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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ALEXANDER M. COSTAKIS and JAMES J. LEFKOWITZ

Appeal 2017-000774¹
Application 11/379,171²
Technology Center 3600

Before NINA L. MEDLOCK, AMEE A. SHAH, and
ALYSSA A. FINAMORE, *Administrative Patent Judges*.

MEDLOCK, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner’s final rejection of claims 1–85. An oral hearing was held on October 23, 2018.

We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ Our decision references Appellants’ Appeal Brief (“App. Br.,” filed January 25, 2016) and Reply Brief (“Reply Br.,” filed October 11, 2016), and the Examiner’s Answer (“Ans.,” mailed August 10, 2016) and Final Office Action (“Final Act.,” mailed February 24, 2015). The record includes a transcript of the October 23, 2018 hearing.

² Appellants identify CFPH, LLC as the real party in interest. App. Br. 2.

CLAIMED INVENTION

Appellants describe that the disclosed invention “relates in general to computer-implemented financial systems, and in particular to an improved automated securities trading system” (Spec. 1, ll. 8–9).

Claims 1, 18, 35, 63, and 85 are the independent claims on appeal. Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. An apparatus, comprising:
 - at least one processor; and
 - at least one memory that stores at least one of a first order and a second order, and that stores instructions which, when executed by the at least one processor, direct the at least one processor to:
 - receive, from a first trader of a group of traders, a first order to buy a financial instrument that represents a contestant in a contest associated with a television show;
 - receive, from a second trader of the group of traders, a second order to sell the financial instrument;
 - determine a price of the financial instrument based at least in part on the first order, the second order, and at least one of a result associated with a stage of the contest and a performance of the contestant in the contest;
 - execute a trade at the determined price; and
 - determine an updated price of the financial instrument if the contestant loses the contest, in which the act of determining the updated price comprises:
 - reducing the price of the financial instrument to zero if the contestant loses the contest.

REJECTION³

Claims 1–85 are rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter.

³ The rejection of claims 1–85 under 35 U.S.C. § 103(a) has been withdrawn. Ans. 2.

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. The Supreme Court, however, has long interpreted § 101 to include an implicit exception: “[l]aws of nature, natural phenomena, and abstract ideas” are not patentable. *Alice Corp. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2354 (2014).

The Supreme Court, in *Alice*, reiterated the two-step framework previously set forth in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66 (2012), “for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts.” *Alice Corp.*, 134 S. Ct. at 2355. The first step in that analysis is to “determine whether the claims at issue are directed to one of those patent-ineligible concepts.” *Id.* If the claims are not directed to a patent-ineligible concept, e.g., an abstract idea, the inquiry ends. Otherwise, the inquiry proceeds to the second step where the elements of the claims are considered “individually and ‘as an ordered combination’” to determine whether there are additional elements that “‘transform the nature of the claim’ into a patent-eligible application.” *Id.* (quoting *Mayo*, 566 U.S. at 79, 78).

The Court acknowledged in *Mayo*, that “all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.” *Mayo*, 566 U.S. at 71. Therefore, the Federal Circuit has instructed that claims are to be considered in their entirety to determine “whether their character as a whole is directed to excluded subject matter.” *McRO, Inc. v. Bandai Namco Games Am., Inc.*, 837 F.3d 1299, 1312

(Fed. Cir. 2016) (quoting *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015)).

We are not persuaded, as an initial matter, by Appellants' argument that the Examiner has not established a prima facie case of patent-ineligibility (App. Br. 7). Appellants charge that the Office Action fails to properly identify the alleged abstract idea or sufficiently explain why the alleged abstract idea is abstract, and that the Office Action provides no tangible evidence to support its conclusions (*id.* at 8–9; *see also* Reply Br. 3–4). Appellants, thus, maintain that “the Examiner provides only conclusory opinions that the alleged abstract idea is abstract, which is insufficient to establish a rejection” (App. Br. 9).

Appellants note that the Supreme Court, in *Alice*, and in *Bilski v. Kappos*, 561 U.S. 593 (2010), supported its finding that the alleged abstract idea was a fundamental economic practice with tangible evidence (App. Br. 8–9). And Appellants ostensibly maintain that the Examiner is likewise required to cite authority here in order to establish a prima facie case of patent-ineligibility (*id.*).

As an initial matter, we find nothing in *Alice* or *Bilski* that requires the Office to identify specific references to support a finding that a claim is directed to an abstract idea. Nor have Appellants articulated sufficiently their assertion (*id.* at 8) that the Administrative Procedure Act imposes any such requirement. Evidence may be helpful, e.g., where facts are in dispute. But, there is no requirement that an examiner provide evidentiary support in every case before a conclusion can be made that a claim is directed to an abstract idea. *See Mortgage Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d 1314, 1325–26 (Fed. Cir. 2016) (“[I]t is also possible, as numerous

cases have recognized, that a § 101 analysis may sometimes be undertaken without resolving fact issues.”). Appellants’ bare assertion that evidence is needed here, without any supporting reasoning as to why, is insufficient to require the Examiner to provide evidentiary support.⁴

The Federal Circuit, moreover, has repeatedly observed that “the prima facie case is merely a procedural device that enables an appropriate shift of the burden of production.” *Hyatt v. Dudas*, 492 F.3d 1365, 1369 (Fed. Cir. 2007) (citing *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992)). The court has, thus, held that the USPTO carries its procedural burden of establishing a prima facie case when its rejection satisfies the requirements of 35 U.S.C. § 132 by notifying the applicant of the reasons for the rejection, “together with such information and references as may be useful in judging of the propriety of continuing the prosecution of [the] application.” *See In re Jung*, 637 F.3d 1356, 1362 (Fed. Cir. 2011) (alteration in original). Thus, all that is required of the Office is that it sets forth the statutory basis of the rejection in a sufficiently articulate and informative manner as to meet the notice requirement of § 132. *Id.*; *see also Chester v. Miller*, 906 F.2d 1574, 1578 (Fed. Cir. 1990) (“Section 132 is violated when a rejection is so uninformative that it prevents the applicant from recognizing and seeking to counter the grounds for rejection.”).

In rejecting the pending claims under § 101, the Examiner analyzed the claims using the *Mayo/Alice* two-step framework, set forth in the USPTO’s “2014 Interim Guidance on Patent Subject Matter Eligibility,” 79 Fed. Reg. 74618 (Dec. 16, 2014) (the “2014 Interim Guidance”), in effect

⁴ We note that the Appellants have put forward no rebuttal evidence showing the claims are not directed to an abstract idea.

at the time the Final Office Action was mailed. Specifically, the Examiner notified Appellants that the claims are directed to “trading a financial instrument,” which the Examiner determined is a fundamental economic practice and, therefore, an abstract idea; and that the claims do not include additional elements or a combination of elements sufficient to ensure that the claims amount to significantly more than the abstract idea itself (Final Act. 10). The Examiner, thus, notified Appellants of the reasons for the rejection in a sufficiently articulate and informative manner as to meet the notice requirement of § 132. And we find that the Examiner, in doing so, set forth a proper rejection under § 101.

For much the same reasons, we are not persuaded by Appellants’ argument that the Office Action failed to identify the “additional elements” and explain why each additional element does not add significantly more to the alleged abstract idea, and, thereby, failed to provide Appellants a sufficient opportunity to respond (App. Br. 9–10; *see also* Reply Br. 6–7). Appellants cannot reasonably maintain that the rejection was not understood or that the Examiner otherwise failed to meet the requirements of § 132. Indeed, Appellants’ understanding is clearly manifested by Appellants’ responses as set forth in the briefs.

Appellants charge in the Reply Brief that the Examiner has overgeneralized the claimed invention as directed to “trading a financial instrument” and that the Examiner has ignored that the claims recite features related to pricing a financial instrument based on a result associated with a stage of a contest and/or a performance of the contestant in the contest and later updating the price of the financial instrument if the contestant loses the contest (Reply Br. 4–6). But, there is no requirement that the Examiner’s

formulation of the abstract idea copy the claim language. Instead, 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 at 1346). 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. The Examiner’s determination here that the claims are directed to “trading a financial instrument” is fully consistent with the Specification, including the claim language (*see, e.g.*, Spec. 1, ll. 8–9 (“This invention relates in general to computer-implemented financial systems, and in particular to an improved automated securities trading system.”); 12, ll. 3–4 (“The present invention comprises a computer-implemented trading system for derivative financial instruments.”)).

An abstract idea, moreover, can be expressed at various levels of abstraction. *See Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1240 (Fed. Cir. 2016) (“An abstract idea can generally be described at different levels of abstraction. As the Board has done, the claimed abstract idea could be described as generating menus on a computer, or generating a second menu from a first menu and sending the second menu to another location. It could be described in other ways, including, as indicated in the specification, taking orders from restaurant customers on a computer.”). That the claim language includes more words than the phrase the Examiner used to articulate the abstract idea, and that the Examiner, thus, articulates the

abstract idea at a higher level of abstraction than do Appellants is an insufficient basis for finding that the claims are not directed to an abstract idea.

We also fail to see how or why, and Appellants do not explain how or why, features related to pricing a financial instrument based on a result associated with a stage of a contest and/or the performance of a contestant in the contest, and later updating the price of the financial instrument if the contestant loses the contest makes the claimed subject matter any less abstract. *Cf. Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1334 (Fed. Cir. 2015) (holding claims patent-ineligible where, “[v]iewed as a whole, the claims simply recite the concept of price determination by using organizational and product group hierarchies as performed by a generic computer”).

Turning to the second step of the *Mayo/Alice* framework, Appellants argue that the claims “recite elements that alone and/or in combination are significantly more than the alleged abstract idea of ‘financial instrument trading’” (App. Br. 10). Pointing to independent claim 1 and dependent claim 5, for example, Appellants argue that claim 1’s recitation of “determin[ing] a price of the financial instrument based at least in part on the first order, the second order, and at least one of a result associated with a stage of the contest and a performance of the contestant in the contest” is significantly more than “financial instrument trading,” and that claim 5’s recitation of “determin[ing] that the first contestant advanced beyond a subsequent stage of the contest; and award[ing] a dividend to the first trader responsive to determining that the contestant advanced beyond a subsequent stage of the contest” also is “more than the alleged abstract idea of ‘financial

instrument trading” (*id.* at 10–11). Yet, the difficulty with Appellants’ argument is that these limitations are part of the abstract idea itself; they are not additional elements to be considered when determining whether the claims include additional elements or a combination elements that is sufficient to amount to significantly more than the judicial exception.

It could not be clearer from *Alice* that, under step two of the *Mayo/Alice* framework, the elements of each claim are considered both individually and “as an ordered combination” to determine whether the additional elements, i.e., the elements *other* than the abstract idea itself, “transform the nature of the claim” into a patent-eligible application. *Alice Corp.*, 134 S. Ct. at 2355. *See Mayo*, 566 U.S. at 72–73 (requiring that “a process that focuses upon the use of a natural law also contain *other* elements or a combination of elements, sometimes referred to as an ‘inventive concept,’ sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the natural law itself” (emphasis added)). In other words, the inventive concept under step two of the *Mayo/Alice* test cannot be the abstract idea itself:

It is clear from *Mayo* that the “inventive concept” cannot be the abstract idea itself, and *Berkheimer* . . . leave[s] untouched the numerous cases from this court which have held claims ineligible because the only alleged “inventive concept” is the abstract idea. *Berkheimer v. HP, Inc.*, 890 F.3d 1369, 1374 (Fed. Cir. 2018) (Moore, J., concurring). *See also BSG Tech. LLC v. BuySeasons, Inc.*, 899 F.3d 1281, 1290 (Fed. Cir. 2018) (“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.”).

Appellants assert that because the Office Action did not reject the claims over any prior art, the Examiner has effectively conceded that the claims recite significantly more than “trading a financial instrument” (Reply Br. 8). But, Appellants misapprehend the controlling precedent.

A finding of novelty or non-obviousness does not automatically lead to the conclusion that the claimed subject matter is patent-eligible. Although the second step in the *Mayo/Alice* 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 Corp.*, 134 S. Ct. at 2355 (alteration in original) (quoting *Mayo*, 566 U.S. at 73). “Groundbreaking, innovative, or even brilliant discovery does not by itself satisfy the § 101 inquiry.” *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 591 (2013). A novel and non-obvious claim directed to a purely abstract idea is, nonetheless, patent-ineligible. *See Mayo*, 566 U.S. at 90; *see also Diamond v. Diehr*, 450 U.S. 175, 188–89 (1981) (“The ‘novelty’ of any element or steps in a process, or even of the process itself, is of no relevance in determining whether the subject matter of a claim falls within the § 101 categories of possibly patentable subject matter.”).

Appellants further argue that the Examiner failed to comply with USPTO guidelines by failing to provide a separate analysis of each claim (App. Br. 11; *see also* Reply Br. 8–9). But, that argument is likewise unpersuasive.

There is no dispute that the 2014 Interim Guidance directs examiners to examine each claim individually. But consideration of each claim individually does not require a separate written analysis for each individual claim.

We decline to find error here in the Examiner’s decision to not address the patent-eligibility of each of claims 1–85 separately inasmuch as the claims are all directed to the same abstract idea. *See Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat. Ass’n*, 776 F.3d 1343, 1348 (Fed. Cir. 2014) (explaining that when all claims are directed to the same abstract idea, “addressing each claim of the asserted patents [is] unnecessary.”). Independent claims 1, 35, and 63 are substantially similar to independent claims 18 and 85, and recite apparatuses (claims 1 and 63) and a computer-readable medium (claim 35), which correspond to the methods recited in claims 18 and 85. And the dependent claims merely further detail how the trading process is conducted, e.g., how prices are determined and adjusted and winning traders identified.

Appellants argue that the Office Action failed to address the recitations of any dependent claim (*see, e.g.*, Reply Br. 7). But, aside from summarily asserting that “many of [the dependent claims] recite, alone and/or in combination with their parent claim(s), significantly more than any alleged abstract idea” (*id.*), Appellants offer no separate arguments for the patent-eligibility of these claims.

We also are not persuaded of Examiner error to the extent Appellants maintain that the claims are patent-eligible because the claims “would not preempt all users or implementations of ‘financial instrument trading’” (App. Br. 11; *see also* Reply Br. 9–10). Although the Supreme Court has

described “the concern that drives [the exclusion of abstract ideas from patent eligible subject matter] as one of pre-emption,” *Alice Corp.*, 134 S. Ct. at 2354, characterizing preemption as a driving concern for patent eligibility is not the same as characterizing preemption as the sole test for patent eligibility. “The Supreme Court has made clear that the principle of preemption is the basis for the judicial exceptions to patentability” and “[f]or this reason, questions on preemption are inherent in and resolved by the § 101 analysis.” *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015) (citing *Alice Corp.*, 134 S. Ct. at 2354). “[P]reemption may signal patent ineligible subject matter, [but] the absence of complete preemption does not demonstrate patent eligibility.” *Id.*

Appellants summarily assert that, as in *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014), the present claims “solve a problem rooted in computer technology to improve the functionality of computer-implemented trading systems by enabling trading of a financial instrument that corresponds to a contest and/or a performance of a contestant in a contest” (App. Br. 12). But Appellants do not identify the problem that the claims allegedly solve. Nor do Appellants otherwise explain how enabling trading of a financial instrument that corresponds to a contest and/or a performance of a contestant in a contest improves computer functionality.

We are not persuaded, on the present record, that the Examiner erred in rejecting claims 1–85 under 35 U.S.C. § 101. Therefore, we sustain the Examiner’s rejection.

Appeal 2017-000774
Application 11/379,171

DECISION

The Examiner's rejection of claims 1–85 under 35 U.S.C. § 101 is affirmed.

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

AFFIRMED