NOTE:  This disposition is nonprecedential.

# United States Court of Appeals for the Federal Circuit

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**IN RE:  JASON ARTHUR ZIMMERMAN,**
*Appellant*

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2023-1542

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Appeal from the United States Patent and Trademark Office, Patent Trial and Appeal Board in No. 12/503,494.

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Decided:  February 9, 2024

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JASON A. ZIMMERMAN, Toronto, Ontario, Canada, pro se.

MEREDITH HOPE SCHOENFELD, Office of the Solicitor, United States Patent and Trademark Office, Alexandria, VA, for appellee Katherine K. Vidal.  Also represented by KAKOLI CAPRIHAN, AMY J. NELSON, FARHEENA YASMEEN RASHEED.

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Before LOURIE, BRYSON, and STARK, *Circuit Judges*.

PER CURIAM.

Jason Arthur Zimmerman appeals the Patent Trial and Appeal Board's ("Board") decision affirming a patent examiner's rejection of proposed claims 59-80 and 82-132

of U.S. Patent Application No. 12/503,494 (the "'494 application") for being directed to patent-ineligible subject matter under 35 U.S.C. § 101. We affirm.

I

Mr. Zimmerman filed the '494 application, seeking a patent to be entitled "Method and System for Trading Combinations of Financial Instruments" which generally relates to "electronic trading of financial instruments." App'x 49 ¶¶ 1-2. The '494 application refers to "multi-leg orders," which it describes as trades involving "a collection of two or more single leg orders (legs), corresponding to distinct financial instruments, that are meant to be executed simultaneously." *Id.* at 49 ¶ 5. In order to execute multiple legs simultaneously, a system "must monitor bids and offers corresponding to the legs of the order and use the bids and offers to compute potential execution prices for the order." *Id.* at 51 ¶ 13. According to the application, this presents "significant technical challenges" as multi-leg orders "involve simultaneous purchases and sales of significant numbers of options across numerous legs," but "it is difficult to guarantee execution of all legs of the order at the prices that were used to obtain the potential execution price." *Id.* The '494 application purports to solve this problem via a computerized method applying a "combinatorial matching algorithm" that mathematically matches each eligible leg of a multi-leg order with a corresponding buy or sell order. *Id.* at 52 ¶ 19; *see also id.* 65 ¶¶ 97-100.

Independent claim 59, which the Board treated as representative, recites:

A computer-implemented method improving trading combinations of financial instruments, said method comprising implementing the following steps in an electronic trading environment where each financial instrument in a set of two or more financial instruments selected to be made available for trading is traded in quantities that are integer

multiples of a respective positive number and trades of said each financial instrument are based on a respective price per unit order quantity, said steps comprising:

receiving, during a first selected time period, combination orders to trade financial instruments;

storing each eligible received combination order, wherein a received combination order is an eligible order if it satisfies at least one selected condition, wherein said at least one selected condition includes the necessary condition that the respective financial instrument specified by each leg of an eligible order is in said set; and

processing, using a computer, eligible orders or expanded eligible orders with a combinatorial matching algorithm (CMA), wherein said processing begins at a selected time, wherein said CMA outputs a matched subcollection of the processed orders; wherein if said CMA is not constrained by limit prices then each order x in said subcollection is executed in said environment at its respective total expanded execution price (TEEP(x)); wherein if said CMA is constrained by limit prices then said method further comprises obtaining said respective price per unit for said each financial instrument and ensuring TEEP(L) is less than or equal to TELP(L), where L consists of the limit orders in said subcollection and TELP is "total expanded limit price", and wherein each order x in said subcollection is executed in said environment at a respective modified total expanded execution price (MTEEP(x)).

App'x 17.

Without directly challenging the representativeness of claim 59, Mr. Zimmerman would have us instead treat

claim 103 as representative.[1] Claim 103, also independent, recites the method steps of claim 59 performed on "[a] system comprising one or more computers connected to a network" and adds one more step: "obtain[ing], via said network and during a selected time period, combination orders to trade financial instruments." App'x 24-25.

The examiner rejected all proposed claims as being directed to patent-ineligible subject matter. Applying the two-step *Alice* framework, the examiner concluded that the claims were directed to the abstract idea of "improving trading combinations of financial instruments," which is among the category of "certain methods of organizing human activity – fundamental economic principles or practices." App'x 721. On appeal, the Board substantially agreed with the examiner's findings and affirmed the rejection.

Mr. Zimmerman timely appealed to this court, arguing that at least some of the rejected claims recite patent-eligible subject matter under 35 U.S.C. § 101. Mr. Zimmerman also argues that the examiner failed to establish a prima facie rejection and the Board erred in affirming the rejection. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(4)(A).

II

The patent eligibility inquiry of 35 U.S.C. § 101 is "a question of law, which we review de novo." *In re Rudy*, 956 F.3d 1379, 1383 (Fed. Cir. 2020). Our § 101 analysis is governed by the two-step *Alice/Mayo* framework. *See Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208, 216-24 (2014); *Mayo Collaborative Servs. v. Prometheus Labs, Inc.*, 566 U.S. 66, 77-80 (2012). At step one, we consider "whether the claims at issue are directed to one of [the]

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[1] Our decision would be the same regardless of whether we focused on claim 59 or 103.

patent-ineligible concepts," such as an abstract idea. *Alice*, 573 U.S. at 217. If we determine the claims are directed to an ineligible concept, we must proceed to step two, in which "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." *Id.* (internal quotation marks omitted).

## III

## A

We agree with the Board and the examiner that all proposed claims that are the subject of this appeal[2] are directed to an abstract idea: matching combinations of financial instruments through steps of receiving data, storing data, processing data, and executing trades. We have repeatedly found claims directed to similar concepts, and containing similar steps, to be abstract. *See, e.g.*, *Trading Techs. Int'l, Inc. v. IBG LLC*, 921 F.3d 1084, 1092 (Fed. Cir. 2019) ("[P]lacing an order based on displayed market information is a fundamental economic practice."); *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353-54 (Fed. Cir. 2016) (stating that steps of collecting information and using mathematical algorithms to analyze it are abstract processes); *In re TLI Commc'ns LLC Pat. Litig.*, 823 F.3d 607, 613 (Fed. Cir. 2016) (finding "classifying and storing digital

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[2]    Although Mr. Zimmerman limits his eligibility arguments to only some of the claims rejected by the examiner (and subsequently affirmed by the Board), we find it unnecessary to determine whether he concedes that all other claims are ineligible. As our eligibility analysis would be the same whether or not we consider the unargued claims, we choose to address the eligibility of all rejected claims.

images in an organized manner" is abstract).  We agree with the Board that, consistent with our precedent, the claims before us are directed to "an abstract idea for which computers are invoked merely as a tool." *TecSec, Inc. v. Adobe Inc.*, 978 F.3d 1278, 1293 (Fed. Cir. 2020); *see also* App'x 8 (finding that Mr. Zimmerman's claims "merely use[] the claimed computer elements as a tool to perform the abstract idea").

Mr. Zimmerman contends that his claims may improve computer functionality and provide a "technical" solution by precluding the risk of nonoptimal trades resulting from delays in real-time order matching.  Appellant Br. at 4, 9.  Such a feature does not amount to a technological improvement of the type we have required for a computer software claim to avoid being directed to an abstract idea at step one.  *See, e.g.*, *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1339 (Fed. Cir. 2016) (claims directed to self-referential data table "designed to improve the way a computer stores and retrieves data in memory"); *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314 (Fed. Cir. 2016) (claims directed to "specific asserted improvement in computer animation").  While Mr. Zimmerman repeatedly calls his patent a "technological" improvement, the purported improvement he describes deals only with the efficiency of the trade's matching process, which "makes the *trader* faster and more efficient, not the computer." *Trading Techs.*, 921 F.3d at 1090; *see also SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1170 (Fed. Cir. 2018) ("[P]atent law does not protect [advances in the realm of abstract ideas] no matter how groundbreaking the advance.").  Therefore, we conclude that the claims are directed to an abstract idea.

B

Turning to step two, we again agree with the Board.  The claims fail to recite an inventive concept sufficient to render the claims patent eligible.

Claim 103, the claim Mr. Zimmerman asks us to focus on, includes the limitations of "[a] system comprising one or more computers connected to a network, said one or more computers programmed and configured to" perform the steps we have concluded are abstract, as well as the step of "obtain[ing] [orders] via said network." App'x 24-25. We agree with the Board's conclusion that the claimed "computer components are all used in a manner that is well-understood, routine, and conventional in the field," App'x 9, which is supported by the specification's description of conventional computer components. *See id.* at 67 ¶ 104. Mr. Zimmerman points us to no record basis to conclude otherwise. Therefore, the claims are patent ineligible under 35 U.S.C. § 101.

## IV

Mr. Zimmerman also challenges the sufficiency of the Board's and examiner's eligibility analyses. His contentions lack merit.

The Administrative Procedure Act ("APA") requires us to "hold unlawful and set aside agency action, findings, and conclusions found to be . . . arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A). Compliance with the APA requires the Board to "provid[e] an administrative record showing the evidence on which the findings are based, accompanied by the agency's reasoning in reaching its conclusions," in such a manner that the Board's "path may reasonably be discerned." *Alacritech, Inc. v. Intel Corp.*, 966 F.3d 1367, 1370 (Fed. Cir. 2020) (internal quotation marks omitted). Here, the Board met its APA obligations. It applied the proper legal standard – the two-step *Alice* framework – and made clear it was relying on intrinsic evidence (the application's specification) to find that the claims recite only well-understood, routine, and conventional activities previously known in the art.

With regard to the examiner, Mr. Zimmerman contends that she failed to provide an explanation satisfying the standards of 35 U.S.C. § 132, which requires the PTO to "notify the applicant" of a rejection by "stating 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 his application." "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." *Chester v. Miller*, 906 F.2d 1574, 1578 (Fed. Cir. 1990); *see also In re Jung*, 637 F.3d 1356, 1362 (Fed. Cir. 2011) (describing examiner's obligation to "explain[] the shortcomings it perceives so that the applicant is properly notified and able to respond") (internal quotation marks and brackets omitted). The office action about which Mr. Zimmerman complains, and on which his appeal to the Board and us are based, met this statutory requirement by informing him his claims were ineligible under § 101 because they were directed to an abstract idea – "improving trading combinations of financial instruments" – and failed to cite anything significantly more. App'x 719-35.

V

We have considered Mr. Zimmerman's remaining arguments and find them unpersuasive. For the forgoing reasons, we affirm the Board's decision.

**AFFIRMED**

COSTS

No costs.