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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte BRIAN THOMAS BOLAND and GOKUL RAJARAM

Appeal 2020-001551
Application 13/297,180
Technology Center 3600

Before MURRIEL E. CRAWFORD, BRADLEY B. BAYAT, and
AMEE A. SHAH, *Administrative Patent Judges*.

CRAWFORD, *Administrative Patent Judge*.

DECISION ON APPEAL
STATEMENT OF THE CASE

Appellant¹ seeks our review under 35 U.S.C. § 134 of the Examiner's final rejection of claims 1–22. We have jurisdiction under 35 U.S.C. § 6(b).

SUMMARY OF DECISION

We AFFIRM.

THE INVENTION

Appellant claims a method of targeting online advertising to a user based on viewed profile pages. (Spec. ¶ 2, Title).

Claim 1 is representative of the subject matter on appeal.

¹ We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as Facebook, Inc. (Appeal Br. 2).

1. A computer-implemented method comprising:
 - maintaining profile information about a subject user and profile information about a viewing user of a social networking system;
 - displaying to the viewing user a first page of the social networking system;
 - receiving, from the viewing user via an action on the first page of the social networking system displayed to the viewing user, a request for a profile page of the subject user;
 - determining advertising items to display to the viewing user in conjunction with the profile page of the subject user, comprising:
 - determining an affinity score of the viewing user for the subject user;
 - selecting at least one user profile from the subject user profile and the viewing user profile for determining a set of interests for consideration in conjunction with the advertising items, the selection based on the affinity score of the viewing user for the subject user;
 - determining by a processor, the set of interests based on the selected at least one user profile;
 - assigning a weight to each of a plurality of advertising items based on a comparison of the advertising item with the determined set of interests;
 - and
 - selecting one or more advertising items from the plurality of advertising items based at least in part on the assigned weights of the plurality of advertising items;
 - generating a user interface display for the viewing user comprising:
 - the profile page of the subject user based on the profile information about the subject user;
 - and

the selected one or more advertising items to display in conjunction with the profile page of the subject user; and sending the user interface display comprising the profile page of the subject user and the selected one or more advertising items for display to the viewing user.

THE REJECTION

Claims 1–22 are rejected under 35 U.S.C. § 101 as directed to a judicial exception without significantly more.

ANALYSIS

35 U.S.C. § 101 REJECTION

We will sustain the rejection of claims 1–22 under 35 U.S.C. § 101.

The Supreme Court

set forth a framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts. First, . . . determine whether the claims at issue are directed to one of those patent-ineligible concepts. . . . If so, . . . then ask, “[w]hat else is there in the claims before us?” . . . To answer that question, . . . consider the elements of each claim both individually and “as an ordered combination” to determine whether the additional elements “transform the nature of the claim” into a patent-eligible application. . . . [The Court] described step two of this analysis as a search for an “‘inventive concept’”—*i.e.*, an element or combination of elements that is “sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.”

Alice Corp. v. CLS Bank Int’l, 573 U.S. 208, 217–18 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 72–73 (2012)) (first and last alterations in original) (citations omitted).

To perform this test, we must first determine whether the claims at issue are directed to a patent-ineligible concept. The Federal Circuit has explained that “the ‘directed to’ inquiry applies a stage-one filter to claims, considered in light of the [S]pecification, based on whether ‘their character as a whole is directed to excluded subject matter.’” *See Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016) (quoting *Internet Patents Corp.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015)). It asks whether the focus of the claims is on a specific improvement in relevant technology or on a process that itself qualifies as an “abstract idea” for which computers are invoked merely as a tool. *See id.* at 1335–36.

In so doing we apply a “directed to” two prong test: 1) evaluate whether the claim recites a judicial exception, and 2) if the claim recites a judicial exception, evaluate whether the judicial exception is integrated into a practical application. *2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50 (Jan. 7, 2019) (“Guidance”).

The Examiner determines that the claims are directed to (1) a fundamental economic practice (selecting and displaying ads, which is a way to organize human activity between a potential buyer and a seller), and (2) collecting information and comparing known information. (Final Act. 3–4). The Examiner finds the claim elements in addition to the abstract ideas include a computer; one or more computing devices comprising a display which further comprises a GUI; one or more processors; an electronic storage; and a computer-readable memory, which are described at a high level of generality and viewed as a whole, do not provide meaningful limitations to transform abstract ideas into a patent-eligible subject matter. (Final Act. 5, 10).

The Specification discloses that:

This invention relates generally to social networking, and in particular to providing information items, including advertisements, to users of a social networking system.

Online advertising has evolved into a profitable business, allowing commercial and private entities alike to place advertisements on websites and within native applications, and then display the advertisements to viewing users who access the websites and applications. The ability to analyze data associated with a particular website, application, and/or the viewing user has allowed advertisers to provide ads that are more relevant to a viewing user's interests. More relevant ads increase the likelihood of ad conversion (e.g., that the viewing user will observe the ad, click on the ad, proceed to the advertiser's website, or otherwise respond to the ad with the intended result) and/or the likelihood of greater demand for or awareness of the advertiser's goods or services, thereby raising the effectiveness of the ad.

(Spec. ¶¶ 1–2).

This disclosure demonstrates that the invention relates to increasing the effectiveness of ads.

Consistent with this disclosure, claim 1 recites “determining advertising items to display to the viewing user . . .,” “selecting at least one user profile . . . for consideration in conjunction with the advertising items,” “assigning a weight to each of a plurality of advertising items based on a comparison of the advertising item with the determined . . . set of interests[,],” and “selecting one or more advertising items from a plurality of advertising items”

We thus agree with the Examiner's findings that claim 1 recites a fundamental economic practice. It follows from prior Supreme Court cases, and *Gottschalk v. Benson*, 409 U.S. 63 (1972), in particular, that claim 1 recites a judicial exception. Controlling the behavior of persons concerning

a commercial interaction is a method of organizing human behavior, which is not patentable subject matter. *See Alice*, 573 U.S. at 217–18.

Also, we agree with the Examiner that claim 1 recites collecting information and comparing known information and that the steps of claim 1 constitute “analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, as essentially mental processes within the abstract-idea category.” *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1354 (Fed. Cir. 2016); *see also buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1355 (Fed. Cir. 2014) (claims directed to certain arrangements involving contractual relations are directed to abstract ideas).

We note that our determination is consistent with current case law. *See Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1370 (Fed. Cir. 2015) (tailoring information presented to a user based on particular information is an abstract idea); *Affinity Labs of Texas, LLC v. Amazon.com, Inc.*, 838 F.3d 1266, 1271 (Fed. Cir. 2016) (customizing a user interface to have targeted advertising based on user information is an abstract idea); *Morsa v. Facebook, Inc.*, 77 F. Supp. 3d 1007, 1013 (C.D. Cal. 2014), *aff’d*, 622 F. App’x 915 (Fed. Cir. 2015) (targeting advertisements to certain consumers is no more than an abstract idea); *Bridge and Post, Inc. v. Verizon Communications, Inc.*, 778 F. App’x 882 (Fed. Cir. 2019) (abstract ideas include tracking a user’s computer network activity and using information gained about the user to deliver targeted media, such as advertisements).

Thus, we find that claim 1 recites at least one of the certain methods of organizing human activity enumerated under the Guidance and, in the

alternative, a mental process. *See* Guidance, 84 Fed. Reg. at 52 (Certain methods of organizing human activity—fundamental economic practice; commercial interactions (including advertising, marketing or sales activities or behaviors)); MPEP § 2106.04(a) (rev. R-10.2019).

Turning to the second prong of the “directed to test,” claim 1 requires a “social networking system,” a “processor,” and a “user interface display.” These recitations do not impose “a meaningful limit on the judicial exception, such that the claim is more than a drafting effort designed to monopolize the judicial exception.” Guidance, 84 Fed. Reg. at 52; MPEP § 2106.04(d). We find no indication in the Specification, nor does Appellant direct us to any indication, that the operations recited in independent claim 1 invoke any inventive programming, require any specialized computer hardware or other inventive computer components, i.e., a particular machine, or that the claimed invention is implemented using other than generic computer components to perform generic computer functions. *See DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1256 (Fed. Cir. 2014) (“[A]fter *Alice*, there can remain no doubt: recitation of generic computer limitations does not make an otherwise ineligible claim patent-eligible.”).

We also find no indication in the Specification that claim 1 effects a transformation or reduction of a particular article to a different state or thing. Nor do we find anything of record, short of attorney argument, that attributes any improvement in computer technology and/or functionality to the claimed invention or that otherwise indicates that the claimed invention integrates the judicial exception into a “practical application,” as that phrase is used in the Guidance. *See* Guidance, 84 Fed. Reg. at 55; MPEP § 2106.04(d).

In this regard, the recitation does not effect an improvement in the functioning of the social networking system, processor, and user interface display or other technology, does not recite a particular machine or manufacture that is integral to the claim, and does not transform or reduce a particular article to a different state or thing. *Id.* Thus, claim 1 is directed to a judicial exception that is not integrated into a practical application and, thus claim 1 is directed to an abstract idea.

Turning to the second step of the *Alice* analysis, because we find that claim 1 is directed to an abstract idea, the claim must include an “inventive concept” in order to be patent-eligible, i.e., there must be an element or combination of elements that is sufficient to ensure that the claim in practice amounts to significantly more than the abstract idea itself. *See Alice*, 573 U.S. at 217–18 (quoting *Mayo*, 566 U.S. at 72–73).

The introduction of the computer and network components of a “social networking system,” a “processor,” and a “user interface display” into the claims does not alter the analysis at *Alice* step two.

[T]he mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention. Stating an abstract idea “while adding the words ‘apply it’” is not enough for patent eligibility. Nor is limiting the use of an abstract idea “to a particular technological environment.” Stating an abstract idea while adding the words “apply it with a computer” simply combines those two steps, with the same deficient result. Thus, if a patent’s recitation of a computer amounts to a mere instruction to “implemen[t]” an abstract idea “on . . . a computer,” that addition cannot impart patent eligibility. This conclusion accords with the preemption concern that undergirds our § 101 jurisprudence. Given the ubiquity of computers, wholly generic computer implementation is not generally the sort of “additional featur[e]” that provides any “practical assurance that the

process is more than a drafting effort designed to monopolize the [abstract idea] itself.”

Alice, 573 U.S. at 223 (alterations except first in original) (citations omitted).

Instead, “the relevant question is whether [claim 1] here do[es] more than simply instruct the practitioner to implement the abstract idea . . . on a generic computer.” *Id.* at 225. It does not.

Taking the claim elements separately, the function performed by the computer components at each step of the process is well-understood, routine and purely conventional. Using a computer to retrieve, select, and apply decision criteria to data and modify the data as a result amounts to electronic data query and retrieval—one of the most basic functions of a computer. All of these computer functions are well-understood, routine, conventional activities previously known to the trading industry. *See Elec. Power Grp.*, 830 F.3d at 1354; *see also In re Katz Interactive Call Processing Patent Litig.*, 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.”). In short, each step does no more than require generic computer components and network components to perform generic functions. As to the data operated upon, “even if a process of collecting and analyzing information is ‘limited to particular content’ or a particular ‘source,’ that limitation does not make the collection and analysis other than abstract.” *SAP Am., Inc. v. InvestPic, LLC*, 890 F.3d 1016, 1022 (Fed. Cir. 2018).

Considered as an ordered combination, the computer and network components of Appellant’s claim 1 add nothing that is not already present when the steps are considered separately. The sequence of data reception-

analysis-access/display is equally generic and conventional or 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), *Inventor Holdings, LLC v. Bed Bath & Beyond, Inc.*, 876 F.3d 1372, 1378 (Fed. Cir. 2017) (holding that sequence of data retrieval, analysis, modification, generation, display, and transmission was abstract), *Two-Way Media Ltd. v. Comcast Cable Commc'ns, LLC*, 874 F.3d 1329, 1339 (Fed. Cir. 2017) (holding sequence of processing, routing, controlling, and monitoring was abstract). The ordering of the steps is, therefore, ordinary and conventional.

Claim 1 does not, for example, purport to improve the functioning of the social networking system, processor, or user interface display. As we stated above, the claim does not effect an improvement in any other technology or technical field. The Specification spells out different generic equipment and parameters that might be applied using this concept and the particular steps such conventional processing would entail based on the concept of information access under different scenarios. (*See, e.g.*, Spec. ¶¶ 15, 31). Thus, the claims at issue amount to nothing significantly more than instructions to apply the abstract idea of information access using some unspecified, generic computer. Under our precedents, that is not enough to transform an abstract idea into a patent-eligible invention. *See Alice*, 573 U.S. at 226.

We have reviewed all the arguments (Appeal Br. 6–13; Reply Br. 2–10) Appellant has submitted concerning the patent eligibility of the claims before us that stand rejected under 35 U.S.C. § 101. We find that our

analysis above substantially covers the substance of all the arguments, which have been made. But, for purposes of emphasis, we will address various arguments in order to make individual rebuttals of the same.

We are not persuaded of error on the part of the Examiner by Appellant's argument that the claims are not directed to a fundamental economic practice because generating a profile page presented in an online system in conjunction with an advertisement based on an affinity score, are not conventionally a form of human activity. (Appeal Br. 9). As we discussed above, the first step in an analysis to determine whether claim are directed to an abstract idea is to determine whether the claims "recite" a judicial exception. If the claims recite a judicial exception, the analysis then proceeds to the next step to determine whether the judicial exception is integrated into a practical application and, if the claims do not so integrate the judicial exception, a determination can be made that the claims are directed to an abstract idea. In the instant case, claim 1 clearly recites a method of advertising which, according to the Guidance, is a judicial exception under the umbrella of a method of organizing human activity. The activity that is organized is the commercial activity between an advertiser and potential buyer. *See* Guidance, 84 Fed. Reg. 52. The recitation in claim 1 related to generating a profile page presented in an online system is analyzed in the second prong of the directed to test and in the second step of the analysis. As we discussed above, there is no improvement to either the social networking system or the processor, and as such, the judicial exception is not integrated into a practical application (under the second prong of Guidance step 2A) and does not amount to significantly more than

the abstract idea recited in claim 1 (under the second step of the Alice framework).

Appellant argues that the steps of (1) determining an affinity score, (2) selecting at least one user profile from the subject user profile and the viewing user profile and (3) generating a user interface display for the viewing user cannot be *practically* performed in the human mind given the processing capacity required to perform these steps and the context within which they are performed. (Appeal Br. 10). This argument is not persuasive because Appellant does not explain why these method steps of claim 1, for example, cannot be performed in the human mind. For example, Appellant has not explained why the determination of an affinity score cannot be done in the human mind. The Specification discloses that the affinity module 222 determines affinities between users. This affinity may be based on the frequency of interactions between two users, the number of interactions between two users or a combination thereof. (Spec. ¶46). It is certainly not clear why determining affinities between people cannot be done in the human mind. In fact, comparison of information is something that people do all the time in human social interactions. In addition, it is not clear from Appellant's argument what is meant by the "context within which they [are] performed." (Appeal Br. 10). In addition, we note that generating a user interface display for the viewing user is simply programming/creating data which may may be performed mentally.

Appellant also argues that the claims recite a specific manner of presenting content on a page to a viewing user to improve the probability that a user is interested in the content and, therefore, recite an improvement over current content presentation systems. (Appeal Br. 11). To the extent

Appellant maintains that the limitations of claim 1 necessarily amount to “significantly more” than an abstract idea because the claimed content presentation system is allegedly patentable over the prior art presentation systems, Appellant misapprehends the controlling precedent. Although the second step in the *Alice/Mayo* framework is termed a search for an “inventive concept,” the analysis is not an evaluation of novelty or non-obviousness, but, rather, a search for “an element or combination of elements that is ‘sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.’” *Alice*, 573 U.S. at 217–18 (alteration in original). A novel and nonobvious claim directed to a purely abstract idea is, nonetheless, patent-ineligible. *See Mayo*, 566 U.S. at 90. In this regard, as we discussed above, the claims do not recite an improvement to the processors, the social network system, or the user interface themselves but, rather, to the way an advertisement is targeted to potential customers. Appellant is focusing on an improvement in *what* is displayed rather than an improvement to the user interface display itself. The improvement advanced by Appellant is to increase the viewing user’s likelihood of interacting with the page or advertisement. (Reply Br. 5). This alleged improvement is in the abstract field of targeted advertising and does not reflect an improvement to the user interface or any technological process.

We are not persuaded of error on the part of the Examiner by Appellant’s argument that the Examiner has not presented sufficient evidence in accordance with *Berkheimer v. HP Inc.*, 881 F.3d 1360 (Fed. Cir. 2018) that the user interface display is well-understood, routine, and conventional. (Appeal Br. 12). We agree with the Examiner’s response to

this argument found on pages 8–10 of the Answer and adopt same as our own.

In addition, addressing step two of the *Mayo/Alice* framework in *Berkheimer*, the Federal Circuit held that the 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. Appellant cannot reasonably contend, nor does Appellant, that there is a genuine issue of material fact regarding whether the operation of the user display is well-understood, routine, or conventional, where, as here, there is nothing in the Specification to indicate that the operations recited in claim 1 require any specialized hardware or inventive computer components or that the claimed invention is implemented using other than generic computer components to perform generic computer functions, e.g., storing, receiving, determining, selecting, sending, and displaying information. Indeed, the Federal Circuit, in accordance with *Alice*, has “repeatedly recognized the absence of a genuine dispute as to eligibility” where claims have been defended as involving an inventive concept based “merely on the idea of using existing computers or the Internet to carry out conventional processes, with no alteration of computer functionality.” *Berkheimer v. HP Inc.*, 890 F.3d 1369, 1373 (Fed. Cir. 2018) (Moore, J., concurring); *see also BSG Tech LLC v. BuySeasons, Inc.*, 899 F.3d 1281, 1291 (Fed. Cir. 2018) (“BSG Tech does not argue that other, non-abstract features of the claimed inventions, alone or in combination, are not well-understood, routine and conventional database structures and activities. Accordingly, the district court did not err in determining that the asserted claims lack an inventive concept.”). Moreover,

the Specification discloses that the operations of the method claimed can be done by a general-purpose computing device, thereby providing evidence on the record that the user interface is well-understood, conventional, and routine. (Spec. ¶ 71).

Appellant argues that the Examiner erred by rejecting the claims for being directed to a chimera of three defined groups of abstract ideas, rather than asserting that the claims are directed to any particular one of the three defined groups. (Reply Br. 4). However, combining several abstract ideas does not render the combination any less abstract. *RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d 1322, 1327 (Fed. Cir. 2017) (“Adding one abstract idea (math) to another abstract idea . . . does not render the claim non-abstract.”); *see also FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1093–94 (Fed. Cir. 2016) (determining the pending claims were directed to a combination of abstract ideas).

In view of the foregoing, we will sustain the Examiner’s rejection of claim 1. We will also sustain this rejection as it is directed to the remaining claims because the Appellant has not argued the separate eligibility of these claims.

CONCLUSIONS OF LAW

We conclude the Examiner did not err in rejecting claims 1–22 under 35 U.S.C. § 101.

CONCLUSION

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1-22	101	Eligibility	1-22	

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

AFFIRMED