

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TRADESTATION GROUP, INC. and
TRADESTATION SECURITIES, INC., IBG LLC, and
INTERACTIVE BROKERS, LLC,
Petitioner,

v.

TRADING TECHNOLOGIES INTERNATIONAL, INC.,
Patent Owner.

Case CBM2015-00161¹
Patent No. 6,766,304 B2

Before SALLY C. MEDLEY, MEREDITH C. PETRAVICK, and
JEREMY M. PLENZLER, *Administrative Patent Judges*.

Opinion for the Board filed by *Administrative Patent Judge* PLENZLER.

Opinion dissenting filed by *Administrative Patent Judge* PETRAVICK.

PLENZLER, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
Covered Business Method Patent Review
37 U.S.C. § 328(a) and 37 C.F.R. § 42.73

¹ CBM2016-00035 has been joined with this proceeding.

I. INTRODUCTION

TradeStation Group, Inc. and TradeStation Securities, Inc. (collectively, “Petitioner”) filed a Petition (Paper 2, “Pet.”) on July 20, 2015, requesting review under the transitional program for covered business method patents of the AIA² of U.S. Patent No. 6,766,304 B2 (Ex. 1001, “the ’304 patent”). Pursuant to 35 U.S.C. § 324, we instituted a covered business method patent review as to claims 1–40 on the ground of claims 1–40 being unpatentable under 35 U.S.C. § 101. Trading Technologies, Inc. (“Patent Owner”) filed a Corrected Patent Owner Response on July 5, 2016. Paper 69 (“PO Resp.”). Petitioner filed a Reply. Paper 98 (“Pet. Reply”). An oral hearing in this proceeding was held on October 19, 2016. A transcript of the hearing is included in the record. Paper 123 (“Tr.”).

After oral hearing, the Federal Circuit issued a decision in *Trading Technologies International, Inc. v. CQG, Inc.*, No. 2016-1616, 2017 WL 192716 (Fed. Cir. Jan. 18, 2017), determining that the claimed subject matter of the ’304 patent is patent eligible under § 101. Petitioner and Patent Owner, with authorization (Paper 125), each filed supplemental briefing addressing the impact of that decision on this proceeding. Paper 128 (“Pet. Br.”); Paper 126 (“PO Br.”).

Petitioner filed a Motion to Exclude Evidence (Paper 103), and Patent Owner also filed a Motion to Exclude Evidence (Paper 104).

This Final Written Decision is issued pursuant to 35 U.S.C. § 328(a) and 37 C.F.R. § 42.73. For the reasons that follow, we determine that claims

² Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284, 329 (2011) (“AIA”).

1–40 of the '304 patent have not been shown to be unpatentable under 35 U.S.C. § 101.

II. DISCUSSION

Petitioner challenges claims 1–40 as directed to patent-ineligible subject matter under 35 U.S.C. § 101. Pet. 23–52; Pet. Reply 8–24. Patent Owner disagrees. PO Resp. 14–65. Our reviewing court also disagrees. *Trading Techs.*, 2017 WL 192716 at *4.

Under 35 U.S.C. § 101, we must first identify whether an invention fits within one of the four statutorily provided categories of patent-eligibility: “processes, machines, manufactures, and compositions of matter.” *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 713–14 (Fed. Cir. 2014). There is no dispute that the claims fit within one of the four statutorily provided categories of patent-eligibility. For example, there is no dispute that claim 1 fits within the process category.

Section 101 “contains an important implicit exception: Laws of nature, natural phenomena, and abstract ideas are not patentable.” *Alice Corp. Pty. Ltd. v. CLS Bank. Int’l*, 134 S. Ct. 2347, 2354 (2014) (citing *Assoc. for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 2107, 2116 (2013) (internal quotation marks and brackets omitted)). In *Alice*, the Supreme Court reiterated the framework set forth previously in *Mayo Collaborative Services v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1293 (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*, 134 S. Ct. at 2355. The first step in

the analysis is to “determine whether the claims at issue are directed to one of those patent-ineligible concepts.” *Id.*

There is no definitive rule to determine what constitutes an “abstract idea.” Rather, the Federal Circuit has explained that “both [it] and the Supreme Court have found it sufficient to compare claims at issue to those claims already found to be directed to an abstract idea in previous cases.” *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1334 (Fed. Cir. 2016); *see also Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1294 (Fed. Cir. 2016) (explaining that, in determining whether claims are patent-eligible under § 101, “the decisional mechanism courts now apply is to examine earlier cases in which a similar or parallel descriptive nature can be seen—what prior cases were about, and which way they were decided”).

The Federal Circuit has already decided that the claims at issue before us are not directed to an abstract idea. *Trading Techs.*, 2017 WL 192716 at *4. Petitioner provides no persuasive reason for us to ignore that guidance, particularly with respect to whether the claims are directed to an abstract idea. *See, e.g.*, Pet. Br. 3–5. For example, Petitioner offers no persuasive explanation as to why its characterization of the alleged abstract idea would affect the Federal Circuit’s determination that the claims are not directed to an abstract idea. *See id.* at 5. We are also not apprised of a persuasive reason to arrive at a different outcome with respect to whether the claims are directed to an abstract idea based on the differences between the record before us and that before the Federal Circuit alleged by Petitioner. *See id.* at 3–5.

Accordingly, we follow the Federal Circuit’s guidance and, in accordance with that guidance, determine the claims before us to be patent

eligible. The sole issue before us is the eligibility of the challenged claims. Based on the facts of this proceeding, we determine that it is not necessary to revisit whether the challenged patent is a covered business method patent as Patent Owner urges.

III. MOTIONS TO EXCLUDE EVIDENCE

Petitioner moves to exclude Exhibits 2029, 2211, 2220, 2222, 2224, 2225, 2228, 2232, 2247, 2251, 2274–2276, 2286–2288, and 2292–2296 (collectively, “the *eSpeed/CQG* Transcripts”); Exhibit 2223 (“the Electronic Trader Declarants Exhibits”); Exhibits 2240–2246, 2250, 2252–2273, and 2277 (“the Third Party Emails”); Exhibits 2212, 2213, and 2214 (“Brumfield Sketch and Animations”); Exhibits 2030, 2032, 2278 (“*eSpeed/CQG* Jury Verdict Forms & Docket Entry; Exhibit 2169B, ¶¶ 75, 83–86, 89–92, 94–97, 102–104, 106–111, 126–128, 131, 133–34, 136–138, 140, 141, 151–153, 172 (“Confidential Declaration of Christopher Thomas”). Paper 103. Patent Owner moves to exclude Exhibit 1016 (TSE), Exhibit 1017 (TSE Translation, and Exhibit 1025, 57:18–58:19 (Testimony of Dan Olsen). Paper 104.

The Petitioner’s Motion to Exclude Evidence and Patent Owner’s Motion to Exclude Evidence are dismissed because we do not rely on the Exhibits or portions of the Exhibits in reaching our Decision.

IV. CONCLUSION

We conclude Petitioner has failed to show that claims 1–40 are unpatentable under 35 U.S.C. § 101.

Patent Owner's Motion to Exclude Evidence is dismissed.
Petitioner's Motion to Exclude Evidence is dismissed.

V. ORDER

Accordingly, it is hereby:

ORDERED that claims 1–40 of U.S. Patent No. 6,384,850 B1 have not been shown to be *unpatentable*;

FURTHER ORDERED that Patent Owner's Motion to Exclude Evidence is *dismissed*;

FURTHER ORDERED that Petitioner's Motion to Exclude Evidence is *dismissed*; and

FURTHER ORDERED that because this is a final written decision of the Board under 35 U.S.C. § 328(a), parties to the proceeding seeking judicial review of this decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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Petitioner was not a party in the suit involved in *Trading Technologies International, Inc. v. CQG, Inc.*, No. 2016-1616, 2017 WL 192716 (Fed. Cir. Jan. 18, 2017) (“*CQG*”). Accordingly, the Federal Circuit was not placed in a position to determine the merits of the Petitioner’s challenge to the patent eligibility of claims 1–40 under 35 U.S.C. § 101. Petitioner’s challenge to the patent eligibility of claims 1–40 under 35 U.S.C. § 101 is based on a construction of the claims and evidence submitted in this proceeding, such as different evidence of what was routine and conventional. *See* Pet. Br. 1–5 (discussing the differences between the records in *CQG* and here). The determination of whether claims 1–40 are patent eligible under 35 U.S.C. § 101 should focus on the record here. The patent-eligibility determination reached in *CQG* was based on the different record before the District Court.

Treating *CQG* as controlling of the patent-eligibility of claims 1–40, notwithstanding a different outcome based on the record developed in this proceeding involving a different party and relying on different evidence, in effect, treats *CQG* as precedential to the patent-eligibility question in this proceeding. Because the Federal Circuit did not in fact designate *CQG* as precedential, the possibility remains that the Federal Circuit would consider the merits of a different outcome based on a different record.

The presumption that *CQG* controls patent-eligibility of claims 1–40, notwithstanding a possible different outcome based on a different set of facts and evidence, necessarily follows from the view that the question of patent-eligibility is a pure question of law. However, if the question of patent-eligibility is question of law based on underlying facts, then underlying facts have the potential of controlling the ultimate determination. Likewise, a

determination of obviousness under 35 U.S.C § 103 may depend on which prior art is applied against the claims. The Federal Circuit has not yet decided whether the question of patent-eligibility is a pure question of law or a question of law based on underlying facts.

I respectfully dissent and based on the record before us determine that the claims of the '304 patent are not directed to patent eligible subject matter under 35 U.S.C. § 101.

Background

The '304 patent “is directed to the electronic trading of commodities.” Ex. 1001, 1:17–18. According to the '304 patent, 80% of the total time to place an order is attributable to the time it takes for a trader to read the prices displayed and to enter a trade order, by manually entering parameters, such as commodity symbol, the desired price, the quantity and whether a buy or sell order is desired. *Id.* at 2:28–51. “The more time a trader takes entering an order, the more likely the price on which he wanted to bid or offer will change or not be available in the market.” *Id.* at 2:51–54. The '304 patent discloses a method of trading that reduces the time it takes for a trader to place an order and, thus, increases the likelihood that the order will be filled at desirable prices and quantities. *Id.* at Abstract and 3:2–7. The method uses a graphical user interface (“GUI”), named the Mercury display. *Id.* at Abstract, 3:9–10.

Before turning to a discussion of how the Mercury display is used to enter an order on an electronic exchange, a discussion of conventional methods of trading is helpful. Figure 2 of the '304 patent depicts a GUI. Ex. 1001, Fig. 2 (“the Fig. 2 GUI”). According to Patent Owner, the Fig. 2 GUI illustrates the “widely accepted conventional wisdom regarding”

electronic trading. PO Resp. 1; *see also* Paper 22, 7 (describing the Fig. 2 GUI as “conventional”) and PO Resp. 2 (describing Fig. 2 GUI as “ubiquitous by the time of the invention” of the ’304 patent).

Figure 2 of the ’304 patent is reproduced below.

FIG. 2

	Contract	Depth	BidQty	BidPrc	AskPrc	AskQty	LastPrc	LastQty	Total
1	CDHO	•	785	7626	7627	21	7627	489	8230
2			626	7625	7629	815			
3			500	7624	7630	600			
4			500	7623	7631	2456			
5			200	7622	7632	800			

The Fig. 2 GUI displays market information in columns. *See id.* at 5:23–28, 6:1–2. BidQty column 202 displays bid quantity, and BidPrc column 203 displays corresponding bid price levels. AskQty column 205 displays ask quantities, and AskPrc column 204 displays corresponding ask price levels. *Id.* at 5:23–28 and 6:4–12. The inside market (i.e., the best (highest) bid price and quantity and the best (lowest) ask price and quantity)) is displayed in row one. *Id.* at 5:19–21. Rows 2–5 display the market depth, a list of next-best bids and asks. *Id.* at 5:22–26.

Prices and quantities change dynamically based on real time information from the market. *Id.* at 5:29–31. The inside market, however, is always displayed in row 1, a fixed location. PO Resp. 2–3. According to Patent Owner, “[t]his made perfect sense and was perceived by those skilled in the art at the time as a significant advantage because it emphasized focus on the primary target for the trader: the inside market” and “since the

location of the inside market is always known, the trader may easily spot the target, regardless of changes in the market.” PO Resp. 5. Christopher H. Thomas testifies that other prior art GUIs, which are similar to the Fig. 2 GUI, “displayed the locations for the best bid and ask prices such that the prices were displayed vertically (e.g., with the location for the best ask price being displayed above the location for the best bid price).” Ex. 2169 ¶ 57; *see also* Ex. 1016, 107 (depicting a trading screen having a central order price column and corresponding ask and bid quantities in adjacent columns).

In the Fig. 2 GUI, “the user could place an order by clicking on a location (e.g., a cell) in one of the price or quantity columns.” Ex. 2169 ¶ 53; *see* PO Resp. 6–7. According to Patent Owner, “these types of tools permitted ‘single action’ order entry that consisted of a trader presetting a default quantity and then clicking on a cell in the screen . . . to cause a trade order message to be sent to the exchange at the preset quantity and at the price value associated with that cell.” Ex. 1006, 7.

Other types of conventional trading GUIs used order entry tickets to send trade orders to an electronic exchange. PO Resp. 1. An order entry ticket is “usually in the form of a window, with areas for a trader to fill out order parameters (e.g., price, quantity, an identification of the item being traded, buy or sell).” *Id.* at 1–2; *see also* Ex. 1001, 2:42–54 (describing a trader manually entering trade order parameters); Ex. 2169 ¶ 45.

Turning now to a discussion of how the Mercury display is used to enter an order on an electronic exchange, the Mercury display is depicted in Figure 3 of the ’304 patent. *Id.* at 3:45–46. Figure 3 is reproduced below.

FIG. 3

E/W		10:48:44	BidQ	AskQ	Prc	LTQ
1009	L	3		104	99	
1010	R	5		24	98	
1011		720		33	97	
1012	X	10		115	96	
1013		0		32	95	
1014		10 1H		27	94	
		50 3H		63	93	
1007	S 0 W 24	1K 5H		45	92	
	S 0 W 7	CLR		28	91	
1015	X	10		20	90	10
1016		17		18	89	
1008	B 0 W 15	CXL	18	97	88	
	B 0 W 13	+ -	97	30	87	
1017		NET 0	30	43	86	
1018	B 0 W 17	NET REAL	43	110	85	
1019			110	23	84	
			23	31	83	
1021			31	125	82	
			125	21	81	
			21		81	

As can be seen in Fig. 3 above, like the Fig. 2 GUI, the Mercury display displays market information in columns. *Id.* BidQ column 1003 displays bid quantities, and AskQ column 1004 displays bid ask quantities. *See id.* at 7:54–55. The bid and ask quantities are displayed along corresponding price levels in Prc column 1005, which is a common price axis. The inside market is displayed at 1020. *Id.*

Unlike the Fig. 2 GUI, the Mercury display values in the price column “are static; that is, they do not normally change positions unless a re-centering command is received.” Ex. 1001, 7:65–67. The bid quantities and ask quantities move up and down as the market changes, and, thus, the location of the inside market moves up and down. *See id.* at 7:67–8:18. According to Patent Owner, some traders focused on trading at particular prices, not the inside market prices. PO Resp. 6–7.

Like the Fig. 2 GUI, a trader executes trades using the Mercury display by first setting the desired commodity and default parameters, such as default quantity. *Id.* at 9:35–49 and Fig. 6, step 1302. Then, a trader can send a buy order or sell order to the market with a single action, such as clicking on the appropriate cell in column 1003 or 1004. *See id.* at 9:39–11:34; Fig. 6, steps 1306–1315. In the example shown in Figure 3, a left click on “20” in column 1004 will send an order to the market to buy 17 lots (i.e., the default quantity set in cell 1016 of column 1002) at a price of 90. *See id.* at 10:39–41.

Claim Language

“The § 101 inquiry must focus on the language of the Asserted Claims themselves.” *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1149 (Fed. Cir. 2016); *see also Accenture Global Servs., GmbH v. Guidewire Software, Inc.*, 728 F.3d 1336, 1345 (Fed. Cir. 2013) (admonishing that “the important inquiry for a § 101 analysis is to look to the claim”); *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat’l Ass’n*, 776 F.3d 1343, 1346 (Fed. Cir. 2014) (“We focus here on whether the claims of the asserted patents fall within the excluded category of abstract ideas.”).

Claim 1 of the ’304 patent is representative and is reproduced below.

1. A method for displaying market information relating to and facilitating trading of a commodity being traded in an electronic exchange having an inside market with a highest bid price and a lowest ask price on a graphical user interface, the method comprising:

dynamically displaying a first indicator in one of a plurality of locations in a bid display region, each location in the bid display region corresponding to a price level along a common static price axis, the first indicator representing quantity associated with at least one order to buy the commodity at the highest bid price currently available in the market;

dynamically displaying a second indicator in one of a plurality of locations in an ask display region, each location in the ask display region corresponding to a price level along the common static price axis, the second indicator representing quantity associated with at least one order to sell the commodity at the lowest ask price currently available in the market;

displaying the bid and ask display regions in relation to fixed price levels positioned along the common static price axis such that when the inside market changes, the price levels along the common static price axis do not move and at least one of the first and second indicators moves in the bid or ask display regions relative to the common static price axis;

displaying an order entry region comprising a plurality of locations for receiving commands to send trade orders, each location corresponding to a price level along the common static price axis; and

in response to a selection of a particular location of the order entry region by a single action of a user input device, setting a plurality of parameters for a trade order relating to the commodity and sending the trade order to the electronic exchange.

In a covered business method patent review, claim terms in an unexpired patent are given the broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.300(b);

Cuozzo Speed Techs., LLC v. Lee, 136 S. Ct. 2131, 2144–46 (2016) (upholding the use of the broadest reasonable interpretation standard). In the Institution Decision, we determined that the broadest reasonable interpretation of common static price axis is “a reference line or column of price levels that is common to the bid and ask display regions where the price levels do not change positions unless a re-centering command is received.” Paper 29, 19–20. In its Response, Patent Owner provided an alternate interpretation. *See* PO Resp. 13. This interpretation requires that the common static price axis have plural price levels. The plain language of other limitations of claim 1 also requires the common static price axis to have plural price levels. *See* Ex. 1004, 12:56 (“fixed price levels”). The price levels must correspond to the location in the bid display region where a first indicator representing an order at the highest bid price is displayed and correspond to the location in the ask display region where a second indicator representing an order to the lowest ask price is displayed. *See id.* at 12:51–54. Claim 1, thus, encompasses a common static price axis that only displays two price levels, one corresponding to the highest bid price and one corresponding to the lowest ask price (i.e., the inside market). For example, a price column that only includes the “90” and “89” price levels of inside market 1020 of the Mercury display depicted in Fig. 3 of the ’304 patent, without any of the other depicted price levels in column 1005, would be a common static price axis as required by claim 1. *See* Ex. 1001, Fig. 3.

Patent Owner implies that the claim requires displaying a greater range of price levels or price levels that have no corresponding orders. *See* PO Resp. 4 (arguing that columns 203 and 204 of the Fig. 2 GUI are not a price axis because it does not display price levels that have no orders).

Neither the broadest reasonable interpretation of common static price axis nor the plain language of any other claim limitation require such or preclude an axis that does not display price levels that have no corresponding order information. The '304 patent discloses that in some situations only the inside market is displayed: “How far into the market depth the present invention can display depends on how much of the market depth the exchanged provide. Some exchanges . . . provide no market depth.” Ex. 1001, 5:7–11.

Eligibility

Patent-eligible subject matter is defined in § 101 of the Patent Act, which recites:

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 therefor, subject to the conditions and requirements of this title.

There are, however, three judicially created exceptions to the broad categories of patent-eligible subject matter in § 101: laws of nature, natural phenomena, and abstract ideas. *Alice*, 134 S. Ct. at 2354; *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1293 (2012). Although an abstract idea, itself, is patent-ineligible, an application of the abstract idea may be patent-eligible. *Alice*, 134 S. Ct. at 2355. Thus, we must 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.* (citing *Mayo*, 132 S. Ct. at 1297–98). The claim must contain elements or a combination of elements that are “sufficient to ensure that the patent in

practice amounts to significantly more than a patent upon the [abstract idea] itself.” *Id.* (citing *Mayo*, 132 S. Ct. at 1294).

Abstract Idea

“The ‘abstract idea’ step of the inquiry calls upon us to look at the ‘focus of the claimed advance over the prior art’ to determine if the claim’s ‘character as a whole’ is directed to excluded subject matter.” *Affinity Labs of Texas v. DirectTV, LLC*, 838 F.3d 1253, 1257 (Fed. Cir. 2016) (quoting *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016); *see also Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016). According to Petitioner, the claims are directed to the abstract idea of “placing an order based on displayed market information, as well as updating market information,” which is a “fundamental economic practice long prevalent in our system of commerce.” Pet. 35 (quoting *Alice*, 134 S. Ct. at 235); Pet. Reply 16. This is consistent with claim 1 of the ’304 patent. Claim 1 of the ’304 patent recites “a method for displaying market information relating to and facilitating trading of a commodity being traded in an electronic exchange having an inside market with a highest bid price and a lowest ask price on a graphical user interface.” Ex. 1001, 12:35–38. Claim 1 recites two steps of displaying market information, bid and ask quantities, in regions along a common static price axis. *Id.* at 12:41–54. The market information is an indicator of an order to buy at the highest bid price and an indicator of an order to sell at the lowest ask price. *Id.* In other words, the displayed market information is the inside market. Claim 1 then recites a step of moving the market information along the price axis as the market changes. *Id.* at 12:55–61. Claim 1 finally recites a step of displaying an order entry region and a step of setting parameters for a trade order and a

step of sending a trade order to an exchange. *Id.* at 12:41–13:3. As can be seen from its steps, the focus of claim 1 is placing trade orders based on displayed market information (i.e., the inside market), as well as updating the market information. This focus is consistent with the '304 patent's statement that "[t]he present invention is directed to the electronic trading of commodities. . . . It facilitates the display of and the rapid placement of trade orders." *Id.* at 1:7–23. The focus of claim 1 is also consistent with the problem disclosed by the '304 patent, which is a trader missing an intended price because the market changed during the time required for a trader to read the prices displayed and to manually enter an order. *Id.* at 2:41–67.

Claim 1 does not recite any limitations that specifies how the computer implements the steps or functions for using a GUI. For example, claim 1 recites displaying an arrangement of the market information on the GUI. The bid quantities are displayed in the bid region at locations that correspond to prices along a common static price axis and ask quantities are displayed in an ask region at locations that correspond to prices along the common static price axis. *Id.* at 12:41–55. Claim 1 does not specify how the computer maps the bid quantities, ask quantities, and price axis to the display. The '304 patent also does not disclose an unconventional or improved method of mapping the bid quantities, ask quantities, and price axis to the display. It states that "[t]he physical mapping of such information to a screen grid can be done by any technique known to those skilled in the art" and that "[t]he present invention is not limited by the method used to map the data to the screen." *Id.* at 5:3–7.

The '304 patent discloses that at least 60 exchanges throughout the world utilize electronic trading and discloses that it is known that electronic

trading includes analyzing displayed market information and updated market information to send trade orders to an exchange. *See id.* at 1:27–2:67.

Similarly, Patent Owner’s declarant Christopher H. Thomas indicates that traders in prior trading systems, including pre-electronic open outcry systems, which have been used for over one hundred years, send trade orders to an exchange based on the inside market price. Ex. 2169 ¶¶ 31, 57, and 58; Ex. 1015. Mr. Thomas testifies that “[i]n the trading pit, traders utilize shouting and hand signals to transfer information about buy and sell orders to other traders. To avoid confusion, the inside market prices were the focus, and traders could only shout and signal regarding their interest at the best bid/offer or at prices that improves the best bid/offer.” Ex. 2169 ¶ 31. Given this, placing an order based on displayed market information, such as the inside market, as well as updating the market information is a fundamental economic and conventional business practice.

The claims at issue here are like the claims at issue in *Affinity Labs*. In *Affinity Labs*, the claim at issue recited an application that enabled a cellular telephone to present a GUI displaying a list of media sources that included selectable items for selecting a regional broadcasting channel. *Affinity Labs*, 838 F.3d at 1255–56. The claim also recited that the cellular telephone was enabled to transmit a request for the selected regional broadcasting channel. *Id.* at 1256. The claims at issue here are also like the claims at issue in *Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229 (Fed. Cir. 2016). In *Ameranth*, the claim at issue recited a GUI that displayed menu items in a specific arrangement, a hierarchical tree format. Menu items were selected to generate a second menu from a first menu. *Ameranth* 842 F.3d at 1234. In both *Affinity Labs* and *Ameranth*, the court determined that the

claims were not directed to a particular way of programming or designing the software, but instead merely claim the resulting systems. The court thus determined that the claims were not directed to a specific improvement in the way computers operate. *Affinity Labs*, 838 F.3d at 1260–61; *Ameranth*, 842 F.3d at 1241. Here, the claims also recite the resulting GUI and are not directed to specific improvements in the way the computers operate.

“Though lengthy and numerous, the claims [that] do not go beyond requiring the collection, analysis, and display of available information in a particular field, stating those functions in general terms, without limiting them to technical means for performing the functions that are arguably an advance over conventional computer and network technology” are patent ineligible. *Elec. Power Grp.*, 830 F.3d at 1351. “Generally, a claim that merely describes an ‘effect or result dissociated from any method by which [it] is accomplished’ is not directed to patent-eligible subject matter.” *Ameranth*, 842 F.3d at 1244 (quoting *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1348 (Fed. Cir. 2015)).

Claim 1 of the ’304 patent is unlike the claims at issue in *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014) and *Enfish*. In *DDR Holdings*, the court determined that the claims did not embody a fundamental economic principle or a longstanding commercial practice. The claims at issue in *DDR Holdings* were directed to retaining website visitors, which the court determined was a problem “particular to the Internet.” *DDR Holdings*, 773 F.3d at 1257. The court also determined that the invention was “necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks” and that the claimed invention did not simply use computers to serve a

conventional business purpose. *Id.* In *Enfish*, the claim at issue was directed to a data storage and retrieval system for a computer memory. *Enfish*, 822 F.3d at 1336–37. The court determined that the claims were directed to an improvement in the functioning of a computer and were not simply adding conventional computer components to well-known business practices. *Id.* at 1338. Here, in contrast, claim 1 is directed to a fundamental economic principle or a longstanding commercial practice and not directed to an improvement in the computer but simply to the use of the GUI in a method of placing an order based on displayed market information, as well as updating market information.

Patent Owner argues that the GUI disclosed in the '304 patent solves an alleged problem of the Fig. 2 GUI, displaying the inside market at a fixed location, while the displayed prices change as the market changes. *See* PO Resp. 5–8. If a trader was focused on trading at a particular price, the trader could miss its intended price using the Fig. 2 GUI because the price could change as the trader clicked it. *Id.* at 6–8. Patent Owner contends that the '304 patent solves this problem by having a common static price axis, where the prices do not normally move. *Id.* at 8–12. The problem of a price changing just as a trader clicks on the price is not disclosed in the '304 patent. Patent Owner relies upon the testimony of Mr. Thomas to show that such a problem existed with the Fig. 2 GUI. *See* PO Resp. 6–8 (citing Ex. 2169 ¶¶ 79–80). The testimony of Mr. Thomas, however, indicates that displaying the inside market at a fixed location, while the displayed prices change as the market changes, is only a problem if the trader is focused on trading at a particular price, not on the inside market price. *Cf.* Ex. 2169 ¶ 58 (“focus on the primary target for the traders: the inside market”) and ¶ 80

(“focused on particular prices than market prices as many other traders were”). For traders focused on trading at the inside market price, the Fig. 2 GUI is advantageous over the Mercury Display—“[s]ince the location of the inside market is always known, the trader may easily spot the target, regardless of changes in the market.” Ex. 2169 ¶ 58. For traders focused on trading at the inside market price, the Mercury Display may be problematic because the inside market is not fixed, the location of the inside market may move up and down the price axis as the market changes, and the inside market could move as the trader clicked on the inside market. *See* Tr. 64:18–66:2; PO Resp. 35 (stating that the Mercury Display “required the trader to ‘chase’ the inside market due to its movement relative to the axis”). Thus, the trader could miss their intended price (i.e., the inside market price). In both Fig. 2 GUI and the Mercury Display, the inside market and prices move relative to each other. The difference between the Fig. 2 GUI and the Mercury Display is whether the inside market or price remains static. That difference is based upon the focus of the trader, and is not a problem with the technology. The fact that some traders focus on price and some traders focus on the inside market is not a problem necessarily rooted in computer technology that overcomes a problem specifically arising in the realm of computer networks; it is a difference in the preferences of a trader. *See* Pet. Reply 3–7.

Further, claim 1 of the ’304 patent is unlike the claims at issue in *McRO, Inc. v. Bandai Namco Games America Inc.*, 837 F.3d. 1299 (Fed. Cir. 2016). In *McRO*, the court held that claims that recited “a specific asserted improvement in computer animation” were not directed to an unpatentable abstract idea because they go “beyond merely organizing

existing information into a new form or carrying out a fundamental economic practice.” *McRO*, 837 F.3d at 135. Here, the claims merely organize existing market information. As discussed above, the claims merely reorganize market information so that the focus of a trader does not normally move.

Inventive Concept

To be patent eligible, a claim directed to an abstract idea must recite additional elements that constitute an inventive concept. *Alice*, 134 S. Ct. at 2357. One looks to “[t]he 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.” *Mayo*, 132 S. Ct. at 1297–98. The additional elements must be more than “well-understood, routine, conventional, activity.” *Mayo*, 132 S. Ct. at 1298.

First, claim 1 of the ’304 patent recites “a method for displaying market information relating to and facilitating trading of a commodity being traded in an electronic exchange having an inside market with a highest bid price and a lowest ask price on a graphical user interface.” Ex. 1001, 12:35–39. The ’304 patent discloses that its system can be implemented “on any existing or future terminal or device” (*id.* at 4:9–15), which are known to include displays, and discloses that the input device can be a mouse (*id.* at 4:13–19), which is a known input device. A mere recitation of a GUI does not make the claim patent eligible. *See Affinity Labs*, 838 F.3d at 1257–58; *Ameranth*, 842 F.3d at 1236–1242; *Internet Patent Corp.*, 790 F.3d at 1348–1349; Pet. Reply 16–17. A recitation of a generic GUI merely limits the use

of the abstract idea to a particular technological environment.⁴ “Limiting the field of use of the abstract idea to a particular existing technological environment does not render any claims less abstract.” *Affinity Labs*, 838 F.3d at 1258 (citing *Alice*, 134 St. Ct. at 2358; *Mayo*, 132 S. Ct. at 1294).

Second, claim 1 recites steps of displaying indicators representing a quantity associated with an order to buy the commodity or an order to sell the commodity in a bid display region or ask display region, respectively. Ex. 1001, 12:41–56. Locations in the bid or ask display region correspond to a price level along a common static price axis. *Id.* Essentially, these limitations require plotting the inside market along a price axis. Plotting information along an axis is a well-understood, routine, conventional, activity. The Fig. 2 GUI includes regions for displaying indicators of bid and ask quantities and regions for displaying corresponding prices. For example, the Fig. 2 GUI displays the bid quantity in BidQty column 202 at locations that correspond to the bid prices in BidPrc column 203. Ex. 1001, 5:24–29. This is akin to plotting information BidQty and AskQty along a price axis. Further, Mr. Thomas testifies that prior GUIs, which are similar to the Fig. 2 GUI, “displayed the locations for the best bid and ask prices such that the prices were displayed vertically (e.g., with the location for the best ask price being displayed above the location for the best bid price).” Ex. 2016 ¶ 57; *see also* Ex. 1016, 107, Ex. 1019, Fig. 2a (depicting a trading screen having a central order price column and ask and bid orders in

⁴ The '304 patent was also the subject of CBM2014-00136. In CBM2014-00136, Patent Owner stated, “[t]he claimed tool is implemented graphically merely because of the state of technology today—it would be possible to implement a comparable tool mechanically.” Ex. 1006, 25.

adjacent corresponding columns). Displaying the best ask price above a best bid price would be displaying a common column of price levels. The '304 patent states:

the physical mapping of such information to a screen grid can be done by any technique known to those skilled in the art. The present invention is not limited by the method used to map the data to the screen display.

Id. at 4:66–5:7.

Claim 1 requires that the price levels are static (i.e., they do not change positions unless a re-centering command is received). The '304 patent discloses that re-centering is desirable when the inside market goes above or below the displayed price column because the trader will want to be able to see the inside market. *Id.* at 9:14–17. Fixing the location of the target or focus of the trader was known in the prior method of trading using a GUI. *See* Ex. 2169 ¶ 58, PO Resp. 6–7. These steps of claim 1 require merely a rearrangement of market information that was known to be displayed in corresponding columns on a GUI. *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1370 (Fed. Cir. 2011) (holding “[t]he mere collection and organization of data” patent-ineligible).

Third, claim 1 also recites steps of displaying an order entry region for receiving commands to send trade orders, setting trade order parameters, and sending trade orders to the electronic exchange with a single action. *Id.* at 12:62–13:3. Methods that permit single action entry of an order, which has preset default parameters, by clicking on a cell in a display of a GUI are known technology. *See* PO Resp. 6–7 and Ex. 1006, 12. The additional elements must be more than “well-understood, routine, conventional, activity.” *Mayo*, 132 S. Ct. at 1298.

The individual elements of the claim do not transform the nature of the claim into a patent-eligible application. They do not add significantly more to the abstract idea or fundamental economic practice. Contrary to Patent Owner's argument, the claim simply recites the use of a generic GUI with routine and conventional functions. Even considering all of the elements as an ordered combination, I would have determined that the combined elements also do not transform the nature of the claim into a patent-eligible application. Indeed, as discussed above, the Fig. 2 GUI disclosed in the '304 patent includes a similar combination of elements.

For the reasons discussed above, I respectfully dissent and determine that the claims of the '304 patent are not directed to patent eligible subject matter under 35 U.S.C. § 101.

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Patent 6,766,304 B2

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