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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ANDREW S. CRANE, ANDRZEJ PASTUSIAK, and
DMITRY V. ZHIYANOV

Appeal 2018-003315
Application 12/884,559¹
Technology Center 3600

Before DEBRA K. STEPHENS, DANIEL J. GALLIGAN, and
DAVID J. CUTITTA II, *Administrative Patent Judges*.

CUTITTA, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from a final rejection of claims 1–11 and 13–21, which are all of the claims pending in the application.² We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ Appellants identify MICROSOFT TECHNOLOGY LICENSING, LLC, as the real party in interest. *See* App. Br. 3.

² Claim 12 has been cancelled. *See* App. Br. 36, Claims Appendix.

STATEMENT OF THE CASE

According to Appellants, the claims are directed to the selection of an advertisement responding to a query, based on the location of the query and the location of the advertisement. Abstract.³ Claim 1, reproduced below, is representative of the claimed subject matter:

1. A method for providing advertisements based on geographic relevance comprising:

associating a query location with a query;

selecting a plurality of advertisements based on the query;

associating an advertisement location with one or more of the selected advertisements;

calculating a geographic distance between the advertisement location for the one or more selected advertisements and the query location;

calculating a confidence level for at least one of the query location and the advertisement location, the confidence level being based on a probability that an associated query location or an associated advertisement location is correct, the calculated confidence level being associated with a plurality of distance-based relevance features;

selecting a distance-based relevance feature that corresponds to the calculated geographic distance, the selected distance based relevance feature being selected from the plurality of distance-based relevance features associated with the confidence level;

determining a relevance for the one or more selected advertisements, the relevance score being based in part on a

³ This Decision refers to: (1) Appellants' Specification filed September 17, 2010 ("Spec."); (2) the Final Office Action mailed April 3, 2017 ("Final Act."); (3) the Appeal Brief filed September 20, 2017 ("App. Br."); (4) the Examiner's Answer mailed December 7, 2017 ("Ans."); and (5) the Reply Brief filed February 7, 2018 ("Reply Br.").

relevance value for the selected distance-based relevance feature;
and

transmitting an advertisement from the one or more
selected advertisements based on the determined relevance.

REJECTION

Claims 1–11 and 13–21 stand rejected under 35 U.S.C. § 101 as
directed to patent-ineligible subject matter. Final Act. 2–4.

Our review in this appeal is limited to the above rejection and the
issues raised by Appellants. Arguments not made are waived. *See* MPEP
§ 1205.02; 37 C.F.R. § 41.37(c)(1)(iv).

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
U.S. at 219 (“On their face, the claims before us are drawn to the concept of
intermediated settlement, i.e., the use of a third party to mitigate settlement
risk.”); *see also Bilski v. Kappos*, 561 U.S. 593, 611 (2010) (“Claims 1 and 4

in petitioners’ application explain the basic concept of hedging, or protecting against risk.”).

Concepts determined to be abstract ideas, and thus patent ineligible, include certain methods of organizing human activity, such as fundamental economic practices (*Alice*, 573 U.S. at 219–20; *Bilski*, 561 U.S. at 611); mathematical formulas (*Parker v. Flook*, 437 U.S. 584, 594–95 (1978)); and mental processes (*Gottschalk v. Benson*, 409 U.S. 63, 69 (1972)). Concepts determined to be patent eligible include physical and chemical processes, such as “molding rubber products” (*Diamond v. Diehr*, 450 U.S. 175, 192 (1981)); “tanning, dyeing, making waterproof cloth, vulcanizing India rubber, smelting ores” (*id.* at 184 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; *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 has 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.* at 191 (citations omitted); *see also 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 (citations omitted). “A claim that recites an abstract idea must include ‘additional features’ to ensure ‘that the [claim] is more than a drafting effort designed to monopolize the [abstract idea].’” *Id.* (quoting *Mayo*, 566 U.S. at 77). “[M]erely requir[ing] generic computer implementation[] fail[s] to transform that abstract idea into a patent-eligible invention.” *Id.*

USPTO January 7, 2019 Revised Section 101 Memorandum

The USPTO recently published revised guidance on the application of § 101. *See* 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019 (“2019 Guidance”). Under the 2019 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 MPEP § 2106.05(a)–(c), (e)–(h)).

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

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

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

ANALYSIS

Appellants argue the claims as a group, specifically addressing the limitations recited in claim 1. *See* App. Br. 20–21, 24–26, and 29–30. Accordingly, we focus our discussion on independent claim 1 as exemplary of Appellants’ arguments for claims 2–11 and 13–21. *See* 37 C.F.R. § 41.37(c)(1)(iv)(2017). Although not necessary to reach our decision, we include some analysis pertaining to claims 11 and 16, simply to clarify our determinations.

The Examiner determines the claims are directed to a “method[] of organizing human activit[y],” (Ans. 4) and, thus, recite an abstract idea. The Examiner also determines the claims “do not have any additional elements that amount to significantly more” than the abstract idea itself. Final Act. 5; *see* Ans. 4.

Appellants present several arguments against the section 101 rejection. We do not find Appellants’ arguments persuasive, as discussed in greater detail below. The Examiner has provided a comprehensive response to Appellants’ argument supported by a preponderance of evidence. *See* Ans. 3–6. Thus, we adopt the Examiner’s findings and conclusions. *See* Final Act. 2–7; *see also* Ans. 3–6. We analyze the claims under the 2019

Guidance and adopt the nomenclature for the steps used in the 2019 Guidance.

STEP 1

Section 101 provides that “[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.” 35 U.S.C. § 101. We note that independent claims 1 and 11 recite methods and independent claim 16 recites a system. As such, the claims are directed to statutory classes of invention within 35 U.S.C. § 101, i.e., processes and a machine.

STEP 2A Prong 1

Under Step 2A, Prong 1 of the 2019 Guidance, we must determine whether the claims, being directed to a statutory classes of invention, nonetheless fall within a judicial exception.

The Examiner determines the claims are directed to “certain methods of organizing human activities” (Ans. 4), in particular, “providing advertisements that are geographically relevant to a user’s query” (Final Act. 2; *see* Ans. 3). As such, the Examiner determines the claims are directed to an abstract idea. *See* Final Act. 2; *see also* Ans. 3–4.

Appellants argue that the Examiner’s “characterization of the claims ignores specific elements included in the claims.” App. Br. 22. In particular, Appellants list claim elements recited in claim 1 and argue the claims are not directed to an abstract idea because the “plain claim language

of claim 1 clearly shows . . . much more than ‘providing advertisements that are geographically relevant to a user’s query.’” *Id.* at 21–22.

Appellants’ arguments do not persuade us of error in the Examiner’s determination that the claims are directed to a method of organizing human activity, namely, “providing advertisements that are geographically relevant to a user’s query.” Final Act. 2; *see also* Ans. 3. The claims recite a process that responds to a query; the answer to that query contemplates location-based considerations such as the location of the query and the location of possible answers. Providing an answer, such as an answer in the form of an advertisement, that contemplates location considerations in response to a query is a process long engaged in by people. For example, drawing from a query described in the Specification (Spec. ¶ 12 (a “query of ‘restaurants in Bellevue WA.’”)), a visitor to Bellevue may ask his or her hotel concierge for restaurant recommendations within walking distance. In response, the concierge selects restaurants that would satisfy the visitor’s inquiry and provides responsive information to the visitor, e.g., the concierge gives the visitor advertising flyers or pamphlets for restaurants within walking distance.

Claim 1, under a broadest reasonable interpretation, reflects such an interaction between the visitor and concierge. Turning to the claim language, claim 1 recites: (1) “associating a query location with a query”; (2) “selecting a plurality of advertisements based on the query”; and (3) “associating an advertisement location with one or more of the selected advertisements.” Claim limitations (1)–(3) broadly recite a process of selecting advertisements in response to the location of a query without any limitation on how the query location is determined or which advertisements

are selected. Turning back to the exemplary human interaction based on the Specification (*see* Spec. ¶ 12), the hotel concierge, parsing the visitor's query for restaurants within walking distance, mentally determines the location of the query is the location of the hotel, i.e., limitation (1), and mentally determines what nearby advertised restaurants could be responsive to the visitor's query, i.e., limitations (2) and (3).

Claim 1 further recites (4) "calculating a geographic distance between the advertisement location for the one or more selected advertisements and the query location." Claim limitation (4) broadly recites a process for determining how far away responsive advertisement locations are to a query. Turning again to the human interaction based on the Specification (*see* Spec. ¶ 12), the concierge mentally determines how far away advertised restaurants are to the hotel in order to ultimately suggest advertised restaurants within walking distance.

Claim 1 additionally recites (5) "calculating a confidence level for at least one of the query location and the advertisement location, the confidence level being based on a probability that an associated query location or an associated advertisement location is correct, the calculated confidence level being associated with a plurality of distance-based relevance features," (6) "selecting a distance-based relevance feature that corresponds to the calculated geographic distance, the selected distance based relevance feature being selected from the plurality of distance-based relevance features associated with the confidence level," and (7) "determining a relevance for the one or more selected advertisements, the relevance score being based in part on a relevance value for the selected distance-based relevance feature."

Claim limitations (5)–(7), considered together, recite a decision-making processes that selects advertisements based on a “distance-based relevance” to the query. But that decision-making process “is untethered to any specific or concrete way of implementing it.” *Affinity Labs of Texas, LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1258 (Fed. Cir. 2016). For example, the claim “calculat[es] a confidence level” that is “based on a probability that an associated query location or an associated advertisement location is correct,” but the claim merely recites that the resultant confidence level considers location correctness, rather than limits how location correctness actually factors into the confidence level calculation. Similarly, the claim “select[s] a distance-based relevance feature” and “determin[es] a relevance,” but again, the claim recites the result and factors considered — the claim does not recite how those results are reached. Once again, returning to the human interaction based on the Specification (*see* Spec. ¶ 12), after mentally confirming the location of potential restaurants, i.e., claim limitation (5), the concierge mentally determines which restaurants are actually within walking distance to the hotel, i.e., claim limitations (6) and (7).

Claim 1 lastly recites (8) “transmitting an advertisement from the one or more selected advertisements based on the determined relevance.” The claim is untethered to any specific means to transmit the recommended advertisement and merely reflects a common interaction between humans. For example, turning one last time to the human interaction based on the Specification (*see* Spec. ¶ 12), the concierge handing the visitor advertisements for restaurants within walking distance discloses claim limitation (8).

Accordingly, claim 1 broadly recites a common interaction between humans, i.e., responding to a query with an advertisement that contemplates location-based considerations; therefore, we conclude the claim recites a method of organizing human activity, as identified in the 2019 Guidance. Furthermore, although not relied upon to make our decision, we note that the claim could also be characterized as reciting a mental process. Except for the last limitation, every limitation recited in claim 1 is directed to a process of observing and evaluating information that can be fully performed within the mind. In particular, the recited associations, selections, calculations, and determinations can be performed mentally to consider location when responding to a query. Because claim 1 may be categorized as reciting a method of organizing human activity, or a mental process, we determine the claim is directed to an abstract idea.

STEP 2A Prong 2

Next, we determine whether the claims are directed to the abstract concept itself or whether they are instead directed to some technological implementation or application of, or improvement to, this concept, i.e., integrated into a practical application. *See, e.g., Alice*, 573 U.S. at 223, discussing *Diehr*, 450 U.S. at 175.

The Examiner determines “the claims do not improve the functioning of a computer and do[] not address challenges particular to or necessarily rooted in computer networks.” Ans. 4. We agree with the Examiner.

Appellants argue the “claims improve the functioning of a computer and address challenges particular to or necessarily rooted in the Internet” (App. Br. 14), namely, “provid[ing] a specific technological improvement on

a technological process of understanding human input” (App. Br. 15) and “improv[ing] the efficiency of a user interface” (Reply Br. 3).

Claim 1, however, notably fails to recite any computer, components specific to a computer, the Internet, user input, or user interfaces. Instead, claim 1 broadly recites a list of steps, the performance of those steps being unrestricted to any means, and thus including human performance, as described above. Because claim 1 is not limited to any computer or Internet system, claim 1 is not necessarily directed to the improvement of any computer or Internet system or rooted in those technologies.

Claim 11 recites “a computing device for execution of computer-useable instructions” and “executing computer-useable instructions” to perform the abstract idea discussed above. However, those recitations, which nakedly call for the execution of the abstract idea by a computer, are tantamount to nothing more than an instruction to apply the abstract idea using a generic computer, i.e., adds the words “apply it,” and, as a result, does not render the abstract idea eligible. *Alice*, 573 U.S. at 221. Similarly, claim 16 recites “a query location component,” “an advertiser device,” and “an advertisement engine” which are “configured” to perform the abstract idea discussed above, but the claim only recites that those components perform the abstract idea. As such, the claim merely recites that the abstract idea is performed by broadly recited “components”; however, these do not serve to transform the abstract idea into patent-eligible subject matter.

Further, contrary to Appellants’ assertion that the “claims recite a particular way to achieve a desired outcome as opposed to merely claiming the outcome,” the claims only recite a result, not the particular manner to achieve the result, and, even further, do not recite a technology-specific

manner to achieve the result. Reply Br. 7. For example, claim 1 recites “calculating a confidence level . . . the confidence level being based on a probability that an associated query location or an associated advertisement location is correct.” The claim requires the calculation of a confidence level to be based on a location correctness probability, but the claim does not provide any specific algorithm or detail as to how computing components would actually calculate the confidence level using the correctness probability or determine the correctness probability. Here, the claims are only directed to an abstract idea because the claims are “untethered to any specific or concrete way of implementing” the invention. *Affinity Labs*, 838 F.3d at 1258.

In addition, claim 1 fails to recite a specific algorithm for “selecting a distance-based relevance feature” and “determining a relevance” score. Thus, the broadly recited calculating, selecting, and determining can be interpreted as being accomplished merely using a subjective judgement by a person, rather than on specific technological implementation details. These limitations, therefore, fail to recite technological operations. And because the claims are “not tied to any particular technology,” the claims “can be implemented in myriad ways,” e.g., a “low-tech” manner where a hotel concierge determines which restaurant advertisements to give to a visitor. *Id.* To clarify that distinction, we highlight the difference between the claim and the Specification. For example, the Specification describes a manner in which a user’s location is associated with a query, e.g., “a user could enter a default location of ‘Redmond, WA’ into a profile that is saved. When the user logs in . . . this saved location is associated with the user” query. Spec. ¶ 14.

Accordingly, the claims are not directed to a specific asserted improvement in computer technological implementation or otherwise integrated into a practical application and thus are *directed to* a judicial exception.

STEP 2B

Next, we determine whether the claim includes additional elements that provide significantly more than the recited judicial exception, thereby providing an inventive concept. *Alice*, 573 U.S. at 218–219 (quoting *Mayo*, 566 U.S. at 72–73).

The Examiner determines “[a]ny general purpose computer available at the time the application was filed would have been able to perform the functions of the claims” and the “[S]pecification as filed supports that view.” Final Act. 5.

Listing limitations recited in claim 1, Appellants argue the claims “are not well understood, routine, and conventional” and “the ordered combination of these elements also provides an inventive concept.” App. Br. 29–30. However, the limitations Appellants rely on, “calculating a geographic distance . . . calculating a confidence level . . . selecting a distance-based relevance feature [and] determining a relevance for the one or more selected advertisements,” are part of the recited abstract idea, as discussed above. *See id.* at 29 (emphasis omitted). Accordingly, those limitations are not “additional limitations” and so do not transform the abstract idea into a patent-eligible concept.

Furthermore, as to claim 11, reciting “a computing device for execution of computer-useable instructions” and “executing computer-

useable instructions” to perform the abstract idea discussed above, and claim 16, reciting “a query location component,” “an advertiser device,” and “an advertisement engine,” which are “configured” to perform the abstract idea, the Specification makes clear that the processes recited by those claims are “described in the general context of computer code or machine-useable instructions” (Spec. ¶¶ 39–40 and 41–44). That is, the Specification teaches that the invention is implemented using known, generic computing components performing known, generic computing functions in a known, generic manner. *See id.* ¶¶ 39–44.

Considering the claimed elements separately, and even assuming all the claims are performed by computing components, each of the recited processes is a generic, routine, and conventional computer activity that is performed only for its conventional use, namely processing information. *See Elec. Power Grp. v. Alstom S.A.*, 830 F.3d 1350, 1354 (Fed. Cir. 2016) (The “focus of the asserted claims . . . is on collecting information, analyzing it, and displaying certain results of the collection and analysis.”); *see also In re Katz Interactive Call Processing Patent Litigation*, 639 F.3d 1303, 1316 (Fed. Cir. 2011) (“Absent a possible narrower construction of the terms ‘processing,’ ‘receiving,’ and ‘storing,’ [] those functions can be achieved by any general purpose computer without special programming.”). None of these activities is used in an unconventional manner nor do any produce an unexpected result.

Further, considered as an ordered combination, even assuming all the claims are performed by some computing components, the computer components of Appellants’ claims add nothing that is not already present when the steps are considered separately. Appellants highlight the ordered

combination of elements. App. Br. 30. But, the sequence of information analysis and output is generic and conventional or has been otherwise held to be abstract. *See Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715 (Fed. Cir. 2014) (sequence of receiving, selecting, offering for exchange, display, allowing access, and receiving payment recited an abstraction); and *Two-Way Media Ltd. v. Comcast Cable Communications, LLC*, 874 F.3d 1329, 1339 (Fed. Cir. 2017) (sequence of processing, routing, controlling, and monitoring). The ordering of the steps is therefore ordinary and conventional. We, thus, conclude that the claims do not provide an inventive concept because the additional elements recited in the claims do not provide significantly more than the recited judicial exception.

Additionally, Appellants' argument that the "claims pose no risk of preempting an abstract idea, itself" does not persuade us that the claim is directed to patent-eligible subject matter. App. Br. 32. Although preemption is characterized as a driving concern for patent eligibility, preemption itself is not the test for patent eligibility. Rather, "[w]hile preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility." *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015). Where claims are deemed to recite only patent-ineligible subject matter under the *Alice* analysis, as they are here, "preemption concerns are fully addressed and made moot." *Id.*

Accordingly, claims 1, 11, and 16 do not recite patent-eligible subject matter. Appellants have not proffered sufficient evidence or argument to persuade us that any of the limitations in the remaining dependent claims provide a meaningful limitation that transforms the claims into a patent-

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eligible application. *See* App. Br. 14–38. Accordingly, Appellants have not persuaded us dependent claims 2–10, 13–15, and 17–21 are directed to patent-eligible subject matter. Therefore, we sustain the rejection of claims 1–11 and 13–21 under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter.

DECISION

We affirm the Examiner’s rejection of claims 1–11 and 13–21 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). *See* 37 C.F.R. § 41.50(f).

AFFIRMED