.

Step 2B – “Inventive Concept” or “Significantly More”

If the claims are “directed to” a patent-ineligible concept, as we conclude above, we proceed to the “inventive concept” step. For *Step 2B*, we must “look with more specificity at what the claim elements add, in order to determine ‘whether they identify an “inventive concept” in the application of the ineligible subject matter’ to which the claim is directed.” *Affinity Labs of Tex., LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1258 (Fed. Cir. 2016) (quoting *Elec. Power Grp.*, 830 F.3d at 1353).

In applying step 2 of the *Alice* analysis, our reviewing court guides we must “determine whether the claims do significantly more than simply describe [the] abstract method” and thus transform the abstract idea into patentable subject matter. *Ulramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715 (Fed. Cir. 2014). We look to see whether there are any “additional features” in the claims that constitute an “inventive concept,” thereby rendering the claims eligible for patenting even if they are directed to an abstract idea. *Alice*, 573 U.S. at 221. Those “additional features” must be more than “well-understood, routine, conventional activity.” *Mayo*, 566 U.S. at 79.

Limitations referenced in *Alice* that are not enough to qualify as “significantly more” when recited in a claim with an abstract idea include, as

non-limiting or non-exclusive examples: adding the words “apply it” (or an equivalent) with an abstract idea¹¹; mere instructions to implement an abstract idea on a computer¹²; or requiring no more than a generic computer to perform generic computer functions that are well-understood, routine and conventional activities previously known to the industry.¹³

Evaluating representative claim 1 under step 2 of the *Alice* analysis, we agree with the Examiner that claim 1 lacks an inventive concept that transforms the abstract idea of “predicting . . . future online behavior of the user . . . ‘into a patent-eligible application of that abstract idea.’” *See* Final Act. 3–4.

We note the patent eligibility inquiry may contain underlying issues of fact. *Mortg. Grader*, 811 F.3d at 1325. In particular, “[t]he question of whether a claim element or combination of elements is well-understood, routine and conventional to a skilled artisan in the relevant field is a question of fact.” *Berkheimer*, 881 F.3d at 1368.

As evidence of the conventional nature of the computing device, processor, display, system interface and storage, we note the Examiner’s citation to Spec. ¶¶ 23, 66, 67, 84, 89, 90, 107 of Appellants’ published application identifies a block diagram system in Figure 1. (Ans. 5–6; citing ¶ 23 of the published application). We further find the published application discloses “[f]inally, it should be understood that processes and techniques

¹¹ *Alice*, 573 U.S. at 221–23.

¹² *Alice*, 573 U.S. at 221, *e.g.*, simply implementing a mathematical principle on a physical machine, namely a computer (citing *Mayo*, 566 U.S. at 84–85).

¹³ *Alice*, 573 U.S. at 225, *e.g.*, using a computer to obtain data, adjust account balances, and issue automated instructions.

described herein are not inherently related to any particular apparatus and may be implemented by any suitable combination of components. Further, various types of general purpose devices may be used in accordance with the teachings described herein.” (Spec. ¶ 131 of the published application).

We agree with the Examiner that the claim limitations may be broadly but reasonably construed as reciting conventional computer components and techniques, particularly in light of Appellants’ Specification, as quoted above.¹⁴

With respect to the *Step 2B* analysis, we agree with the Examiner because, as in *Alice*, the recitation of a “computing device comprising a processor, a display, a system interface, and accessible storage having instructions stored thereon” (claim 1) is simply not enough to transform the patent-ineligible abstract idea here into a patent-eligible invention. *See Alice*, 573 U.S. at 221 (“[C]laims, which merely require generic computer implementation, fail to transform [an] abstract idea into a patent-eligible invention.”).

Accordingly, based upon the findings above, on this record, we are not persuaded of error in the Examiner’s conclusion that the appealed claims are directed to patent-ineligible subject matter. Therefore, we sustain the

¹⁴ During prosecution, claims must be given their broadest reasonable interpretation when reading claim language in light of the specification as it would be interpreted by one of ordinary skill in the art. *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). Under this standard, we interpret claim terms using “the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in the applicant’s specification.” *In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997).

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Examiner's § 101 rejection of representative independent claim 1, and grouped claims 2–21, 24, and 25, not argued separately, and which fall therewith.

Response to Appellants' Arguments

We address Appellants' arguments as they apply to the Guidance and add the following primarily for emphasis and clarification with respect to the Guidance.

Appellants argue that the claimed invention is “**not** directed to an abstract idea” in independent claim 1 and there is “no need to make an analysis of the second step of *Mayo*.” (App. Br. 17–18).

Appellants provide a general comparison of the claims to “*Speed Track; Synchronoss Technologies; IOENGINE; and Alice*, all of which unequivocally support the position that the pending claims are directed to patent-eligible subject matter.” (App. Br. 19). Appellants present similar conclusory arguments:

similar to the claims in *Speed Track*, the present claims are directed to a specific improvement that existed in the art; namely, predicting a user's online behavior based on a correlation process, aggregated data, updating a concept map, tagging an edge of the concept map and using that information to predict the online actions of a user.

(App. Br. 19–20; *see also* App. Br. 21–23).

Appellants argue that the claimed invention is similar to *Enfish* where the claimed invention improves search engine operation. (Reply Br. 3–4). We find Appellants' argument to not be commensurate in scope with the express language of representative independent claim 1 which does not

recite a search engine and, consequently, cannot improve the operation thereof.¹⁵

Appellants further argue that the Examiner’s finding of an abstract idea directed to advertising is in error and the claimed invention is “distinguished from an abstract method of using advertising as an exchange or currency, as claimed in *Ultramercial*.” (App. Br. 16–17; *see also* Reply Br. 2).

We note that dependent claim 2 further limits the claimed invention to targeting ads. As a result, the scope of independent claim 1 includes targeting advertisement and is broad enough to cover other claim usages.

Appellants additionally argue:

the independent claims do not recite only “conventional technology”. Rather, they recite novel limitations including essentially every limitation of every independent claim, evidenced by the fact that there are no pending prior art rejections. Further, there is no authority to support the position that “conventional technology” encompasses, for example, “a pre-computed concept map representing a plurality of concepts, concept metadata, and relationships between the plurality of concepts, wherein the relationships are represented by an edge, and wherein correlating the one or more online events of a user with one or more features of a pre-computed concept map comprises determining a list of features matching the one or more online events and mapping the list of features to nodes and information in the concept map” as recited in claim 1. Nor, for that matter, can conventional technology be reasonably deemed to encompass any other limitation of claim 1. This is especially true when considered in the context of predicting future online

¹⁵ Additionally, we note that dependent claims 4 and 14 add a limitation of “searching for a keyword,” but this is 1 of 4 limitations in the alternative (which does not necessarily limit independent claim 1).

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behavior of a user, which itself cannot reasonably be deemed to fall within the scope of conventional technology.

(Reply Br. 6). We disagree with Appellants and find the claim merely sets forth a generic “computer system.”

With regards to Appellants’ arguments regarding the *McRO* case, Appellants contend that “[s]ubstituting the relevant subject of the instant claims ‘search engine’ for the subject ‘animation’ in the foregoing, the entirety of the underlined portion of *McRO* cited above is directly applicable to the instant claims.” (Reply Br. 7–10).

We disagree with Appellants because claim 1 does not expressly recite a “search engine” and Appellants’ comparison based thereon is unpersuasive.

CONCLUSION

The Examiner did not err in rejecting claims 1–21, 24, and 25 based upon a lack of subject matter eligibility under 35 U.S.C. § 101.

DECISION

For the above reasons, we affirm the Examiner’s subject matter eligibility rejection of claims 1–21, 24, and 25 under 35 U.S.C. § 101.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv) (2017).

AFFIRMED