

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

**TRADING TECHNOLOGIES INTERNATIONAL,
INC.,**
Appellant

v.

IBG LLC, INTERACTIVE BROKERS LLC,
Appellees

UNITED STATES,
Intervenor

2017-2323

Appeal from the United States Patent and Trademark Office, Patent Trial and Appeal Board in Nos. CBM2015-00172, CBM2016-00040.

Decided: April 30, 2019

JENNIFER KURCZ, Baker & Hostetler LLP, Chicago, IL, argued for appellant. Also represented by LEIF R. SIGMOND, JR., MICHAEL DAVID GANNON; ALAINA J. LAKAWICZ, Philadelphia, PA; COLE BRADLEY RICHTER, McDonnell, Boehnen, Hulbert & Berghoff, LLP, Chicago, IL; STEVEN BORSAND, JAY QUENTIN KNOBLOCH, Trading Technologies International, Inc., Chicago, IL.

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Before MOORE, CLEVINGER, and WALLACH, *Circuit Judges*.
MOORE, *Circuit Judge*.

Trading Technologies International, Inc., (“TT”) appeals a decision of the Patent Trial and Appeal Board holding claims 1–22 of U.S. Patent No. 7,783,556 ineligible under 35 U.S.C. § 101. Because we agree that the patent is a covered business method patent and the claims are ineligible, we affirm.

BACKGROUND

TT is the owner of the ’556 patent, which “relates to displaying market information on a screen.” ’556 patent at 1:7–9. The specification states that the invention works “particularly well” with the trading screen shown in Figure 2. *Id.* at 3:8–11. Figure 2 is a prior art trading screen disclosed in U.S. Patent No. 6,772,132, which displays bids and offers in association with price values along an axis. *Id.* at 2:9–14, 3:12–16, Fig. 2. According to the specification, “traders are often interested in analyzing other pieces of highly relevant information that are not normally provided in an electronic exchange’s data feed nor displayed by a trading screen.” *Id.* at 2:18–22. Traders may “make quick mental calculations, use charting software, or look to

other sources to provide additional insight beyond what is normally provided.” *Id.* at 2:22–25.

The specification discloses “generating values that are derivatives of price and then displaying these values along an axis on a screen.” *Id.* at 3:22–25. The claims focus on a particular price derivative, profit and loss (“P&L”). The specification acknowledges that “there are numerous ways to calculate P&L and one of ordinary skill in the art would recognize the many different possibilities.” *Id.* at 13:61–63. Claim 1 recites:

1. A method for displaying market information on a graphical user interface, the method comprising:

receiving by a computing device a current highest bid price and a current lowest ask price for a tradeable object from an electronic exchange;

identifying by the computing device a long or short position taken by a user with respect to the tradeable object, wherein the long position is associated with a quantity of the tradeable object that has been bought by the user at a price, and wherein the short position is associated with a quantity of the tradeable object that has been sold by the user at a price;

computing by the computing device a plurality of values based on the long or short position, wherein each of the plurality of values represents a profit or loss if the long or short position is closed at a price level among a range of price levels for the tradeable object;

displaying via the computing device the plurality of values along a value axis;

displaying via the computing device a first indicator at a first location corresponding to a first value along the value axis, wherein the first indicator represents a particular price based on any of the following prices: current best bid, current best ask, and a last traded price, and wherein the first value represents a profit or loss incurred by the user if the long or short position is closed at the particular price; and

moving the first indicator relative to the value axis to a second location corresponding to a second value along the value axis responsive to receipt of an update to the particular price, wherein the second value represents a profit or loss incurred by the user if the position is closed at the update to the particular price.

IBG LLC and Interactive Brokers LLC (collectively, “Petitioners”) petitioned for review of claims 1–22 of the ’556 patent pursuant to the Transitional Program for Covered Business Method Patents (“CBM review”). Leahy-Smith Am. Invents Act, Pub. L. No. 112-29, § 18(a), 125 Stat. 284, 329–31 (2011) (“AIA”). The Board instituted CBM review and issued a final written decision holding that the patent meets the criteria to be eligible for CBM review and the claims are ineligible under 35 U.S.C. § 101. It additionally held that claims 12–22 cover transitory signals and are therefore not directed to statutory subject matter under § 101.

TT appeals from the Board’s decision. We have jurisdiction under 28 U.S.C. § 1295(a)(4)(A).

DISCUSSION

I. CBM Eligibility

Pursuant to § 18(a)(1)(E) of the AIA, the Board may only institute CBM review for a patent that is a CBM patent. A CBM patent is “a patent that claims a method or corresponding apparatus for performing data processing or other operations used in the practice, administration, or management of a financial product or service, *except that the term does not include patents for technological inventions.*” *Id.* § 18(d)(1) (emphasis added). Pursuant to its authority under § 18(d)(2), the Patent and Trademark Office promulgated 37 C.F.R. § 42.301(b), which requires the Board to consider the following on a case-by-case basis in determining whether a patent is for a technological invention: “whether the claimed subject matter as a whole recites a technological feature that is novel and unobvious over the prior art” and whether it “solves a technical problem using a technical solution.” We review the Board’s reasoning “under the arbitrary and capricious standard and its factual determinations under the substantial evidence standard.” *SightSound Techs., LLC v. Apple Inc.*, 809 F.3d 1307, 1315 (Fed. Cir. 2015). The only issue of CBM eligibility that TT contests is whether its patents are for technological inventions.

The Board relied on claim 1 to determine that the ’556 patent is directed to a covered business method patent. It determined that claim 1 does not recite a technological feature that is novel and unobvious over the prior art because the patent indicates that the claimed technological features are known technologies. It determined that claim 1 does not recite a technical solution to a technical problem because the problem disclosed in the patent is that traders need additional information on a trading screen to effectively analyze the market, which is business problem, not a technical one.

TT argues the Board erred in applying the first consideration of § 42.301(b) based on our decision in *Versata Development Group Inc. v. SAP America, Inc.*, 793 F.3d 1306 (Fed. Cir. 2015). According to TT, *Versata* set aside the novelty and nonobviousness language of the regulation, leaving the definition of a technological invention as one having a technological feature that solves a technical problem using a technical solution. Appellant Br. 28–29 (citing 793 F.3d at 1326). We need not decide this issue because we agree with the Board that the claims do not solve a technical problem using a technical solution. See *Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1240 (Fed. Cir. 2016) (“We need not address this argument regarding whether the first prong of 37 C.F.R. § 42.301(b) was met, as we affirm the Board’s determination on the second prong of the regulation . . .”).

The problem that the patent seeks to solve is providing “highly relevant information” that is “not normally provided in an electronic exchange’s data feed nor displayed by a trading screen” to a trader. ’556 patent at 2:18–37. The specification does not identify any technical problems associated with obtaining or displaying this information. Rather, it states that traders “might make quick mental calculations, use charting software, or look to other sources to provide additional insight beyond what is normally provided.” *Id.* at 2:22–25. The use of multiple sources of information made it difficult for traders to quickly process information to make informed trades. *Id.* at 2:26–30.

The “highly relevant information” in the context of the claims is the P&L associated with making a trade at a specific price. The specification acknowledges that a skilled artisan would recognize the numerous ways to calculate this information. *Id.* at 13:60–63. Claim 1 essentially takes the prior art trading screen of Figure 2, calculates P&L for “a range of price levels,” and displays the P&L values along an axis. Compare *id.* at Fig. 2 with *id.* at Fig. 9. TT argues this improves the usability, visualization, and

efficiency of prior art trading screens. But merely providing a trader with new or different information in an existing trading screen is not a technical solution to a technical problem. Instead, it focuses on improving the trader, not the functioning of the computer. We conclude the Board's reasoning that the '556 patent is a CBM patent was not arbitrary and capricious.

II. PATENT ELIGIBILITY

We review the Board's legal conclusions de novo and its factual findings for substantial evidence. *Ameranth*, 842 F.3d at 1236. "Eligibility under 35 U.S.C. § 101 is a question of law, based on underlying facts." *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1163 (Fed. Cir. 2018).

"Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof," may obtain a patent. 35 U.S.C. § 101. As a judicially created exception to this provision, "[l]aws of nature, natural phenomena, and abstract ideas are not patent eligible." *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014) (quoting *Assoc. for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013)). All inventions at some level "embody, use, reflect, rest upon, or apply" these concepts, but if an invention applies these concepts to a new and useful end, it is patent eligible. *Id.* at 217. The Supreme Court has established a two-step framework for "distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts." *Id.* "First, we determine whether the claims at issue are directed to" a patent-ineligible concept. *Id.* If so, "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.* (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 78–79 (2012)).

A

At *Alice* step one, we must “determine whether the claims at issue are directed to a patent-ineligible concept.” *Alice*, 573 U.S. at 218. Under this inquiry, we evaluate “the focus of the claimed advance over the prior art” to determine if the character of the claim as a whole, considered in light of the specification, is directed to excluded subject matter. *Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1338 (Fed. Cir. 2017) (quoting *Affinity Labs of Tex., LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1257 (Fed. Cir. 2016)); *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016).

The claims considered in light of the specification make clear that “the focus of the claimed advance over the prior art” is providing a trader with additional financial information to facilitate market trades, an abstract idea. *Intellectual Ventures*, 850 F.3d at 1338 (internal quotation marks omitted). The specification states that the invention may be used “in any electronic trading screen” and identifies the prior art trading screen of Figure 2 as one in which the invention would “work particularly well.” ’556 patent at 3:8–12. The only difference between the trading screen of Figure 2 and the one claimed is that the axis in Figure 2 displays price values, and the claimed axis displays P&L values. This includes the additional limitations of dependent claims 2 and 3, which are the only dependent claims that TT mentions on appeal. See ’132 patent at 10:4–17. Information, whether displayed in the form of price values or P&L values, is abstract. *SAP*, 898 F.3d at 1167. Likewise, the claimed steps for calculating the P&L values—“identifying a long or short position taken by a user” and “computing by the computing device a plurality of values” representing “a profit or loss if the long or short position is closed at a price level”—is nothing more than “mere automation of manual processes using generic computers,” which “does not constitute a patentable improvement in

computer technology.” *Credit Acceptance Corp. v. Westlake Servs.*, 859 F.3d 1044, 1055 (Fed. Cir. 2017).

TT asserts that the claims are not directed to an abstract idea because they provide a particular graphical user interface that improves usability, visualization, and efficiency. It argues the claims combine a value axis with values associated with price levels, each value representing P&L if the position is closed at a particular price; a first indicator representing a particular price; and functionality to move the indicator relative to the value axis in response to an updated price. It argues prior art trading screens lacked a value axis that showed P&L for a trade. Relying on *Electric Power Group LLC v. Alstom S.A.*, 830 F.3d 1350, 1354 (Fed. Cir. 2016), it argues we have suggested that “identifying a particular tool for presentation” was enough to confer eligibility. TT’s contentions are unavailing.

The claims are focused on providing information to traders in a way that helps them process information more quickly, ’556 patent at 2:26–39, not on improving computers or technology. The claims require displaying P&L values along an axis, displaying an indicator representing market information at a location on the axis, and moving the indicator to a second location. The “tool for presentation” here, *Electric Power*, 830 F.3d at 1354, is simply a generic computer. ’556 patent at 14:66–15:2 (“Various types of general purpose or specialized computer apparatus or computing device may be used with or perform operations in accordance with the teachings described herein.”). While the fact that an invention is run on a generic computer does not, by itself, “doom the claims,” *Core Wireless Licensing S.A.R.L. v. LG Elecs., Inc.*, 880 F.3d 1356, 1362 (Fed. Cir. 2018), the claims here fail because arranging information along an axis does not improve the functioning of the computer, make it operate more efficiently, or solve any technological problem. Like *Electric Power*, the purported advance “is a process of gathering and analyzing information of a specified content, then displaying the

results, and not any particular assertedly inventive technology for performing those functions.” 830 F.3d at 1354. We thus conclude that the claims are directed to an abstract idea.

B

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 218 (quoting *Mayo*, 566 U.S. at 78–79). Step two “looks more precisely at what the claim elements add” to determine if “they identify an inventive concept in the application of the ineligible matter to which . . . the claim is directed.” *SAP*, 898 F.3d at 1167 (internal quotation marks omitted). The abstract idea itself cannot supply the inventive concept, “no matter how groundbreaking the advance.” *Id.* at 1171.

The elements of the claims, considered individually and as an ordered combination, fail to recite an inventive concept. The claimed trading screen simply takes the prior art trading screen of Figure 2 and adds P&L values along the axis. ’556 patent at 3:8–12, 8:50–54. The specification acknowledges that “there are numerous ways to calculate P&L and one of ordinary skill in the art would recognize the many different possibilities.” *Id.* at 13:61–63. Even if no trading screen had previously displayed P&L values, “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). We see nothing in the combination of these elements that supply an inventive concept. We conclude that claims 1–22 are ineligible under § 101.

III. Constitutionality of CBM Review

TT argues the Board’s decision should be vacated because CBM review is unconstitutional. In a total of four sentences in its opening brief, TT raises challenges based on a right to a jury under the Seventh Amendment, separation of powers under Article III, the Due Process Clause, and the Taking Clause. Such a conclusory assertion with no analysis is insufficient to preserve the issue for appeal. *See United States v. Great Am. Ins. Co. of N.Y.*, 738 F.3d 1320, 1328 (Fed. Cir. 2013) (“It is well established that arguments that are not appropriately developed in a party’s briefing may be deemed waived.”); *SmithKline Beecham Corp. v. Apotex Corp.*, 439 F.3d 1312, 1320 (Fed. Cir. 2006) (holding that “mere statements of disagreement . . . do not amount to a developed argument” sufficient to preserve the issue). We decline to address TT’s constitutional challenges.

CONCLUSION

We have considered TT’s other arguments and find them unpersuasive. For the foregoing reasons, we conclude that the ’556 patent is CBM eligible and that claims 1–22 are ineligible. In light of this conclusion, we need not address Petitioners’ separate ground that claims 12–22 are directed to non-statutory subject matter.

AFFIRMED