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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte YIGAL DAN RUBINSTEIN,
YANXIN SHI, and JOHN HEGEMAN

Appeal 2019-000471
Application 13/758,553
Technology Center 3600

Before ANTON W. FETTING, BRUCE T. WIEDER, and
ROBERT J. SILVERMAN, *Administrative Patent Judges*.

SILVERMAN, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from the Examiner's decision rejecting claims 1–20. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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.

ILLUSTRATIVE CLAIM

1. A computer-implemented method comprising:
 - receiving a request for content from a viewing user of a social networking system;
 - receiving a plurality of candidate recommendation units for the viewing user, each candidate recommendation unit including a recommendation that the viewing user perform an action in the social networking system identified by the recommendation unit;
 - determining a plurality of bid amounts for each candidate recommendation unit, each bid amount associated with a goal of the social networking system and based on a value to the goal of the viewing user performing the action identified by the candidate recommendation unit, wherein the plurality of bid amounts for at least one candidate recommendation unit is associated with a plurality of different goals of the social networking system;
 - determining a combined bid amount for each candidate recommendation unit based on the plurality of bid amounts associated with a candidate recommendation unit;
 - determining an expected value for each candidate recommendation unit based on the combined bid amount associated with the candidate recommendation unit;
 - ranking the candidate recommendation units using the expected value;
 - selecting content for presentation to the viewing user including a recommendation unit selected from the candidate recommendation units based at least in part on the ranking; and
 - sending the selected content for display to the viewing user.

REJECTION²

Claims 1–20 are rejected under 35 U.S.C. § 101 as ineligible subject matter.

FINDINGS OF FACT

The findings of fact relied upon, which are supported by a preponderance of the evidence, appear in the following Analysis.

ANALYSIS

Under 35 U.S.C. § 101, an invention is patent-eligible if it claims a “new and useful process, machine, manufacture, or composition of matter.” 35 U.S.C. § 101. Yet, subject matter belonging to any of the statutory categories may, nevertheless, be ineligible for patenting. The Supreme Court has interpreted § 101 to exclude laws of nature, natural phenomena, and abstract ideas, because they are regarded as the basic tools of scientific and technological work, such that including them within the domain of patent protection would risk inhibiting future innovation premised upon them. *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013).

Of course, “[a]t some level, ‘all inventions . . . embody, use, reflect, rest upon, or apply’” these basic tools of scientific and technological work. *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 217 (2014). Accordingly, evaluating ineligible subject matter, under these judicial exclusions, involves a two-step framework for “distinguish[ing] between patents that claim the buildin[g] block[s] of human ingenuity and those that integrate the building

² The Final Office Action (pages 3–18) included rejections under 35 U.S.C. § 103(a). These rejections are withdrawn. *See* Answer 4–5.

blocks into something more, thereby transform[ing] them into a patent-eligible invention.” *Id.* (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 88–89 (2012) (internal quotation marks omitted)). The first step determines whether the claim is directed to judicially excluded subject matter (such as a so-called “abstract idea”); the second step determines whether there are any “additional elements” recited in the claim that (either individually or as an “ordered combination”) amount to “significantly more” than the identified judicially excepted subject matter itself. *Id.* at 217–18.

In 2019, the USPTO published revised guidance on the application of § 101, in accordance with judicial precedent. *See 2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50, 52 (Jan. 7, 2019) (“*2019 Revised Guidance*”). Under the *2019 Revised Guidance*, a claim is “directed to” an abstract idea, only if the claim recites any of (1) mathematical concepts, (2) certain methods of organizing human activity, and (3) mental processes — without integrating such abstract idea into a “practical application,” i.e., without “apply[ing], rely[ing] on, or us[ing] the judicial exception in a manner that imposes a meaningful limit on the judicial exception, such that the claim is more than a drafting effort designed to monopolize the judicial exception.” *Id.* at 52–55. The considerations articulated in MPEP § 2106.05(a)–(c) and (e)–(h) bear upon whether a claim element (or combination of elements) integrates an abstract idea into a practical application. *Id.* at 55. A claim that is “directed to” an abstract idea constitutes ineligible subject matter, unless the claim recites an additional element (or combination of elements) amounting to significantly more than the abstract idea. *Id.* at 56.

Although created “[i]n accordance with judicial precedent” (*id.* at 52), the *2019 Revised Guidance* enumerates the analytical steps differently than the Supreme Court’s *Alice* opinion. Step 1 of the *2019 Revised Guidance* addresses whether the claimed subject matter falls within any of the statutory categories of § 101. *Id.* at 53–54. Step 2A, Prong One, concerns whether the claim at issue recites ineligible subject matter and, if an abstract idea is recited; Step 2A, Prong Two, addresses whether the recited abstract idea is integrated into a practical application. *Id.* at 54–55. Unless such integration exists, the analysis proceeds to Step 2B, in order to determine whether any additional element (or combination of elements) amounts to significantly more than the identified abstract idea. *Id.* at 56.

Claims 1–20 are argued as a group. Appeal Br. 6–16. Claim 1 is selected for analysis herein. *See* 37 C.F.R. § 41.37(c)(1)(iv).

With respect to Step 1 of the *2019 Revised Guidance*, there is no dispute that the claims are within identified categories of § 101.

In relation to the inquiry of Step 2A, Prong One, the Examiner states: “Claims 1–20 are directed to displaying content to user based on bids and ranks of the recommendation units.” Final Action 2. According to the Examiner, the identified concept “is considered an idea of itself, which is merely an abstract idea” and it “is similar to the concepts of *collecting and comparing known information*, which have all been found by the courts to be abstract.” *Id.* Further, the Examiner states:

The claimed concept is also considered a fundamental economic activity which is merely an abstract idea. The concept of directed to displaying content to user based on bids and ranks of the recommendation units is a well-known and conventional step in the advertising field and therefore the abstract idea is deemed *fundamental* in this field.

Id. at 3.

This latter categorization of the Examiner squares with the approach of the *2019 Revised Guidance*. Except for the recitations of “computer-implement[ation]” and “sending the selected content for display to the viewing user,” the limitations of independent claim 1, for example, recite a technique for determining what content is provided to social network users, based upon various marketing goals and strategies of the social networking system. As the Specification explains, the bids may be allocated according to strategies for accomplishing particular goals — such as increasing the number of users. Spec. ¶ 27. Thus, the technique of claim 1 is among the “[c]ertain methods of organizing human activity,” particularly “commercial or legal interactions (including agreements in the form of contracts; legal obligations; advertising, marketing or sales activities or behaviors; [and] business relations).” *2019 Revised Guidance*, 84 Fed. Reg. at 52. Further, the claimed features are similar to forms of targeted advertising, which courts have regarded as a type of abstract idea. *See Affinity Labs of Tex., LLC v. Amazon.com, Inc.*, 838 F.3d 1266, 1271 (Fed. Cir. 2016) (“tailoring of content based on information about the user — such as where the user lives or what time of day the user views the content — is an abstract idea that is as old as providing different newspaper inserts for different neighborhoods”) (citing *Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1369 (Fed. Cir. 2015)).

The Appellant disputes the Examiner’s categorization of the claimed subject matter as a fundamental economic practice (a type of the ineligible methods of organizing human activity), asserting that “claim 1 does not describe agreements between people in the form of contracts, legal

obligations, or business relations” and that “it is not possible that this concept could be a *fundamental* economic practice or even a process [that] had been heard of before outside of the Appellant’s system,” because “recommendation units did not exist prior to the advent of social networking systems like Facebook.” Appeal Br. 9.

To the contrary, the identified concept of “displaying content to user based on bids and ranks of the recommendation units” (Final Action 2) is similar to basic marketing practices, as discussed above. Moreover, even if the particular implementation in a computer-network environment were a more recent development, as the Appellant contends, this would not undermine the Examiner’s determination that the identified concept, free of such computer-network features, could be regarded properly as an abstract idea.

Therefore, we are not persuaded of error, as to the Examiner’s analysis corresponding to Step 2A, Prong One.

Turning to Step 2A, Prong Two, unless a claim that recites a judicial exception (such as an abstract idea) “integrates the recited judicial exception into a practical application of that exception,” the claim is “directed to” the judicial exception. *2019 Revised Guidance*, 84 Fed. Reg. at 53. The analysis of such an “integration into a practical application” involves “[i]dentifying . . . any additional elements recited in the claim beyond the judicial exception(s)” and “evaluating those additional elements individually and in combination to determine whether they integrate the exception into a practical application.” *Id.* at 54–55. Among the considerations “indicative that an additional element (or combination of elements) may have integrated the exception into a practical application” is whether “[a]n additional

element reflects an improvement in the functioning of a computer, or an improvement to other technology or technical field.” *Id.* at 55 (footnote omitted). “[W]hether an additional element or combination of elements integrate[s] the exception into a practical application should be evaluated on the claim as a whole.” *Id.* at 55 n.24.

In regard to issues pertaining to Step 2A, Prong Two, the Appellant contends that “the claimed invention is directed to a specific implementation of a solution to a problem in the software arts”:

Taking claim 1 as an example, claim 1 provides a unique method of selecting content for presentation to a viewing user. The content includes a recommendation unit selected from a plurality of candidate recommendation units. Each candidate recommendation unit is associated with a plurality of bid amounts. The bid amounts for each candidate recommendation unit are associated with a plurality of different goals of the social networking system. The different goals of the social networking system include use growth, user retention, user engagement, and page promotion. *See* [Spec.] FIG. 2; claim 14 (referring to goals). Accordingly, content including a recommendation unit that can recommend and identify an action valuable to the social networking system is selected and presented. *See* [Spec.] FIG. 3.

Appeal Br. 10. Further, the Appellant contends that the claimed subject matter “improves the computer of the social networking system in its ability to achieve its goals through allowing it to perform a unique bidding process to selectively present content to its users.” *Id.* at 10–11. In addition, comparing the claims in the Appeal to those in *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014), the Appellant contends that “the claimed invention here specifically arises in the realm of the Internet” and “these methods are not possible outside the Internet

environment,” such that “the claimed invention is rooted in computer technology to overcome a problem (how [to] select the right content to achieve different goals of a social networking system)” — an outcome that the Appellant calls “[a]n unconventional desired result (presenting content that triggers user actions valuable to the goals of the social networking system).” *Id.* at 11–12.

These arguments are not persuasive, at least because the alleged improvement stems from features describing the identified judicial exception, as opposed to any additional elements. *See 2019 Revised Guidance*, 84 Fed. Reg. at 54–55.

Moreover, the Appellant does not adequately show how the claimed subject matter could be rooted in computer technology, in the manner of *DDR Holdings*. The claims at issue in *DDR Holdings* did not use a computer network in its normal, expected manner by sending a website visitor to a third-party website connected with a selected advertisement. *DDR Holdings*, 773 F.3d at 1258–59. Instead, the claims “specif[ied] how interactions with the Internet are manipulated” in order to “override[] the routine and conventional sequence of events ordinarily triggered by the click of a hyperlink.” *Id.* at 1258. Here, we find no technological improvement in Appellant’s claim 1 comparable to changing the routine, conventional functioning of Internet hyperlink protocol. Critically, the Appellant identifies no obstacle created by the use of a computer network environment, which the claimed subject matter might overcome. *See id.* at 1257–58. Rather, the technique of the Appellant’s claims “qualifies as an ‘abstract idea’ for which computers are invoked merely as a tool.” *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1336 (Fed. Cir. 2016).

Nor are we persuaded by the Appellant’s position that the claims do not monopolize the identified abstract concept. *See* Appeal Br. 12. The preemption/monopolization concerns of subject-matter eligibility are addressed through the approach that the Supreme Court described in, e.g., *Alice. Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015) (“[Q]uestions on preemption are inherent in and resolved by the § 101 analysis.”) “While preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility.” *Id.*

Therefore, we are not persuaded of error in the rejection, with regard to analyses corresponding to Step 2A, Prong Two.

Under Step 2B of the *2019 Revised Guidance* (84 Fed. Reg. at 56), a claim that recites a judicial exception (such as an abstract idea) might, nevertheless, be patent-eligible, if the claim contains “additional elements amount[ing] to significantly more than the exception itself” — i.e., “a specific limitation or combination of limitations that [is] not well-understood, routine, conventional activity in the field, which is indicative that an inventive concept may be present.” *See Alice*, 573 U.S. at 223 (“[T]he mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention.”)

Referring to *BASCOM Global Internet Services, Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1350 (Fed. Cir. 2016), the Appellant argues that claim 1 provides an unconventional and non-generic arrangement of elements, thus amounting to significantly more than the identified judicial exception, by

selectively presenting content to a viewing user based on values of the viewing user's action recommended and identified by recommendation units included in the content. As a whole, amended claim 1 recites a "specific, discrete implementation" of receiving candidate recommendation units (each can recommend the viewing user perform an action and identify that action), determining a plurality of bid amounts for each candidate recommendation unit based on value of the viewing user performing the recommended action, determining a combined bid amount for each candidate recommendation unit, determining an expected value of each candidate recommendation unit, ranking the candidate recommendation units, selecting content including a candidate recommendation unit selected based on the ranking, and sending the selected content for display to the viewing user.

Appeal Br. 15–16. *See also* Reply Br. 5–6.

Yet, as noted above, the referenced claim limitations are part of the judicial exception at issue in this Appeal. As such, these limitations cannot impart patent-eligibility to the claims. "It has been clear since *Alice* that a claimed invention's use of the ineligible concept to which it is directed cannot supply the inventive concept that renders the invention 'significantly more' than that ineligible concept." *BSG Tech LLC v. BuySeasons, Inc.*, 899 F.3d 1281, 1290 (Fed. Cir. 2018). The same is true of the Appellant's additional argument regarding independent claim 14 (*see* Appeal Br. 15), wherein the features of "aggregating . . . the bid contributions associated with each goal" and "determining the combined bid amount for the recommendation unit based on the aggregated bid contributions," are part of the Examiner's identified abstract idea. Accordingly, we are not persuaded of error in the rejection, with regard to the inquiries corresponding to Step 2B.

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Therefore, we are not persuaded of error in the rejection, such that we sustain the rejection of claims 1–20 under 35 U.S.C. § 101.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–20	101	Eligibility	1–20	

TIME PERIOD FOR RESPONSE

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

AFFIRMED