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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte DAVID W. JABERG, ANTON KRYUKOV,
JASON R. NAZAROF and
DAREK POCZOBUT-POTCHEBOUT

Appeal 2020-004135
Application 14/555,376
Technology Center 3600

Before CARL W. WHITEHEAD JR., JEFFREY S. SMITH and
ADAM J. PYONIN, *Administrative Patent Judges*.

WHITEHEAD JR., *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE¹

Appellant² is appealing the final rejection of claims 1–5, 15–19 and 21 under 35 U.S.C. § 134(a). *See* Appeal Brief 7. Claims 6–14 and 20 are

¹ Rather than reiterate Appellant’s arguments and the Examiner’s determinations, we refer to the Appeal Brief (filed February 11, 2020), the Reply Brief (filed May 13, 2020), the Final Action (mailed September 12, 2019) and the Answer (mailed March 18, 2020), for the respective details.

² We use the word Appellant to refer to “applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies GX2 Systems, LLC, as the real party in interest. Appeal Brief 2.

cancelled. Claims 1, 15 and 21 are independent. We have jurisdiction under 35 U.S.C. § 6(b). We AFFIRM.

Introduction

According to Appellant, the claimed subject matter “creates an execution risk transfer (‘ERT’) by transferring the risk of fulfilling a spread trade from a user or trader to another entity such as a trading firm or another user account.” Abstract.

Representative Claim³

Claim 1 is reproduced below for reference (bracketed step lettering added):

1. A computer-implemented method for guaranteeing a trader a fill of a spread order at a fulfillment value and a fulfillment quantity, and for executing an electronic trade associated with the spread order on one or more live electronic markets, the method comprising:

[a] receiving, at a trading system running on one or more servers, a spread order,

[a1] wherein the spread order includes a target value and a desired quantity for purchasing the spread order,

[a2] wherein the target value for the spread order represents a

³ Appellant argues, claims 1–5, 15–19 and 21 together. *See* Appeal Brief 8–24. We select independent claim 1 as the representative claim focusing on subject matter common to independent claims 1, 15 and 21. *See* 37 C.F.R. § 41.37(c)(1)(iv); *see also* Final Action 2.

price based on a mathematical relationship between an ask price and a bid price for two or more market instruments on an electronic market;

[b] converting a market representative of each of the two or more market instruments into a corresponding decimalized market representative,

[b1] wherein each of the two or more market instruments is associated with a decimalized bid price and a decimalized ask price and a corresponding bid quantity and an ask quantity;

[c] determining, using one or more processors of the trading system, a decimalized fulfillment value and a fulfillment quantity at which the trading system will guarantee a fill of the spread order, based on the target value, the decimalized bid price, and the decimalized ask price,

[c1] wherein the decimalized bid price and the decimalized ask price are real numbers;

[d] transmitting, via a network to a trading client, the decimalized fulfillment value and the fulfillment quantity at which the trading system will guarantee a fill of the spread order;

[e] receiving, from the trading client, an indication of acceptance to fill the spread order at the decimalized fulfillment value;

[f] filling, in response to receiving the indication of acceptance from the trading client, the spread order at the decimalized fulfillment value,

[f1] wherein each of the two or more market instruments of the

spread order are fulfilled simultaneously at the decimalized fulfillment value;

[g] in response to filling the spread order:

[g1] issuing, at the trading system, a change in stored inventory prior to an electronic trade of the spread order occurring, [g2] automatically generating an indication that the spread order has been filled, and

transmitting, to the trading client, the indication that the spread order has

been filled;

[h] netting opposing filled orders from other users that have not been executed; and

[i] after transmitting the indication to the trading client, automatically causing at least

[i1] a portion of the spread order to be executed on one or more live electronic markets,

[i2] wherein the portion of the spread order to be executed is based on the netted opposing orders, and

[i3] wherein causing at least the portion of the spread order to be executed includes determining a best possible price at which to execute at least the portion of the spread order based on a price and a liquidity of at least one of the two or more market instruments.

Rejection on Appeal

Claims 1–5, 15–19 and 21 stand rejected under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter. Final Action 2–5.

PRINCIPLES OF LAW

A. Section 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. However, the U.S. Supreme Court has long interpreted 35 U.S.C. § 101 to include implicit exceptions: “[l]aws of nature, natural phenomena, and abstract ideas” are not patentable. *E.g.*, *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014).

In determining whether a claim falls within an excluded category, we are guided by the Court’s two-part framework, described in *Mayo* and *Alice*. *Alice* at 217–18 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 75–77 (2012)). In accordance with that framework, we first determine what concept the claim is “directed to.” *See Alice*, 573 U.S. at 219 (“On their face, the claims before us are drawn to the concept of intermediated settlement, *i.e.*, the use of a third party to mitigate settlement risk.”); *see also Bilski v. Kappos*, 561 U.S. 593, 611 (2010) (“Claims 1 and 4 in petitioners’ application explain the basic concept of hedging, or protecting against risk.”).

Concepts determined to be abstract ideas, and thus patent ineligible, include certain methods of organizing human activity, such as fundamental economic practices (*Alice*, 573 U.S. at 219–20; *Bilski*, 561 U.S. at 611); mathematical formulas (*Parker v. Flook*, 437 U.S. 584, 594–95 (1978)); and mental processes (*Gottschalk v. Benson*, 409 U.S. 63, 67 (1972)). Concepts

determined to be patent eligible include physical and chemical processes, such as “molding rubber products” (*Diamond v. Diehr*, 450 U.S. 175, 191 (1981)); “tanning, dyeing, making waterproof cloth, vulcanizing India rubber, smelting ores” (*id.* at 182 n.7 (quoting *Corning v. Burden*, 56 U.S. 252, 267–68 (1853))); and manufacturing flour (*Benson*, 409 U.S. at 69 (citing *Cochrane v. Deener*, 94 U.S. 780, 785 (1876))).

In *Diehr*, the claim at issue recited a mathematical formula, but the Court held that “a claim drawn to subject matter otherwise statutory does not become nonstatutory simply because it uses a mathematical formula.” *Diehr*, 450 U.S. at 187; *see also id.* at 191 (“We view respondents’ claims as nothing more than a process for molding rubber products and not as an attempt to patent a mathematical formula.”).

Having said that, the Court also indicated that a claim “seeking patent protection for that formula in the abstract . . . is not accorded the protection of our patent laws, and this principle cannot be circumvented by attempting to limit the use of the formula to a particular technological environment.” *Id.* (citation omitted) (citing *Benson* and *Flook*); *see, e.g., id.* at 187 (“It is now commonplace that an *application* of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection.”).

If the claim is “directed to” an abstract idea, we turn to the second part of the *Alice* and *Mayo* framework, where “we must examine the elements of the claim to determine whether it contains an ‘inventive concept’ sufficient to ‘transform’ the claimed abstract idea into a patent-eligible application.” *Alice*, 573 U.S. at 221 (citation omitted). “A claim that recites an abstract idea must include ‘additional features’ to ensure ‘that the [claim] is more

than a drafting effort designed to monopolize the [abstract idea].” *Id.* (alterations in original) (quoting *Mayo*, 566 U.S. at 77). “[M]erely requir[ing] generic computer implementation[] fail[s] to transform that abstract idea into a patent-eligible invention.” *Id.*

B. USPTO Section 101 Guidance

In January 2019, the U.S. Patent and Trademark Office (USPTO) published revised guidance on the application of § 101. 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (January 7, 2019) (“2019 Revised Guidance”).⁴ “All USPTO personnel are, as a matter of internal agency management, expected to follow the guidance.” 2019 Revised Guidance at 51; *see also* October 2019 Update at 1.

Under the 2019 Revised Guidance and the October 2019 Update, we first look to whether the claim recites:

(1) any judicial exceptions, including certain groupings of abstract ideas (i.e., mathematical concepts, certain methods of organizing human activity such as a fundamental economic practice, or mental processes) (“Step 2A, Prong One”); and

⁴ In response to received public comments, the Office issued further guidance on October 17, 2019, clarifying the 2019 Revised Guidance. USPTO, *October 2019 Update: Subject Matter Eligibility* (the “October 2019 Update”) (available at https://www.uspto.gov/sites/default/files/documents/peg_oct_2019_update.pdf).

(2) additional elements that integrate the judicial exception into a practical application (*see* MPEP § 2106.05(a)–(c), (e)–(h) (9th ed. Rev. 08.2017, Jan. 2018)) (“Step 2A, Prong Two”).⁵

2019 Revised Guidance at 52–55.

Only if a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, do we then look, under Step 2B, to whether the claim:

(3) adds a specific limitation beyond the judicial exception that is not “well-understood, routine, conventional” in the field (*see* MPEP § 2106.05(d)); or

(4) simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.

2019 Revised Guidance at 52–56.

ANALYSIS

The Examiner determines claims 1–5, 15–19 and 21 are patent ineligible under 35 U.S.C. § 101. *See* Final Action 2–5; *Alice*, 573 U.S. at 217 (describing the 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”).

Step 2A—Prongs 1 and 2 identified in the 2019 Revised Guidance

Prong One

The Examiner determines, the claim “limitations describe the abstract idea of allowing a user to purchase or sell assets or commodities available in

⁵ This evaluation is performed by (a) identifying whether there are any additional elements recited in the claim beyond the judicial exception, and (b) evaluating those additional elements individually and in combination to determine whether the claim as a whole integrates the exception into a practical application. *See* 2019 Revised Guidance at 54–55.

the market which may correspond to a Certain Methods of Organizing Human Activity (fundamental economic principles or practices and commercial or legal interactions).” Final Action 3.

The Specification discloses in the Background:

In trading, a spread trade is the purchase or sale of at least one instrument (e.g., a soybean oil future contract) and the purchase or sale of at least one different instrument (e.g., a soybean future contract) as a strategy. Spreads may have two legs like the soybean oil future contract purchase and the soybean future contract sale, or have more than two legs (e.g., one purchase leg and three sale legs).

Specification ¶ 2.

[S]ome spreads are not offered as a unit or can only be traded using individual legs because the legs are resident on different exchanges or markets. A trader who trades spreads executes each leg of the spread manually (e.g., entering each leg order sequentially when market conditions meet a pricing criteria), by an automated execution platform, or by an algorithm-driven execution platform that attempts to execute all of the legs as efficiently and accurately as possible once the target pricing conditions are met.

Specification ¶ 3.

The Specification discloses:

The described technology “guarantees” a trader’s spread in the sense that it provides a specific, guaranteed price, guaranteed price range, or likely executed price to the user while providing a holistic transfer of risk to the system, but separate legs of the spread are not executed until the system determines a selected or “best” time to fulfill each of the spread’s legs. The trader’s execution risk may, therefore, be partially or fully placed on the described technology and not on the trader. The described system provides functionality such as this and as described below in an

automated system, functionality which could not be performed (or preformed in any commercially valuable way) manually.

Specification ¶ 15.

Claim 1 recites a method for “guaranteeing a trader a fill of a spread order at a fulfillment value and a fulfillment quantity, and for executing an electronic trade associated with the spread order on one or more live electronic markets.” Claim 1 further recites receiving a spread order with a target value whereas the target value is based upon a mathematical relationship between an ask and bid price for multiple market instruments in limitations [a]–[a2]. Claim 1 also recites decimalizing the market instruments wherein each market instrument is associated with a decimalized bid and ask price and corresponding bid and ask quantity in limitations [b], [b1]. Claim 1 recites determining a decimalized fulfillment value and quantity that will guarantee the fill of the spread order based upon the target value and the decimalized real numbers of the bid and ask price in limitations [c], [c1]. Claim 1 further recites transmitting decimalized fulfillment value and quantity that will guarantee the fill of the spread order, receiving an indication of acceptance from the trading client and filling the spread order at the decimalized fulfillment value wherein the multiple market instruments are fulfilled simultaneously at the decimalized fulfillment value in limitations [d]–[f1]. Claim 1 recites issuing a change in inventory prior to the trade of the spread order, generating and transmitting that the spread order was filled in limitations [g]–[g2]. Claim 1 recites netting opposing orders that have not been executed by others in limitation [h]. Claim 1 further recites executing a portion of the spread order based upon the netted opposing orders wherein the portion of the spread order is executed at a best

possible price based on the price and a liquidity of market instruments in limitations [i]–[i3].

These steps comprise fundamental economic principles or practices (including hedging, insurance, mitigating risk), as well as, mathematical relationships, mathematical formulas or equations, mathematical calculations and thus, the claim recites the judicial exceptions of “[c]ertain methods of organizing human activity” and “[m]athematical concepts.” 2019 Revised Guidance, Section I (Groupings of Abstract Ideas).

Further, our reviewing court has found claims to recite judicial exceptions when they recited similar subject matter. *See Alice*, 573 U.S. at 219–20 (concluding that use of a third party to mediate settlement risk is a “fundamental economic practice” and thus an abstract idea); *id.* at 220 (describing the concept of risk hedging identified as an abstract idea in *Bilski* as “a method of organizing human activity”); *Inventor Holdings, LLC v. Bed Bath & Beyond, Inc.*, 876 F.3d 1372, 1378–79 (Fed. Cir. 2017) (holding that concept of “local processing of payments for remotely purchased goods” is a “fundamental economic practice, which *Alice* made clear is, without more, outside the patent system.”); *OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362–63 (Fed. Cir. 2015) (concluding that claimed concept of “offer-based price optimization” is an abstract idea “similar to other ‘fundamental economic concepts’ found to be abstract ideas by the Supreme Court and this court” (citations omitted)); *buySAFE, Inc. v. Google, Inc.*, 765 F.3d. 1350, 1355 (Fed. Cir. 2014) (holding that concept of “creating a contractual relationship—a ‘transaction performance guaranty’” is an abstract idea).

Furthermore, our reviewing court has found claims to recite judicial exceptions when they recited similar subject matter in regard to mathematical concepts. *See Bilski v. Kappos*, 561 U.S. 593, 611 (2010) (“The concept of hedging . . . reduced to a mathematical formula . . . is an unpatentable abstract idea[.]”); *Diamond v. Diehr*, 450 U.S. 175, 191 (1981) (“A mathematical formula as such is not accorded the protection of our patent laws”) (citing *Benson*, 409 U.S. 63); *Parker v. Flook*, 437 U.S. 584, 594 (1978) (“[T]he discovery of [a mathematical formula] cannot support a patent unless there is some other inventive concept in its application.”); *Benson*, 409 U.S. at 71–72 (concluding that permitting a patent on the claimed invention “would wholly pre-empt the mathematical formula and in practical effect would be a patent on the algorithm itself”); *Mackay Radio & Telegraph Co. v. Radio Corp. of Am.*, 306 U.S. 86, 94 (1939) (“[A] scientific truth, or the mathematical expression of it, is not patentable invention[.]”); *SAP America, Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1163 (Fed. Cir. 2018) (holding that claims to a “series of mathematical calculations based on selected information” are directed to abstract ideas); *Digitech Image Techs., LLC v. Elecs. for Imaging, Inc.*, 758 F.3d 1344, 1350 (Fed. Cir. 2014) (holding that claims to “a process of organizing information through mathematical correlations” are directed to an abstract idea); *Bancorp Servs., LLC v. Sun Life Assurance Co. of Can. (U.S.)*, 687 F.3d 1266, 1280 (Fed. Cir. 2012) (identifying the concept of “managing a stable value protected life insurance policy by performing calculations and manipulating the results” as an abstract idea). Therefore, we conclude the claims recite judicial exceptions pursuant to Step 2A, Prong One, of the 2019 Revised Guidance.

Prong Two

Under Prong Two of the 2019 Revised Guidance, we must determine “whether the claim as a whole integrates the recited judicial exception into a practical application of the exception.” 2019 Revised Guidance, Section III(A)(2). We note that a “claim that integrates a judicial exception into a practical application will apply, rely on, or use 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.” 2019 Revised Guidance, Section III(A)(2).

Appellant contends:

[E]ven if Appellant’s claims include a judicial exception, the claims integrate the judicial exception into a practical application and thus recite patent-eligible subject matter. Thus, if one were to assume that Appellant's claims recite the judicial exception of a method of organizing human activity, much like claim 1 of Example 42^[6], Appellant’s claim is still patent-eligible because it is not directed to the judicial exception because of any one of the specific limitations [compared to the limitations of claim 1 of Example 42].

Appeal Brief 18.

We do not find Appellant’s argument persuasive because the claimed subject matter is distinguishable from the subject matter in Example 42. In Example 42, the claimed subject matter was determined to be patent eligible because, “the additional elements recite a specific improvement over prior art systems by allowing remote users to share information in real time in a

⁶ *Example 42 -- Method for Transmission of Notifications When Medical Records Are Updated*, Subject Matter Eligibility Examples: Abstract Ideas, 1-5, available at https://www.uspto.gov/sites/default/files/documents/101_examples_37to42_20190107.pdf

standardized format regardless of the format in which the information was input by the user.” The present Claim 1’s subject matter, in contrast, does not improve the functioning of a device nor is it an improvement to a technology or technical field, as discussed further below. *See Answer 5; 2019 Revised Guidance at 55.*

Appellant argues, “[t]he claims improve electronic trading technology by addressing technical challenges faced under prior art trading technology systems, as explained in detail in Appellant’s specification.” Appeal Brief 12; *see Specification ¶¶ 3, 14.* Appellant further argues the, “claimed technology provides a particular solution to a problem or a particular way to achieve a desired outcome similar to the claims in *McRO, Inc.*^[7]” and the

claims in the instant application similarly use a combined order of specific rules that are applied to create a desired result. Both the disclosure **and** the claims relate to computer rules for improving a particular process: the process of guaranteeing fulfillment of a trader’s spread order while executing the spread order at the best time to fill the spread order.

Appeal Brief 19–20; *see Specification ¶ 15.*

Our ruling court has held that, “[g]roundbreaking, 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 nonobvious claim directed to a purely abstract idea is, nonetheless, patent ineligible. *See Mayo*, 566 U.S. at 90; *see also Diehr*, 450 U.S. at 188–89 (“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

⁷ *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, (Fed. Cir. 2016).

matter of a claim falls within the § 101 categories of possibly patentable subject matter.”).

We note, in *McRO*, the Federal Circuit concluded the claim, when considered as a whole, was directed to a “technological improvement over the existing, manual 3-D animation techniques” through the “use[] [of] limited rules . . . specifically designed to achieve an improved technological result in conventional industry practice.” *McRO*, 837 F.3d at 1316.

Specifically, the Federal Circuit found the claimed rules allow “computers to produce ‘accurate and realistic lip synchronization and facial expressions in animated characters’ that previously could only be produced by human animators;” and the “rules are limiting [because] they define morph weight sets as a function of . . . phoneme sub-sequences.” *McRO*, 837 F.3d at 1313 (citations omitted).

However, we find no evidence of record here that the present situation is like the one in *McRO* where computers were previously unable to make certain subjective determinations, i.e., regarding morph weight and phoneme timings, which could only be made prior to the claimed invention by human animators. See Specification ¶¶ 14, 15 (“The trader’s execution risk may, therefore, be partially or fully placed on the described technology and not on the trader. The described system provides functionality such as this and as described below in an automated system, functionality which could not be performed (or [performed] in any commercially valuable way) manually.”) (Emphasis added). Further, our reviewing court has held, “mere automation of manual processes using generic computers does not constitute a patentable improvement in computer technology.” *Credit Acceptance Corp.*

v. Westlake Services, 859 F.3d 1044, 1055 (Fed. Cir. 2017). Accordingly, we do not find Appellant’s argument persuasive of Examiner error.

Appellant contends:

Similar to *Trading Technologies*^[8] where the claims related to a better and specific graphical user interface for a trading platform, the claims of the instant application relate to an improved, useful, and specific system to determine and present decimalized bid and ask prices using risk proxy markets and use such prices in transferring risk from the trader and in fulfilling spread orders in an electronic trading system.

Appeal Brief 20, 21 (emphasis added); *see* Specification ¶¶ 20–30.

We find the claim’s recitation of displaying or presenting data is unlike patent-eligible claims directed to displaying data such as the claimed user interface in *Core Wireless*.⁹ In *Core Wireless*, the court held that claims which recited an interface were patent eligible because the claims recited specific limitations of the interface such as: an application summary that can be reached through a menu, the data being in a list and being selectable to launch an application, and additional limitations directed to the actual user interface displayed and how it functions. *Core Wireless*, 880 F.3d at 1363. The court found that the claims were directed to an improved user interface and not the abstract concept of an index as the claim “limitations disclose a specific manner of displaying a limited set of information to the user, rather than using conventional user interface methods to display a generic index on

⁸ *Trading Techs. Int’l, Inc. v. CQG, Inc.*, 675 F. App’x 1001 (Fed. Cir. 2017).

⁹ *Core Wireless Licensing S.A.R.L. v. LG Elecs., Inc.*, 880 F.3d 1356 (Fed. Cir. 2018).

a computer.” *Core Wireless* 880 F.3d at 1363; *see also Trading Tech v. CQG, Inc.*, 675 Fed. App’x 1001 (Fed. Cir. 2017) (Holding that a user interface with a prescribed functionality directly related to the interface’s structure, that is addressed to and resolves a problem in the art, is patent eligible.). In Appellant’s claim 1, there are no limitations directed to a specific manner of displaying or presenting a limited set of information to the user or to how the user interacts with the displayed data and, therefore, we find Appellant’s arguments unpersuasive.

We find claim 1 does not recite any improvement to the claimed computer system; instead claim 1 only uses the computer system to automate a trader’s fulfilling a spread order. *See* Specification ¶ 15. Additionally, we detect no additional element (or combination of elements) recited in Appellant’s representative claim 1 that integrates the judicial exception into a practical application. *See* 2019 Revised Guidance, Section III(A)(2). For example, Appellant’s claimed additional elements (e.g., servers, software, network, processors, inventory) do not: (1) improve the functioning of a computer or other technology; (2) is not applied with any particular machine (except for generic devices); (3) does not effect a transformation of a particular article to a different state; and (4) is not applied in any meaningful way beyond generally linking the use of the judicial exception to a particular technological environment, such that the claim as a whole is more than a drafting effort designed to monopolize the exception. *See* MPEP §§ 2106.05(a)–(c), (e)–(h).

Accordingly, we determine the claim does not integrate the recited judicial exception into a practical application. *See* 2019 Revised Guidance, Section III(A)(2).

Step 2B identified in the 2019 Revised Guidance

In Step 2B, we need to consider whether an additional or combination of elements, “[a]dds a specific limitation or combination of limitations that are not well-understood, routine, conventional activity in the field, which is indicative that an inventive concept may be present” or “simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception, which is indicative that an inventive concept may not be present.” 2019 Revised Guidance at 56.

Appellant argues, “The claimed subject matter is not ‘well-understood, routine, conventional activity.’ Appellant respectfully contends that the combination and arrangement of the elements of the claims are both non-conventional and non-generic.” Appeal Brief 22. Appellant proceeds to recite limitations from claim 1 and further argues that “operations of claim 1 recite a non-conventional combination of additional elements that present a specific discrete implementation of guaranteeing a trader a fill of a spread order at a decimalized fulfillment value and a fulfillment quantity.” Appeal Brief 23.

Appellant further argues:

[T]he Examiner has failed to provide the necessary express support to sustain a *prima facie* case for a rejection under Alice Step 2B (*See, e.g.*, October 2019 Update, p. 16 (“[W]hen the examiner has concluded that certain claim elements recite well-understood, routine, conventional activity in the relevant field, the examiner must expressly support such a rejection in writing with one of the four options specified in Section III.A of the *Berkheimer* Memorandum.^[10]”).

¹⁰ USPTO, “Change in Examination Procedure Pertaining to Subject Matter

Reply Brief 9.

We find Appellant’s argument regarding express support could have been—but was not—raised in the Appeal Brief, and thus is waived. *See, e.g.,* 37 C.F.R. § 41.41(b)(2) (“Any argument raised in the reply brief which was not raised in the appeal brief, or is not responsive to an argument raised in the examiner’s answer, . . . will not be considered by the Board for purposes of the present appeal, unless good cause is shown.”).

The Examiner determines in the Final Action:

[C]laim 1 does not include additional elements that are sufficient to amount to significantly more than the judicial exception because the additional elements of trading system running on one or more servers, one or more processors of the trading system, and electronic market are all recited at a high level of generality in that it results in no more than simply applying the abstract idea using generic computer elements (MPEP 2106.05(f)). The network limitation is a field of use limitation (MPEP 2106.05(h)).

Final Action 4.

We find Appellant’s arguments are not persuasive of Examiner error because the Examiner supports the determination that the additional elements are well-understood, routine, or conventional by citing to various sections of the MPEP. *See* Final Action 4. It is further noted that the Specification discloses that the additional elements are well-understood, routine or conventional. *See* Specification ¶¶ 36–40.

Further in *Bascom*, our reviewing court found that while the claims of the patent were directed to an abstract idea, the patentee alleged an

Eligibility, Recent Subject Matter Eligibility Decision (*Berkheimer v. HP, Inc.*)” (April 19, 2018) available at <https://www.uspto.gov/sites/default/files/documents/memo-berkheimer-20180419.PDF>.

“inventive concept can be found in the ordered combination of the claim limitations that transform the abstract idea of filtering content into a particular, practical application of that abstract idea.” *Bascom Global Internet Services, Inc., v. AT&T Mobility LLC* 827 F.3d 1341, 1352 (Fed. Cir. 2016). In particular, the patent in *Bascom* claimed “a technology-based solution (not an abstract-idea-based solution implemented with generic technical components in a conventional way) to filter content on the Internet that overcomes existing problems with other Internet filtering systems.” *Bascom* at 1351.

Claim 1 is distinguishable, as it recites an abstract-idea-based solution, that is, a method of filling a spread order with generic technical components (e.g., computer processor, software, network), in a conventional way. *See generally* Specification. Therefore, we are not persuaded that ordered combination of limitations in representative claim 1 provides an inventive concept, and we find the claims simply appends a well-understood, routine and conventional activity to the judicial exception. *See* 2019 Revised Guidance at 56.

Accordingly, we conclude claims 1–5, 15–19 and 21 are directed to certain methods of organizing human activity such as fundamental economic principles or practices (including hedging, insurance, mitigating risk), as well as, mathematical concepts such as mathematical relationships, mathematical formulas or equations, mathematical calculations as identified in the Memorandum, and are directed to the judicial exception without significantly more. *See* 2019 Revised Guidance at 52. We affirm the Examiner’s 35 U.S.C. § 101 rejection of claims 1–5, 15–19 and 21.

CONCLUSION

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1-5, 15-19, 21	101	Eligibility	1-5, 15-19, 21	

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). *See* 37 C.F.R. § 1.136(a)(1)(v).

AFFIRMED