UNITED STATES PATENT AND TRADEMARK OFFICE
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BEFORE THE PATENT TRIAL AND APPEAL BOARD
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TRADESTATION GROUP, INC., TRADESTATION SECURITIES, INC.,
IBG LLC, and INTERACTIVE BROKERS LLC,
Petitioner,

v.

TRADING TECHNOLOGIES INTERNATIONAL, INC.,
Patent Owner.
_____

Case CBM2015-00172[1]
Patent No. 7,783,556 B1
_____

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

PETRAVICK, *Administrative Patent Judge*.

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

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[1] Case CBM2016-00040 has been joined with this proceeding.

I. INTRODUCTION

A. *Background*

TradeStation Group, Inc. and TradeStation Securities, Inc. (collectively, "Petitioner") filed a Petition (Paper 2, "Pet.") on August 12, 2015, that requests review under the transitional program for covered business method patents of the AIA[2] of U.S. Patent No. 7,783,556 B1 (Ex. 1001, "the '556 patent"). Petitioner challenges the patentability of claims 1– 22 ("the challenged claims") of the '556 patent under 35 U.S.C. § 101. On February 12, 2016, we instituted a covered business method patent review (Paper 18, "Institution Decision" or "Inst. Dec.") based upon Petitioner's assertion that claims 1–22 are directed to patent ineligible subject matter under 35 U.S.C. § 101.

Subsequent to institution, IBG LLC and Interactive Brokers LLC filed a Petition and Motion for Joinder with the instant proceeding. *IBG LLC and Interactive Brokers LLC v. Trading Technologies International, Inc.*, CBM2016-00040, Papers 3, 4. On April 4, 2016, we instituted a covered business method patent review and granted the Motion, joining IBG LLC and Interactive Brokers LLC as a petitioner in this covered business method patent review. Paper 23.

Thereafter, Trading Technologies International, Inc. ("Patent Owner") filed a Patent Owner's Response on June 26, 2016 (Paper 43, "PO. Resp.") and Petitioner filed a Reply (Paper 61, "Pet. Reply") to Patent Owner's Response.

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

Patent Owner filed a Motion to Exclude (Paper 65, "Motion" or "Mot.") and Petitioner filed an Opposition (Paper 67) to Patent Owner's Motion. Patent Owner filed a Reply (Paper 68) in support of its Motion.

We held a joint hearing of this case and several other related cases on October 19, 2016. Paper 83 ("Tr.").

After oral hearing, the Federal Circuit issued a decision, *Trading Techs. Int'l, Inc.* v. *CQG, Inc.*, No. 2016-1616, 2017 WL 192716 (Fed. Cir. Jan. 18, 2017), determining that claims of U.S. Patent Nos. 6,766,304 ("the '304 patent") and 6,772,132 ("the '132 patent") are patent eligible under § 101. The '304 patent and the '132 patent are directed to similar subject matter as the '556 patent. Petitioner and Patent Owner, with authorization (Paper 79), each filed supplemental briefing addressing the impact of that decision on this proceeding. Paper 82; Paper 80 ("PO Br.").

We have jurisdiction under 35 U.S.C. § 6. 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 Petitioner has shown by a preponderance of the evidence that claims 1–22 of the '556 patent are patent ineligible under 35 U.S.C. § 101.

B. Related Matters

The '556 patent is the subject of numerous related U.S. district court proceedings. Pet. 2–3; Paper 5, 2–6; Paper 26, 1.

C. The '556 Patent

The '556 patent is titled "System and Method for Displaying Order Information in Relation to a Derivative of Price" and issued from an

application filed on March 12, 2004. Ex. 1001, [54], [22]. The '556 patent

discloses that electronic exchanges provide data feeds to connected traders.

See id. at 1:13–44. The data feeds are displayed to traders using "a variety

of different formats, any of which would be known to one of ordinary skill

in the art." *Id.* at 1:45–47. The '556 patent depicts two examples of typical

displays or graphical user interfaces ("GUI") in Figures 1 and 2. *Id.* at 1:47–

2:17. Figures 1 and 2 are reproduced below.
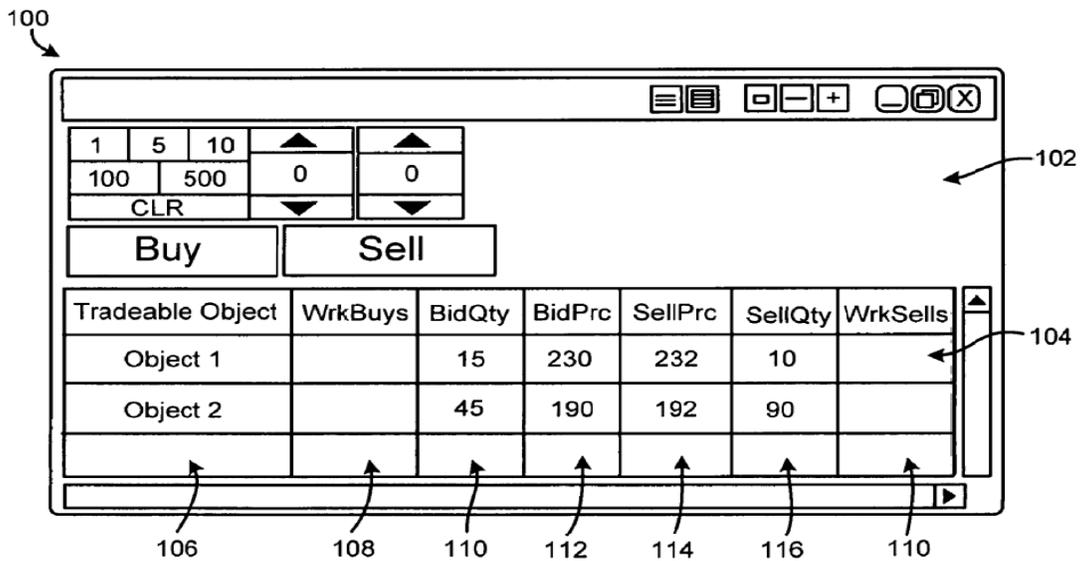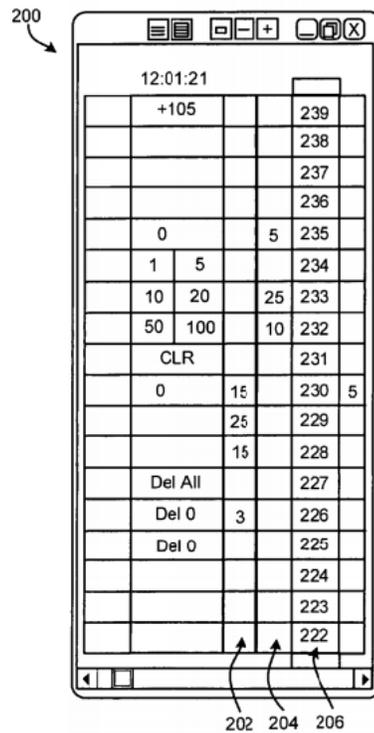

FIG. 1
Prior Art

FIG. 2
Prior Art

Figures 1 and 2 depict example prior art trading screens that convey market information received from an electronic exchange to a trader. *Id.* at 2:48–54. In Figure 1, trading screen 100 has a mark grid section 104 that displays tradable object information, such as bid quantities 110, bid prices 112, sell prices 114, and sell quantities 116. *Id.* at 1:56–64. Trading screen 200 in Figure 2 displays the same type of information except that the bids 202 and offers 204 are displayed in association with price values along an axis. *Id.* at 2:8–14. To place an order, a trader simply clicks on certain areas of trading screen 200, such as one of bids 202. *See id.* at 2:14–17.

The '556 patent discloses that traders are often interested in information not normally provided in an exchange's data feed or displayed on a trading screen and discloses that the traders must make "quick mental calculations, use charting software, or look to other sources" for this information. *Id.* at 2:18–33. The '556 patent, thus, discloses "a system and

method for displaying, on a trading screen, order information in relation to a derivative of price." *Id.* at 2:34–38. A derivative of price is "anything that has some dependence on or relationship to price." *Id.* at 3:33–34. Figure 8 of the '556 patent is reproduced below.
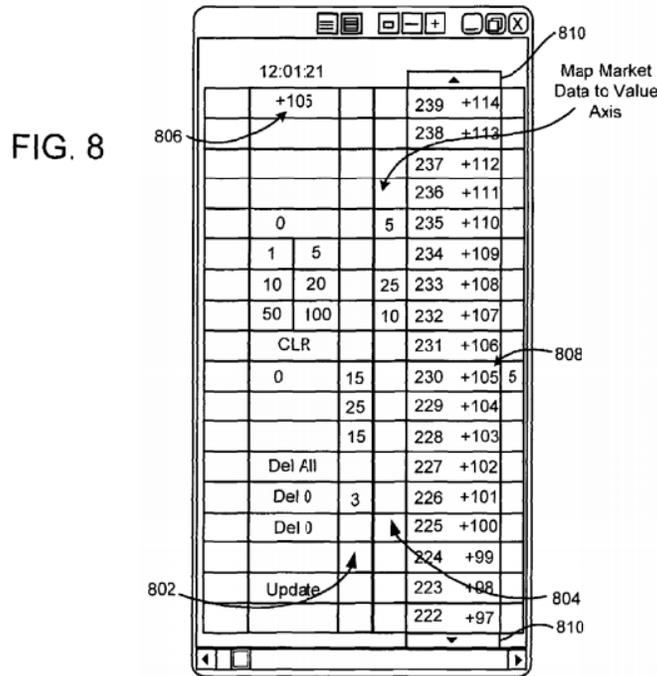

Figure 8 depicts an embodiment of a trading screen similar to trading screen 200 depicted in Figure 2, except that the value axis depicted in Figure 8 includes price derivative information. The example price derivative information shown in Figure 8 is net change. *Id.* at 9:51–10:6. Net change is the value at a current point minus value at a reference point. *Id.* at 9:63–64. For the example depicted in Figure 8, the reference point is set at yesterday's settlement price in unit of ticks (i.e., the minimum change in a price value that is set by the exchange for each tradable object), which was "125." *Id.* at 9:53–57. The last traded price, indicated by the "5" in the last traded quantity indicator column, is "230" and, thus, the net change is 230– 125 or +105 at the last traded price. *Id.* at 9:57–62. As can be seen from

Figure 8 above, a "+105" indicator is displayed next to the last traded price of "230."

The '556 patent discloses another embodiment that has profit and loss as the price derivative information. *Id.* at 13:50–51.

> If a trader bought one lot of a particular tradeable object at "230" then . . . the value axis might include at "0" associated with the price of "230," and then "+1" associated with "231," "+2" associated with "232," and so on, and "-1" associated with "229," "-2" associated with "228," and so on.

Id. at 13:50–58.

Traders open long positions in a tradeable object by agreeing to buy a quantity of units of the tradeable object or open short positions by agreeing to sell a quantity of units of the tradeable object. Pet. 7. A trader closes either position by buying or selling the same quantity of units as they currently own for the long position or are obligated to sell for a short position; thus, traders either make a profit, suffer a loss, or break even. *Id.*

D. Illustrative Claim

Petitioner challenges claims 1–22. Claims 1 and 12 are independent. Claim 1 recites a method, and claim 12 recites a computer readable medium having program code recorded thereon. Claims 2–11 depend, directly or indirectly, from claim 1, and claims 13–22 depend, directly or indirectly, from claim 12. Claim 1 of the '556 patent is illustrative of the challenged claims and is reproduced below:

> 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 computer 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 computer 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 a 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.

II. ANALYSIS

A. Requirements for Covered Business Method Patent Review

Section 18 of the AIA provides for the creation of a transitional program for reviewing covered business method patents. Section 18 limits review to persons or their privies who have been sued or charged with

infringement of a "covered business method patent," which does not include patents for "technological inventions." AIA §§ 18(a)(1)(B), 18(d)(1); *see* 37 C.F.R. § 42.302.

In compliance with 37 C.F.R. § 42.302(a), Petitioner certifies that it has been sued for infringement of the '556 patent. Pet. 14–15; Paper 5, 2.

1. *"Method or Corresponding Apparatus for Performing Data Processing or Other Operations Used in the Practice, Administration or Management of a Financial Product or Service"*

The statute defines a "covered business method patent" as

[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 . . . .

AIA § 18(d)(1); *see* 37 C.F.R. § 42.301(a). A covered business method patent can be broadly interpreted to encompass patents claiming activities that are financial in nature. Transitional Program for Covered Business Method Patents—Definitions of Covered Business Method Patent and Technological Invention, 77 Fed. Reg. 48734, 48735 (Aug. 14, 2012); *Blue Calypso, LLC v. Groupon, Inc.*, 815 F.3d 1331, 1338–41 (Fed. Cir. 1331) (determining that a patent was a covered business method patent because it claimed activities that are financial in nature); *Unwired Planet, LLC v. Google, Inc.*, 841 F.3d 1376, 1380 n.5 (Fed. Cir. 2016) (stating that "we endorsed the 'financial in nature' portion of the standard as consistent with the statutory definition of 'covered business method patent' in *Blue Calypso*"); *Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1324–25 (Fed. Cir. 2015) ("the statute on its face covers a wide range of finance-related activities").

A patent need have only one claim directed to a covered business method to be eligible for review. 77 Fed. Reg. at 48,736 (Response to Comment 8). We take claim 1 as representative.

Petitioner contends that the '556 patent is a covered business method patent because it 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. Pet. 15–19; Pet. Reply 21–23. Petitioner argues that claim 1 is directed to a financial activity because it recites a method that facilitates financial trades in an electronic market, as indicated by certain financial claim elements. Pet. 17. Those claim elements include: bid prices, ask prices, last trade prices, and calculating monetary profits or losses. *Id.* Further, Petitioner contends that the claims of the '566 patent are directed to performing "data processing or other operations," as required by the statute. Pet. Reply 21–23.

Patent Owner disagrees. Patent Owner does not dispute that the claims of the '556 patent "include financial terms," but disputes that the claims perform data processing or other operations, as required by the statute. PO Resp. 32–36. First, Patent Owner argues that "data processing" should be interpreted according to the definition of "data processing" found in the glossary for class 705 of the United States Patent Classification System, which is "[a] systematic operation on data in accordance with a set of rules which results in a significant change in the data." *Id.* at 32–33 (quoting Ex. 2121, 4 (emphasis original)). Patent Owner argues that the claims of the '556 patent are not directed to data processing under this definition because the claims are concerned with displaying information in a specific manner and not concerned with processing the information that is

displayed. PO Resp. 33. With regards to "other operations," Patent Owner asserts that the claimed invention is not directed to a business method. *Id.* at 33–34. According to Patent Owner, the legislative history "makes clear that improvements to software tools or GUIs, even if used for trading or other financial activities, were intended to be outside the scope of CBM review." *Id.* at 34 (quoting Ex. 1008, 7, 12, 157, Cong. Rec. S5428 (daily ed. Sept. 8, 2011) (statements of Sens. Schumer and Durbin)).

As an initial matter, Patent Owner's arguments concerning the legislative history are not persuasive. Although the legislative history includes certain statements that certain novel software tools and graphical user interfaces that are used by the electronic trading industry worker are not the target of § 18 of the AIA (*see* PO Resp. 34–36 (reproducing statements by Senator Durbin and Schumer)), the language of the AIA, as passed, does not include an exemption for user interfaces for commodities from covered business method patent review. Indeed, "the legislative debate concerning the scope of a CBM review includes statements from more than a single senator. It includes inconsistent views . . . ." *Unwired Planet*, 841 F.3d at 1381. For example, in contrast to the statements quoted by Patent Owner, the legislative history also indicates that "selling and trading financial instruments and other securities" is intended to be in the scope of covered business method patent review. Ex. 1008, 31 (157 Cong. Rec. S5432 (daily ed. Sept. 8, 2011) (statements of Sen. Schumer). "[T]he legislative history cannot supplant the statutory definition actually adopted . . . . The authoritative statement of the Board's authority to conduct a CBM review is the text of the statute." *Unwired Planet*, 841 F.3d at 1381. Each claimed invention has to be evaluated individually to determine if it is eligible for a

covered business method patent review. A determination of whether a patent is eligible for a covered business method patent review under the statute is made on a case-by-case basis. 37 C.F.R. § 42.301(b).

Turning to the '556 patent, we are persuaded by Petitioner that the '556 patent is a covered business method patent. According to the specification of the '556 patent, "the invention relates to electronic trading" (*id.* at 1:7) and, in particular, to displaying information for a trader to analyze when making a trade (*id.* at 2:18–33). The information relates to tradable objects, which are financial products, such as stocks, options, bonds, futures, currency, etc. *Id.* at 4:32–38. The '556 patent discloses that the invention involves processing the information for display—"[t]he traders receive the data feed, in one form or another, and their computers process the information." Ex. 1001, 1:20–22; *see also id.* at 2:59–62 ("FIG. 4 illustrates a flow diagram of an example process for generating a derivative of price axis and displaying . . . .").

The disclosed invention is reflected in claim 1 of the '556 patent, which is directed to "[a] method for displaying market information on a graphical user interface." Ex. 1001, 15:21–22. The claimed method recites steps of: receiving financial data from an electronic exchange; identifying a long or short position taken by a user with respect to a tradeable object; computing a plurality of values based on the long or short position, wherein the values represent a profit or loss if the long or short position closed at different price levels; and displaying the plurality of values along a value axis. *Id.* at 15:23–40. The claimed method also recites steps of displaying a first indicator at a first location corresponding to a first value and moving the first indicator to a second location corresponding to a second value in

response to receiving an update. *Id.* at 15:41–54. The first indicator represents a particular price based upon the price of the current best bid, current best ask, or a last traded price. *Id.* at 15:43–45.

Electronic trading is a financial service or activity. Tradable objects are financial products. A method of computing and displaying financial information for a tradable object on a graphical user interface for use in electronic trading is a method for performing data processing or other operations used in the practice, administration, or management of a financial product or service. We, thus, are persuaded by Petitioner that the '556 patent is a covered business method patent. *See* Pet. 15–19; Pet. Reply 21–23.

Patent Owner argues that the statute requires that the "data processing" cause a significant change in the data, and that data processing that merely displays the data, like the data processing disclosed in the '556 patent, is not significant. PO Resp. 32–33. Patent Owner's argument is based upon the assumption that "data processing" in the statute is interpreted according to the definition of "data processing" found in the glossary for class 705 of the United States Patent Classification System. *See* Pet. 33. Patent Owner, however, does not sufficiently explain why this definition is controlling, as opposed to the plain meaning of "data processing." *Pfizer, Inc. v. Lee*, 811 F.3d 466, 471 (Fed. Cir. 2016); *see also* Pet. Reply 22–23 (providing other definitions of "data processing"). We, thus, are not persuaded that "data processing" as recited by the statute precludes data processing for the purpose of displaying the data. As pointed out above, the '556 patent, itself, discloses that a data feed of market information received from an electronic exchange is processed to compute and display an axis of

derivative price information. Ex. 1001, 1:20–22, 2:59–62. We, thus, are not persuaded that the '556 patent does not claim "performing data processing . . . used in the practice, administration, or management of a financial product or service."

In any event, the statute does not limit covered business method patents to only those that claim methods for performing data processing used in the practice, administration, or management of a financial product or service. It includes methods for performing "other operations" used in the practice, administration, or management of a financial product or service. Claim 1's method of displaying market information on a graphical user interface is an operation used in the practice, administration, or management of a financial product or service. It is a method reciting an operation used in the practice, administration, or management of the financial service of trading a financial product.

We determine that Petitioner has shown by a preponderance of the evidence that the '556 patent is a covered business method patent.

2. Technological Invention Exception

Even if a patent includes claims that would otherwise be eligible for treatment as a covered business method, review of the patent is precluded if the claims cover only "technological invention[s]," as defined by 37 C.F.R. § 42.301(b). The definition of "covered business method patent" in § 18(d)(1) of the AIA does not include patents for "technological inventions."

To determine whether a patent is for a technological invention, we consider "whether the claimed subject matter as a whole [1] recites a

technological feature that is novel and unobvious over the prior art; and [2] solves a technical problem using a technical solution." 37 C.F.R. § 42.301(b). Both prongs must be satisfied in order for the patent to be excluded as a technological invention. *See Versata*, 793 F.3d at 1326–27.

The following claim drafting techniques, for example, typically do not render a patent a "technological invention":

> (a) Mere recitation of known technologies, such as computer hardware, communication or computer networks, software, memory, computer-readable storage medium, scanners, display devices or databases, or specialized machines, such as an ATM or point of sale device.

> (b) Reciting the use of known prior art technology to accomplish a process or method, even if that process or method is novel and non-obvious.

> (c) Combining prior art structures to achieve the normal, expected, or predictable result of that combination.

77 Fed. Reg. at 48,763–64.

Petitioner contends that the claims of the '556 patent do not recite a technological feature that is novel and unobvious over the prior art and do not solve a technical problem using a technical solution. Pet. 19–23. Petitioner argues that the claims of the '556 patent "make scant mention of any technology at all, much less novel and unobvious technology." *Id.* at 20. Petitioner also argues that the '556 patent solves the problem of traders needing to "'make quick mental calculations, using charting software, or look to other sources to provide additional insight beyond what is normally provided by an exchange or a typical trading screen,'" which is not a technical problem. Pet. 22 (citing Ex. 1001, 2:28–30). Petitioner asserts that "simply adding another well-known item of information . . . to a prior art trading screen" is not a technical solution. *Id.*

Patent Owner disputes that the claims of the '556 patent do not recite a technological feature that is novel and unobvious over the prior art and do not solve a technical problem using a technical solution. PO Resp. 36–42. According to Patent Owner, the '556 patent claims a technological feature that is novel and unobvious over the prior art because it claims a "combination of computing of a plurality of values based on position and representing a profit or loss if the position is closed at the price level, displaying the plurality of values along a value axis, and displaying and moving indicators at locations along the value axis," that is different from prior art GUIs. *Id.* at 37. In addition, Patent Owner argues that the '556 patent solves a technical problem using a technical solution because the problem of not providing certain market information, such as a price derivative, on a display is a technical problem with a GUI and not a business problem. *Id.* at 38–41.

Claim 1 of the '556 patent recites "a method for displaying market information on a graphical user interface." Ex. 1001, 15:23. The first step of the method is to receive information via a computer for a tradeable object from an electronic exchange. *Id.* at 15:24–26. The '556 patent discloses that known electronic exchanges provide data feeds to connected traders' computers. *See id.* at 1:13–30, 4:16–21. The data feeds typically include information such as best bid quantity and price; best ask quantity and price; last traded quantity; the previous day's settlement price; the open price; and the closed price. *Id.* at 1:30–43. The '556 patent discloses that trading screens or GUIs that display the information from the data feed are known. *Id.* at 1:45–2:17; Figs. 1–2. In particular, the '556 patent discloses that one known trading screen or GUI displays market information along a value axis

having a range of price levels. *Id*. at 2:5–17; Fig. 2. Claim 1 requires a step of identifying via a computer a long or short position taken by a user with respect to the tradeable object and further defines the long or short position. *Id.* at 15:27–33. The '556 patent discloses that a user chooses a particular price derivative to display by inputting information through a GUI or command-line entry. *See id.* at 8:37–9:6; Fig. 5; *see also* Pet. 22 (citing Ex. 1005, 6:56–57, Fig. 19). The '556 patent discloses that inputting devices such as a keyboard or mouse are conventional. Ex. 1001, 6:26–31. In addition, the '556 patent states:

> It is further understood that the programs, processes, method and apparatus described herein are not related or limited to any particular type of computer or network apparatus (hardware or software) unless indicated otherwise. 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 here.

Ex. 1001, 14:63–15:2. The '556 patent, itself, indicates that the technological features recited by claim 1 are known technologies.

We determine that at least claim 1 of the '556 patent does not recite a technological feature that is novel and unobvious over the prior art, as required by the first prong of the test to determine whether a patent is for a technological invention. Notwithstanding that both prongs must be satisfied in order for a patent to be excluded as a technological invention, we analyze whether the '556 patent satisfies the second prong—whether it solves a technical problem using a technical solution.

The '556 patent discloses that:

> [i]n addition to viewing traditional-style trading screens, 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. For instance, they might make quick mental calculations, use charting software, or look to other sources to provide additional insight beyond what is normally provided by an exchange or a typical trading screen. Some even trade directly off this information. Regardless of what source or sources a trader might use, it may be too difficult for the trader to quickly assimilate this highly relevant information from diverse and often unrelated sources or even effectively process all of the information to make informed trades.

Ex. 1001, 2:18– 30. The '556 patent discloses that such information can be profit and loss information. *Id.* at 13:50–14:3.

As can be seen from the above, the problem disclosed in the '556 patent is that traders need additional information on a trading screen to effectively analyze the market. As Petitioner points out, this is not a technical problem but a business problem. *See* Pet. 19, 22–23.

Patent Owner disputes that the problem is a business problem and argues that the problem is a technical one. PO Resp. 38–40. Patent Owner argues that the problem solved by the '556 patent is that "highly relevant information is not accessible or understandable in an efficient manner" and asserts that the '556 patent solves this problem by providing a GUI that "more effectively provid[es] highly relevant information to a user in a way that allows them to understand and effectively process it." *Id.* at 40. Patent Owner asserts that "[t]here can be no dispute that GUIs are technological in nature." *Id.* at 37.

Patent Owner's argument is unpersuasive. The inaccessibility or understandability of information to a trader is not a technical problem. A GUI that displays market information is not a technical solution to a technical problem. GUIs that display market information in similar

arrangements were known. *See* Ex. 1001, 2:5–17; Fig. 2 (reproduced above). Mere recitation of known technologies and recitations of the use of known prior art technology to accomplish a process or method, even if that process or method is novel and non-obvious, do not render a patent a technological invention. 77 Fed. Reg. at 48,763–64. Additionally, we note that although independent claim 12 is substantially similar to claim 1, claim 12 does not recite a GUI.

Patent Owner proffers the testimony of Eric Gould-Bear and Dan Olsen to show that GUIs are technology and the claimed invention is a technical solution to a technical problem. *See, e.g.*, PO Resp. 37 (citing Ex. 2168 ¶¶ 25–28, Ex. 2174 ¶¶ 6–27, testimony of Eric Gould-Bear and Dan Olsen, respectively). The testimony of Mr. Gould-Bear and Dr. Olsen is unpersuasive because, although their testimony addresses related patents, it does not specifically address the claimed invention of the '556 patent. For example, Mr. Gould-Bear's testimony is directed to U.S. Patent Nos. 6,766,304, 7,767,411, and 6,772,132. *See* Ex. 2168 ¶ 25 (addressing the inventiveness of "TT Patents"), ¶ 1 (defining "TT Patents" as U.S. Patent Nos. 6,766,304; 7,767,411; 6,772,132). Likewise, Dr. Olsen's testimony is related to U.S. Patent No. 6,766,304 and not the claimed invention of the '556 patent. *See* Ex. 2174 ¶ 6. The claims of U.S. Patent Nos. 6,766,304, 7,767,411, and 6,772,132 recite features not recited by the claims of the '556 patent. *See, e.g.*, Ex. 3006, 12:2–27 (claim 1 of U.S. Patent No. 6,772,132 reciting, for example, static display of prices).

We determine that at least claim 1 of the '556 patent does not recite a technical solution to a technical problem, as required by the second prong of the test to determine whether a patent is for a technological invention. As

the '556 patent is a covered business method patent and is not precluded for being a technological invention, the '556 patent is eligible for covered business method patent review.

B. Claim Construction

In a covered business method patent review, the Board interprets claim terms in an unexpired patent according to the broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.300(b); *see Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016) (upholding the use of the broadest reasonable interpretation standard). Under that standard, and absent any special definitions, we give claim terms their ordinary and customary meaning, as they would be understood by one of ordinary skill in the art at the time of the invention. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). Any special definitions for claim terms must be set forth with reasonable clarity, deliberateness, and precision. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

1. *"computer readable medium having program code recorded thereon"*

Petitioner proposes that the broadest reasonable interpretation of the claim term "computer readable medium," recited by claim 12, is "an intervening substance through which something else is transmitted or carried on." Pet. 24. According to Petitioner, this is consistent with the '556 patent which discloses that a computer readable medium could be "any medium that participates in providing instructions to processor for execution." *Id.*

(quoting Ex. 1001, 5:65–67). Petitioner, thus, argues that computer readable medium includes transitory media, such as a signal. Pet. 24, 47.

Patent Owner argues that the addition of the phrase "having program code recorded thereon" limits the claims to non-transitory media, because the use of the word "recorded." PO Resp. 43–44. According to Patent Owner, a technical definition of "recording" is "any process for preserving signals, sounds, data or other information for future reference or reproduction, such as disk recording, facsimile recording, ink-vapor recording, magnetic tape or wire recording, and photographic recording." *Id.* (quoting Ex. 2133, 1665). Patent Owner states "[a] signal cannot preserve itself, and thus the claims cannot cover a signal *per se*." PO Resp. 44 (citing Ex. 2168 ¶ 47). Patent Owner asserts that "[t]he specification clearly distinguishes between media used for transmission and media used for storage." *Id.* (citing Ex. 1001, 5:62–6:4). Patent Owner, thus, implies that storing information is the same or akin to recording information on media.

The specification of the '566 patent does not disclose recording information on a computer readable medium. It does, however, disclose storing information on computer readable medium. In this regard, the '556 patent states:

> It is further understood that memory includes a device where information can be *stored (temporarily or otherwise) on any computer readable medium and retrieved. The term computer readable medium, as used herein, refers to any medium that participates in providing instructions to processor for execution.* Such a medium may take many forms, including but not limited to, non-volatile media, volatile media, and *transmission media*. Non-volatile media includes, for example, optical or magnetic disks, such as storage device. Volatile media includes dynamic

>memory, such as main memory or RAM (sometimes referred to a "random access memory"). Common forms of computer-readable media include, for example, a floppy disk, a flexible disk, hard disk, magnetic tape, or any other magnetic medium, a CD-ROM, any other optical medium, punch cards, paper tape, any other physical medium with patterns of holes, a RAM, a PROM, and EPROM, a FLASH-EPROM, and any other memory chip or cartridge, or *any other medium from which a computer can read*.

Ex. 1001, 5:62–6:4 (emphases added). As can be seen from the above, the '556 patent does not "clearly distinguish" between media used for transmission or media used for storage. Contrary to Patent Owner's argument, the '556 patent indicates that information can be stored, albeit temporarily, on any computer readable medium, including transmission media.

Patent Owner asserts that the meaning of "recording" is "any process for preserving signals, sounds, data or other information for future reference or reproduction, such as disk recording, facsimile recording, ink-vapor recording, magnetic tape or wire recording, and photographic recording." PO Resp. 43–44 (quoting Ex. 2133, 1665). Another definition of the verb "record" is "to set down in writing" or "to cause (as sound, visual images, or data) to be registered on something (as a disc or magnetic tape) in reproducible form." Inst. Dec. 19 (citing Ex. 3001 (Merriam-Webster's Collegiate Dictionary, 10th ed. (definition of record))). Neither of these definitions preclude recording data or information on a signal. A signal with encoded or embedded data comports with these definitions because data can be preserved or registered on a signal, albeit temporarily, as disclosed in the '556 patent (Ex. 1001, 5:62–69).

Patent Owner's declarant Mr. Gould-Bear testifies that "the act of recording something on or in a medium is intended to give permanence to the data being recorded, such that it can later be accessed and retrieved" and a propagated signal or other transmission medium would be unsuitable for that purpose. Ex. 2168 ¶ 47. Mr. Gould-Bear's testimony is unpersuasive because it does not address the '556 patent disclosure that information can be stored, albeit temporarily, on any computer readable medium, including transmission media (Ex. 1001, 5:62–6:4).

In *Ex parte Mewherter,* a Board precedential decision, the Board determined that under the broadest reasonable construction standard, a similar claim term "machine readable storage medium"[3] encompasses transitory medium, including signals, and is not limited to a medium for permanently storing information. *Ex parte Mewherter,* 107 USPQ2d 1857, 1859–63 (PTAB 2013) (precedential). Similar to Patent Owner, Appellant in *Mewherter* argued that the use of the word "storage" necessarily excluded signals from the scope of the claim because, as defined in a technical dictionary, a storage medium is any device or recording medium into which data can be copied and held until some later time. *Id.* at 1859, 1862. The Board determined that "a signal with embedded data fully comports with this definition, for data can be copied and held by a transitory recording medium, albeit temporarily, for future recovery of the embedded data." *Id.* at 1862.

Patent Owner argues that "[t]he evidence of other applicants acting as their own lexicographer in *Ex parte Mewherter* (appeal 2012-007692)

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[3] "The term 'machine-readable medium' is equivalent to the more commonly used term 'computer-readable medium.'" *Mewherter,* 107 USPQ2d at 1858, n.2.

cannot trump the plain meaning of this term as person of ordinary skill in the art would have understood it, unless there is a disclaimer or redefinition in the specification." PO Resp. 44 (citation omitted). In *Mewherter,* the Board quoted to a number of published patent applications as extrinsic evidence of the ordinary and customary meaning of "computer readable storage medium." *Id.* at 1860–62. For example, the Board quoted U.S. Patent Application Publication No. 20060265749 A1, which states "[t]his program can be recorded on a computer-readable storage medium . . . Such a storage may include . . . media such as carrier waves." *Id.* at 1861. Patent Owner's argument is misplaced. In *Mewherter*, the Board relied upon the published patent applications as evidence of the ordinary and customary meaning of "computer readable storage medium," as understood by those of ordinary skill in the art after the year 2002. *See Mewherter,* 107 USPQ2d at 1860 n.5.

Patent Owner also argues that "the USPTO guidance relied upon" is directed to examination in a pre-issuance context and, thus, should not be relied upon in a post-issuance context and that "the USPTO's guidance on clarifying amendments during examination should not be extended to post-grant proceedings." PO Resp. 43. It is not clear from Patent Owner's argument to what USPTO guidance Patent Owner is referring as Patent Owner provided no citation to any USPTO guidance. *See id.* Petitioner cites to § 2106 of the Manual of Patent Examining Procedures ("MPEP"). Pet. 47 (citing Ex. 1012). Section 2106 of the MPEP states that if the broadest reasonable interpretation of machine readable medium in light of the specification encompasses transitory forms of signal transmission, the claims should be rejected under 35 U.S.C. § 101 as failing to claim statutory subject matter. *Ex parte Mewherter* refers to the guidance in *Subject Matter*

Eligibility of Computer-Readable Media, 1351 Off. Gaz. Pat. Office 212
(Feb. 23, 2010). *Mewherter,* 107 USPQ2d at 1859. *Subject Matter
Eligibility of Computer-Readable Media* states that the broadest reasonable
interpretation of computer readable medium claims may encompass
transitory propagating signals *per se* and suggests clarifying the claim by
adding the limitation "non-transitory" to the claim. 1351 Off. Gaz. Pat.
Office 212. Inasmuch as Patent Owner's argument is directed to either
§ 2106 of the MPEP or *Subject Matter Eligibility of Computer-Readable
Media*, Patent Owner's argument is unpersuasive. Although the guidance
provided in § 2106 of the MPEP and *Subject Matter Eligibility of Computer-
Readable Media* are not binding upon the Board, Patent Owner provides no
persuasive reason for the Board to depart from this guidance. Like in a pre-
issuance context, during covered business method patent review, claims are
given their broadest reasonable interpretation in light of the specification.
37 C.F.R. § 42.300(b); *see Cuozzo*, 136 S. Ct. at 2144–46.

After consideration of all the arguments and evidence of record, we
determine that the broadest reasonable interpretation of "computer readable
medium have program code recorded thereon," in light of the specification
of the '556 patent, is any medium that participates in providing instructions
to a processor for execution and having program code recorded thereon.

2. Other Terms

We do not need to construe any other claim terms for purposes of our
decision.

D. Patent Subject Matter Eligibility

Petitioner contends that claims 1–22 are unpatentable under 35 U.S.C. § 101 as being directed to ineligible subject matter. Pet. 25–47. Patent Owner disagrees. PO Resp. 6–44.

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 Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2354 (2014); *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).

Claims 1–12 recite a method, which falls into the process category of patent-eligible subject matter of § 101. Claims 12–22 recite a computer readable medium having program code recorded thereon. When given the

broadest reasonable interpretation, in light of the specification of the '556 patent, claims 12–22 encompass subject matter that falls into the manufacture category (e.g., non-transitory media), as well as subject matter that falls outside the four statutory classes of subject matter (e.g., propagating signals).

1. Subject Matter Outside the Four Statutory Class of Subject Matter

First, we turn to Petitioner's contention that claims 12–22 are unpatentable under 35 U.S.C. § 101 because they encompass subject matter that falls outside the four statutory categories of patentable subject matter. Pet. 46–47.

Claims 12–22 are directed to "[a] computer readable medium having program code recorded thereon." *See* Ex. 1001, 16:44–45. Petitioner contends that, when given the broadest reasonable interpretation, the "computer readable medium" of claims 12–22 includes a medium encompassing transitory, propagating signals and that transitory, propagating signals are not statutory subject matter. Pet. 47 (citing *In re Nuijten*, 500 F.3d 1346, 1355 (Fed. Cir. 2007). Petitioner, thus, argues that claims 12–22 are unpatentable under 35 U.S.C. § 101. *Id.*

Patent Owner disputes that claims 12–22 encompass transitory, propagating signals because the broadest reasonable interpretation of the claim limitation "computer readable medium having program code recorded thereon" limits the claim to non-transitory medium and precludes transitory, propagating signals. PO Resp. 43–44.

Above, we determine that the broadest reasonable interpretation of "computer readable medium having program code recorded thereon," in

light of the specification of the '556 patent, is any medium that participates
in providing instruction to a processor for execution and having program
code recorded thereon. Given this interpretation, we are persuaded by
Petitioner that claims 12–22 encompass transitory, propagating signals. Pet.
46–47. Transitory, propagating signals are not covered by the four statutory
classes of subject matter of 35 U.S.C. § 101. *In re Nuijten,* 500 F.3d at
1352.

Petitioner has shown sufficiently that claims 12–22 are
unpatentable under 35 U.S.C. § 101 as encompassing subject matter
that falls outside the four statutory categories of patentable subject
matter.

2. Abstract Idea

Next, we turn to Petitioner's contention that claims 1–22 are
unpatentable under 35 U.S.C. § 101 as being directed to an abstract idea.
Pet. 25–46. We take independent claim 1 as representative.[4]

Petitioner argues that claim 1 encompasses the abstract idea of
"providing a trader with financial information to facilitate market trades,"
which is a "fundamental economic practice long prevalent in our system of
commerce." Pet. 27 (quoting *Alice*, 134 S. Ct. at 2357). Petitioner further
argues that providing a trader with financial information to facilitate market
trades is subject matter that "can be performed in the human mind, or by a

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[4] Independent claim 12, the only other independent, corresponds to claim 1
in that it recites a computer readable medium having program code that
causes a computer to execute the method substantially the same as the
method of claim 1. Thus, claim 1 is representative of claim 12.

human using a pen and paper." *Id.* at 29 (quoting *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.2d 1366, 1372 (Fed. Cir. 2011)). To support its argument that the claims are directed to an abstract idea because it can be performed in a trader's mind, Petitioner directs attention to a description in the background of the invention section of the '556 patent indicting that "the process of calculating additional values (e.g., profit / loss) to be used along with other market information was conventionally performed by 'mental calculations' or other manual means." Pet. 29–30 (citing Ex. 1001, 2:22–23). Lastly, Petitioner argues that the claims do not solve any technological problem but rather are directed to solving a business problem, i.e., traders having to consult multiple different sources of information when making trading decisions. Pet. 28–29 (citing Ex. 1001, 2:18–23).

"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). 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").

Notwithstanding Patent Owner's arguments, which we address below, we determine that Petitioner has shown[5] that claim 1 is directed to the abstract idea of providing a trader with financial information to facilitate market trades, which is a fundamental economic practice.

Claim 1 recites in the preamble a method for displaying market information on a graphical user interface. Ex. 1001, 15:22–23. The method steps include receiving current highest bid price and current lowest ask price for a tradeable object; identifying a long or short position taken by a user; computing a plurality of values, which represent a profit or loss if the long or short position is closed at a range of price levels; displaying the values along a value axis; displaying an indicator or a current best bid, current best ask, or a last traded price along the value axis; and moving the indicator in response to receipt of updated information. *Id.* at 15:23–54. In essence, all that claim 1 requires was well known in the prior art many years before the claimed invention. *See id.* at 1:13–2:33. We agree with Petitioner that claim 1 encompasses the abstract idea of providing a trader with financial information to facilitate market trades, a fundamental economic practice, and steps that can be performed using pen and paper, or even in a trader's mind. *See* Pet. 27–30.

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[5] As explained above, determining whether a claim is directed to an abstract idea calls upon us to look at the focus of the claimed advance over the prior art. In order to do so, we must make findings of fact as to the prior art at the time of the invention. Those facts must be supported by a preponderance of the evidence. 35 U.S.C. § 326(e).

When we compare claim 1 at issue to those claims already found to be directed to an abstract idea in previous cases, we are persuaded that claim 1 is more similar to those claims found to encompass an abstract idea than those determined not to encompass an abstract idea. Claim 1 is similar to the claims in *Electric Power*, which did "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." *Elec. Power Grp., LLC v. Alstom S.A.,* 830 F.3d 1350, 1353 (Fed. Cir. 2016).

In comparison, claim 1 is unlike the claims at issue in *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014), *McRo, Inc. v. Bandai Namco Games America Inc.*, 837 F.3d. 1299 (Fed. Cir. 2016), 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 *McRo, Inc. v. Bandai Namco Games America Inc.*, 837 F.3d. 1299 (Fed. Cir. 2016), 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 require merely organizing and displaying market information. 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, claim 1 is directed to a fundamental economic principle or a longstanding commercial practice and not directed to an improvement in the computer.

We have considered all of Patent Owner's arguments regarding why the claims are not directed to an abstract idea but are not persuaded by such arguments. PO Resp. 6–21. Patent Owner argues that Petitioner oversimplifies the claims and ignores the structure and functionality recited in the claims, which Patent Owner deems to be functionality of the claimed GUI itself. *Id*. at 11–16. We disagree that Petitioner has oversimplified the claims and ignores the structure and functionality recited in the claims. Petitioner's arguments are commensurate in scope with the breadth of the claims. For example, independent claim 1 only recites that the method is for displaying market information on a GUI and claims 12–22 do not recite a GUI at all.

Nor are we persuaded by Patent Owner's arguments that the claimed GUI improves the computer because it allows the computer to be used in new and inventive ways. PO Resp. 10–16. Patent Owner's arguments are general and not specific to the claim language before us. In any event, to the extent that Patent Owner asserts that claims that require a GUI are automatically patent eligible, that assertion is not commensurate with our

reviewing court's holdings on the issue of patent eligibility. For example, the claim at issue in *Affinity Labs* 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*, 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. 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. *Apple, Inc., v. Ameranth, Inc.*, 842 F.3d 1229, 1234 (Fed. Cir. 2016). 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 and determined that the claims are 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. The same is true here in that the claims are not directed to any particular way of programming or designing software, but merely claim the resulting system and not any specific improvement in the way a computer operates.

Patent Owner argues that the claims are not to an abstract idea because they are not directed to a fundamental idea, longstanding commercial practice, a business method, or a generic GUI. PO Resp. 16–20. Patent Owner argues that in contrast to many other cited cases, the claims here are directed to the specific structure, make-up, and functionality of a particular GUI. *Id.* Patent Owner argues that "the claimed GUI tool builds on and is an improvement to trading screens like those in the '132 patent" and, thus, the claims of the '556 patent are even more clearly patent eligible.

id. at 6–9; *see also* PO Br. 3–4. The claims of the '556 patent, however, do not build on and are broader in some aspects than the claims of the '132 patent. For example, the claims of the '556 patent do not recite the static display of prices feature claimed by the '132 patent. The '132 patent was involved in *Trading Technologies International, Inc.*, v. *CQG, INC.*, No. 2016-1616, 2017 WL 192716 (Fed. Cir. Jan. 18, 2017). In that case, the Federal Circuit referred to even those narrower claims as on the line between patent eligibility and ineligibility (*see id.* at *4 (noting the "close question[] of eligibility")). The specification of the '556 patent is different from that of the '132 patent, and does not claim priority to the applications that matured into the patents involved in that decision. Thus, comparing the claims of the patents involved in *Trading Technologies* is not particularly helpful here. *Trading Technologies*, 2017 WL 192716 at *2.

2. Inventive Concept

To be patent eligible, a claim to an otherwise 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." *Id.* at 1298.

Petitioner argues that the claimed steps of receiving current highest bid price and current lowest ask price for a tradeable object; identifying a long or short position taken by a user; computing a plurality of values, which represent a profit or loss if the long or short position is closed at a range of

price levels; displaying the values along a value axis; displaying an indicator of a current best bid, current best ask, or a last traded price along the value axis; and moving the indicator in response to receipt of updated information, constitute "well-understood, routine, conventional activity." Pet. 30–32. Petitioner further argues that the claims are not rooted in computer technology because they do not overcome a problem specifically arising in the realm of computers or computer networks. *Id.* at 44–46 (citing *DDR Holdings*, 773 F.3d at 1257).

Notwithstanding Patent Owner's arguments, which we address below, we are persuaded that Petitioner has shown that none of the additional claim elements in claim 1 transforms the nature of the claims into a patent-eligible application. Claim 1 of the '556 patent requires "a method for displaying market information on a graphical user interface." Ex. 1001, 15:23. The '556 patent discloses that trading screens or GUIs that display market information were known. *Id.* at 1:45–2:17; Figs. 1–2. The '556 patent's Figure 2 depicts an example of one known trading screen or GUI that displays market information along a value axis having a range of price levels. *Id.* at 2:5–17; Fig. 2. The use of a GUI to display market information is a well-understood, routine, conventional activity that does not add significantly more to the abstract idea. *Mayo*, 132 S. Ct. at 1298. Moreover, 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. v. Active Network, Inc.*, 790 F.3d 134, 1348–1349 (Fed. Cir. 2015). A recitation of a generic GUI merely limits the use of the abstract idea to a particular technological environment. "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).

The first step of the method is to receive information via computer for
a tradeable object from an electronic exchange. Ex. 1001, 15:24–26. The
'556 patent discloses that known electronic exchanges provide data feeds to
traders' computers. *See id.* at 1:13–30, 4:16–21. The data feeds typically
include information such as best bid quantity and price; best ask quantity
and price; last traded quantity; the previous day's settlement price; the open
price; and the closed price. *Id.* at 1:30–43. This step is nothing more than
routine data gathering and does not transform the abstract idea into a patent-
eligible invention. *See CyberSource Corp. v. Retail Decisions, Inc.*, 654
F.3d 1366, 1370 (Fed. Cir. 2011).

Claim 1 requires a step of identifying via computer a long or short
position taken by a user with respect to the tradeable object and further
defines the long or short position. Ex. 1001, 15:27–33. The '556 patent
discloses that a user chooses a particular price derivative to display by
inputting information through a GUI or command-line entry. *See id.* at
8:37–9:6; Fig. 5. The '556 patent discloses that inputting devices such as a
keyboard or mouse are conventional. *Id.* at 6:26–31. This step also is
nothing more than routine data gathering and does not transform the abstract
idea into a patent-eligible invention.

Claim 1 also requires a step of computing via a computer a plurality
of values based on the long or short position. The values represent a profit
or loss if the long or short position is closed at a price level among a range of
price levels. The '556 patent discloses that traders often make quick mental
calculations, use charting software, or look to other sources to analyze pieces

of information (e.g., price derivatives) not normally provided in an electronic exchange's data feed. *Id.* at 2:18–25. The '556 patent discloses that profit and loss is one such piece of information and that "there are many ways to measure [profit and loss]." *Id.* at 13:51–52; *see also id.* at 2:18–25, 13:17–20 (disclosing that one of ordinary skill in the art can apply the disclosed principles to any values on an axis), 3:33–43 (disclosing that many different price derivatives would be "readily apparent to one of ordinary skill in the art"). Using a computer to perform known calculations of profit or loss does not transform the abstract idea into a patent-eligible invention.

Claim 1 further requires a step of displaying via computer a first indicator, which represents a particular price based upon the current best bid, current best ask, or last traded price, at a location corresponding to a first value along the value axis and a step of moving the first indicator to a second location corresponding to a second value along the value axis in response to receipt of an update to the particular price. The '556 patent discloses a prior art trading screen, or GUI, that displays market information along a value axis having a range of price levels that move as the market updates. *Id*. at 2:5–17; Fig. 2. Displaying an indicator of market information relative to a value axis is routine and conventional activity and does not transform the abstract idea into a patent-eligible invention.

Given the above, we determine that the individual elements of claim 1 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.

Patent Owner argues that the claims pass part two of *Alice* because they recite an inventive concept. PO Resp. 20–31. But in making such

arguments, Patent Owner does not explain sufficiently what about the claims qualifies as an inventive concept. For example, Patent Owner describes the claims as reciting "structural details of a specific GUI that functions differently from prior art GUIs to solve GUI-centric problems." *Id.* at 23. Patent Owner goes on to argue that the "solution to these problems is not only rooted in computer technology, but is *new computer technology itself*; a new GUI with the claimed structure, make-up, and functionality." *Id.* (emphasis added). Patent Owner does not explain sufficiently what about the claims qualifies as an inventive concept and as discussed above the individual elements of the claims do not transform the nature of the claims 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 claims simply recite the use of a generic computer with routine and conventional functions. Further, considering all of the elements as an ordered combination, we determine that the combined elements also do not transform the nature of the claims into a patent-eligible application.

Petitioner argues, and we agree, that the additional elements recited by dependent claims 2–11 and 13–22 do not add significantly more to the abstract idea so as to render the claims patent-eligible. Pet. 34–36. Patent Owner makes no specific arguments directed to the additional elements of the dependent claims.

Petitioner has shown sufficiently that claims 1–22 of the '556 patent are not directed to patent eligible subject matter under 35 U.S.C. § 101.

III. MOTION TO EXCLUDE

Patent Owner moves to exclude certain deposition testimony of its expert Dr. Olsen under Federal Rule of Evidence 403 because allegedly its probative value is substantially outweighed by a danger of unfair prejudice and confusing the issues as the result of vague questioning. Mot. 1. The deposition testimony is found on pages 57 and 58 of Exhibit 1018 and is relied upon in Petitioner's Reply (Pet. Reply, 6).

We did not and need not consider the specific pages objected to in Exhibit 1018. We have determined that Petitioner has demonstrated that the challenged claims are unpatentable without considering the specific objected to pages or the portion of Petitioner's Reply that relies on such evidence. Accordingly, we *dismiss* Patent Owner's Motion to Exclude as moot.

IV. CONCLUSION

For the foregoing reasons, we determine that Petitioner has shown, by a preponderance of the evidence, that claims 1–22 of the '556 patent are patent-ineligible under 35 U.S.C. § 101.

V. ORDER

For the reasons given, it is:

ORDERED that claims 1–22 of the '556 patent are patent-ineligible under 35 U.S.C. § 101;

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

FURTHER ORDERED that, because this is a Final Written Decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

CBM2015-00172
Patent 7,783,556 B1

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