

NOTE: This disposition is nonprecedential.

**United States Court of Appeals
for the Federal Circuit**

IN RE: NOAH P. HEALY,
Appellant

2024-2311

Appeal from the United States Patent and Trademark
Office, Patent Trial and Appeal Board in No. 15/171,621.

Decided: August 7, 2025

NOAH P. HEALY, Charlottesville, VA, pro se.

OMAR FAROOQ AMIN, Office of the Solicitor, United
States Patent and Trademark Office, Alexandria, VA, for
appellee Coke Morgan Stewart. Also represented by
KAKOLI CAPRIHAN, AMY J. NELSON.

Before MOORE, *Chief Judge*, CUNNINGHAM, *Circuit Judge*,
and SCARSI, *District Judge*.¹

¹ Honorable Mark C. Scarsi, District Judge, United
States District Court for the Central District of California,
sitting by designation.

PER CURIAM.

Noah P. Healy appeals a decision of the Patent Trial and Appeal Board sustaining the examiner’s rejection of all pending claims of U.S. Patent Application No. 15/171,621 as patent ineligible under 35 U.S.C. § 101. *Ex parte Noah P. Healy*, No. 2023-002702, 2024 WL 3440209 (P.T.A.B. July 16, 2024) (“*Decision*”). We *affirm*.

I. BACKGROUND

Mr. Healy is the named inventor on the ’621 application, entitled “System and Method of Price Discovery for Exchange Market.” J.A. 48. The ’621 application is directed to systems and methods “for discovering and publishing clearing prices of commodities within exchange markets.” J.A. 80; *see also* J.A. 81–82 (“method for operating a commodity market through a coordinate discovery market”). The application explains that “exchange markets traditionally work by constantly maintaining a balance between supply and demand” by changing the price of commodities. J.A. 49 ¶ 4. The application also states that conventional methods and systems for operating exchange markets “are roughly nine centuries old,” “would be recognizable to early Renaissance Venetians,” and “suffer from well-known flaws, such as manipulative practices, money laundering, and crash instability.” J.A. 48 ¶ 3.

The ’621 application purports to overcome these drawbacks of conventional exchange markets, as well as additional challenges posed by technological advances, by proposing “a different logical construct for an exchange market, which dictates a different set of rules for interaction of the relevant participants.” J.A. 48 ¶ 2. The claimed invention purportedly “link[s] a positive sum forecasting market to a negative sum clearing house in a mutually negative reinforcement control loop” by “providing a temporal sequence of clearing prices and accepting future price speculation from speculators along with an investment,” combining the investments “into a bett[o]r pool,” and paying

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“the speculators who most correctly predicted the future prices” using “a pari-mutuel payout.” J.A. 50 ¶ 7. This method separates speculation from trading “so that speculator incentives can be inverted to align with producers and consumers” while still allowing producers and consumers “to utilize the pricing information provided by speculators when determining how much of a commodity to buy or sell.” *Id.* ¶ 8.

Claim 1 is illustrative:

1. . . . A system for discovering and publishing clearing prices of commodities within exchange markets, the system comprising:

an intermediary market server configured to receive, aggregate, and publish pricing information to and from participants, which, using a telecommunication network, simultaneously publishes prices and predictions on clearing prices for a plurality of commodities to at least one speculator device associated with a speculator comprising a graphical user interface, at least one producer device associated with a producer of at least one commodity comprising a graphical user interface, and at least one consumer device associated with a consumer of at least one commodity comprising a graphical user interface;

wherein the at least one speculator device, via the graphical user interface, exchanges data with the intermediary market server related to purchasing interests in at least one commodity of the plurality of commodities according to a different logical construct that dictates a different set of rules for interaction of relevant participants by participant type, wherein speculators do

not directly perform any transactions with producers or consumers and do not purchase or handle any commodities, and instead provide predictions on clearing prices of the plurality of commodities backed by a financial investment placed with the intermediary market server, wherein the intermediary market server allocates returns on investments based on information measurement and provides a means to directly state a degree of influence of each participant in the exchange markets, removing price and temporal priority to allow separation of speculation from trading so that speculator incentives are inverted to align with producers and consumers;

wherein the at least one producer device, via the graphical user interface, exchanges data with the intermediary market server related to selling the at least one commodity;

wherein the at least one consumer device, via the graphical user interface, exchanges data with the intermediary market server related to buying the at least one commodity;

a clearing house module configured to receive offers of sale, offers to buy, produce contracts for received offers, handle monetary payments related to transactions between producers and consumers, and provide a volume seeking price discovery in the exchange markets and coordination on a non-zero sum basis in which all participants are rewarded for realizing mutual

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gains by making mutually consistent decisions;

wherein, in response to transactions being processed by the intermediary market server between producers and consumers at a clearing price, the system tracks interactions of pluralities of different participants at different times and measures information content of actions taken in roles of producer, consumer, and speculator, providing feedback as a four party commodities market operates, and the system organizes information, measurements, presentation, and execution, transforming generated matched pairs of producers and consumers creating commodities transactions, providing rewards payments to speculators based on accuracy of prediction for clearing prices of the commodities transactions that positively contribute to implement a positive sum commodity market, and the speculator is rewarded from an investment pool based on a level of accuracy and a calculation of a percentage of change from influence provided by each speculator prediction and investment to move a current price to an actual clearing price according to a pari-mutuel betting schema with a positive sum pari-mutuel information gathering provided by the system, wherein the at least one speculator device, and each contributing speculator, are paid a fraction of impact that each investment of the speculator or contributing speculator had on moving a current market price toward the actual clearing price of commodities exchanged between producers and

consumers, with larger proportional gains returned for relatively bigger correct moves;

wherein instances and opportunity for price manipulation and hedging in the marketplace are reduced, efficiency of the marketplace is increased, and cost of operation is reduced, by having speculators directly provide price information to the marketplace.

J.A. 28–29.

On April 12, 2022, an examiner rejected all of the '621 application's claims as patent ineligible under 35 U.S.C. § 101. J.A. 514–26; *Decision* at *2. The examiner concluded that the claims were directed to “a process that[] . . . covers fundamental economic principles and commercial or legal interactions.” J.A. 516; *accord Decision* at *7. The examiner also determined that some additional limitations described by the claims were described at such a high degree of generality as to “amount[] to no more than mere instructions to apply the abstract idea using a generic computer component.” J.A. 522. The examiner concluded that “generally link[ing] the use of the abstract idea to a particular technological environment cannot provide an inventive concept.” J.A. 523.

Mr. Healy subsequently appealed the examiner's rejections to the Board, J.A. 553, and the Board affirmed the examiner's rejections of representative claim 1 and claims 2–20, which rise and fall with claim 1. *Decision* at *11. The Board rejected Mr. Healy's arguments that claim 1 was directed to technological improvements, concluding that any improvements were improvements to the abstract ideas themselves, rather than to any computer components or technology. *Id.* at *8. The Board also agreed with the examiner that the additional limitations in claim 1 were described “in general terms, without describing the

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particulars,” such that the claims recite “conventional computer components and techniques.” *See id.* at *11.

Mr. Healy filed this timely appeal. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(4)(A).

II. DISCUSSION

Patent eligibility under 35 U.S.C. § 101 is a question of law that may implicate underlying fact issues. *In re Marco Guldenaar Holding B.V.*, 911 F.3d 1157, 1159 (Fed. Cir. 2018). “We review the Board’s ultimate conclusion on patent eligibility de novo.” *In re Killian*, 45 F.4th 1373, 1378 (Fed. Cir. 2022). We review the Board’s underlying factual findings for substantial evidence. *Customedia Techs., LLC v. Dish Network Corp.*, 951 F.3d 1359, 1362 (Fed. Cir. 2020).

Section 101 defines patent-eligible subject matter as “any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.” 35 U.S.C. § 101. The Supreme Court has long held that there are implicit exceptions in § 101: “Laws of nature, natural phenomena, and abstract ideas are not patentable.” *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013) (citation omitted). To determine whether a patent claim is directed to patent-ineligible subject matter under § 101, we apply the two-step framework set forth by the Supreme Court in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66 (2012) and *Alice Corporation Pty. Ltd. v. CLS Bank International*, 573 U.S. 208 (2014).

At step one, we determine whether the claim is “directed to” a patent-ineligible concept. *Alice*, 573 U.S. at 217; *accord Mayo*, 566 U.S. at 77. At step two, we “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.” *Alice*, 573 U.S. at 217 (quoting

Mayo, 566 U.S. at 78–79). The Supreme Court has described the step two analysis “as a search for an ‘inventive concept.’” *Id.* at 217 (quoting *Mayo*, 566 U.S. at 72–73).

A.

As an initial matter, we reject Mr. Healy’s contention that the Board committed procedural error in failing to consider certain arguments. In particular, Mr. Healy appears to argue that the Board should have considered arguments he made in an office action response filed in 2022. Appellant’s Br. 3–4 (citing J.A. 437–59 (response dated Jan. 11, 2022)). However, contrary to Mr. Healy’s contention, he forfeited these arguments before the Board by failing to raise them in his appeal brief to the Board. *See, e.g.*, 37 C.F.R. § 41.37(c)(1)(iv).

Mr. Healy also appears to argue that the Board erred in failing to consider the withdrawal of the ’621 application after he paid the issue fee in November 2020. Appellant’s Br. 10; *see also* J.A. 349 (issue fee payment). However, the United States Patent and Trademark Office (“USPTO”) has the authority to withdraw an application from issue because of the “[u]npatentability of one or more claims.” 37 C.F.R. § 1.313(b)(3); *see also BlackLight Power, Inc. v. Rogan*, 295 F.3d 1269, 1273 (Fed. Cir. 2002). In any event, Mr. Healy does not dispute that the ’621 application was withdrawn from issue to address the unpatentability of the pending claims. We thus reject Mr. Healy’s allegations of procedural error.

B.

As to step one, Mr. Healy first challenges the Board’s agreement with the examiner that claim 1² was directed to

² On appeal, Mr. Healy argues that it was “improper” for the Board to treat claim 1 as representative. *See* Appellant’s Br. 2; *see also* Appellant’s Reply Br. 12.

an abstract idea, arguing that the claim does not recite “fundamental economic principles and commercial [or] legal interactions” and “was specifically drafted to avoid such categorization.” Appellant’s Br. 3 (quoting *Decision* at *7). Second, Mr. Healy argues that the Board improperly discounted evidence that claim 1 was directed to technical improvements. Appellant’s Br. 6.

The Board properly considered the patent application in determining that claim 1 was directed to a logical construct for exchange markets, which is a quintessential method of organizing human activity. *See Decision* at *7–8. The specification explains that “process arrangement and the algorithms that support it allow the separation of speculation from trading so that speculator incentives can be inverted to align with producers and consumers.” J.A. 50 ¶ 8. Both the Supreme Court and this court have repeatedly affirmed that analogous systems and methods are patent ineligible. *See Alice*, 573 U.S. at 213, 219 (holding that claims “designed to facilitate the exchange of financial obligations between two parties by using a computer system as a third-party intermediary” were directed to an abstract idea); *Bancorp Servs., L.L.C. v. Sun Life Assur. Co. of Canada (U.S.)*, 687 F.3d 1266, 1280 (Fed. Cir. 2012) (holding that claims covering systems and methods of “managing a stable value protected life

However, because Mr. Healy failed to separately argue the patentability of the remaining claims, *see* J.A. 569–84, the Board was permitted to treat claim 1 as representative. *See, e.g., Berkheimer v. HP Inc.*, 881 F.3d 1360, 1365 (Fed. Cir. 2018) (“Courts may treat a claim as representative in certain situations, such as if the patentee does not present any meaningful argument for the distinctive significance of any claim limitations not found in the representative claim”); *In re Lovin*, 652 F.3d 1349, 1356–57 (Fed. Cir. 2011); *see also* 37 C.F.R. § 41.37(c)(1)(iv).

insurance policy by performing calculations and manipulating the results” were directed to an abstract idea).

Mr. Healy next argues that the Board failed to consider how the claim “explicitly addresses technical improvements” in “[b]andwidth utilization,” “[s]ystem integration at scale,” “[c]omputing time optimization,” “[s]torage efficiency,” and “[h]eat dissipation management.” Appellant’s Br. 6. Mr. Healy, however, does not explain how claim 1 disclosed such improvements. Tellingly, before the Board, he argued that “[t]he integration of a practical application includes reducing market inefficiencies, including price manipulation and hedging, reducing complexity and thereby computing requirements, and the end result of such integration is the very practical application of reducing the need for computing resources.” *Decision* at *8 (quoting J.A. 574). We conclude that any purported improvements from the claimed invention are simply improvements to the abstract idea, not specific improvements to the underlying technology. See, e.g., *Recentive Analytics, Inc. v. Fox Corp.*, 134 F.4th 1205, 1212 (Fed. Cir. 2025); *BSG Tech LLC v. Buyseasons, Inc.*, 899 F.3d 1281, 1288 (Fed. Cir. 2018). Therefore, the Board did not err in its step one analysis.

C.

Mr. Healy urges that the Board’s analysis “for both steps and both prongs of *Alice*” was improper. Appellant’s Br. 13. We disagree.

At step two, the Board considered the additional limitations recited by claim 1, such as an intermediary market server, a telecommunication network, and a clearing house module, and determined that they merely amounted to “generic computer-based elements along with no more than mere instructions to implement the identified abstract idea using the computer-based elements.” *Decision* at *11. We have explained that such elements that are specified “at a high level of generality” and “in functional terms” and that

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“merely invoke[] well-understood, routine, conventional components and activity to apply the abstract idea” cannot supply an inventive concept. *Elec. Comm’n Techs., LLC v. ShoppersChoice.com, LLC*, 958 F.3d 1178, 1183 (Fed. Cir. 2020). Therefore, we hold that the claims do not recite an inventive concept and are patent ineligible under § 101.

III. CONCLUSION

We have considered Mr. Healy’s remaining arguments and find them unpersuasive. Accordingly, we *affirm*.

AFFIRMED

COSTS

No costs.