

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

INTERACTIVE BROKERS LLC; CQG, INC.; CQG, LLC (f/k/a CQGT, LLC);
NINJATRADER GROUP, LLC; NINJATRADER, LLC;
TRADESTATION GROUP, INC.; TRADESTATION SECURITIES, INC.; and
TRADESTATION TECHNOLOGIES, INC.,
Petitioner,

v.

CHART TRADING DEVELOPMENT, LLC,
Patent Owner.

Case CBM2016-00038
Patent 7,113,190 B2

Before BRIAN J. McNAMARA, FRANCES L. IPPOLITO, and
KEVIN W. CHERRY, *Administrative Patent Judges*.

McNAMARA, *Administrative Patent Judge*.

DECISION
Institution of Covered Business Method Patent Review
37 C.F.R. § 42.208

BACKGROUND

Pursuant to 35 U.S.C. § 321 and section 18 of the AIA,¹ Interactive Brokers LLC; CQG, INC.; CQG, LLC (f/k/a CQGT, LLC); NinjaTrader Group, LLC; NinjaTrader, LLC; TradeStation Group, Inc.; TradeStation Securities, Inc.; and TradeStation Technologies, Inc. (collectively, “Petitioner”) filed a Petition, Paper 4 (“Pet.”), requesting that we institute a covered business method patent review of claims 1–42 (the “challenged claims”) of U.S. Patent No. 7,113,190 B2 (the ’190 Patent). Petitioner contends that pursuant to 37 C.F.R. §§ 42.301 and 42.304(a) the ’190 Patent meets the definition of a covered business method patent and does not qualify as a technological invention. Pet. 14–23. Petitioner also contends that claims 1–42 fail to comply with the patentable subject matter requirements of 35 U.S.C. § 101. Pet. 28–40. Petition further contends that the challenged claims are unpatentable under 35 U.S.C. § 103 for the reasons outlined in the Petition. Pet. 40–76.

Chart Trading Development LLC (“Patent Owner”) filed a Patent Owner Preliminary Response contesting Petitioner’s assertion that the claims are not drawn to a technological invention and the grounds on which Petitioner challenges the claims. Paper 11 (“Prelim. Resp.”). The standard for instituting a covered business method patent review is the same as that for a post-grant review. AIA § 18(a)(1).

After reviewing the evidence before us at this time, we are persuaded that Petitioner has shown it is more likely than not that at least one of the challenged claims is unpatentable. 35 U.S.C. § 324(a). Therefore, we institute a covered business method patent review of claims 1–42.

¹ Leahy-Smith America Invents Act, Pub. L. 112-29, 125 Stat. 284, 329 (2011) (“AIA”).

PENDING LITIGATIONS

A person may not file a petition under the Transitional Program for Covered Business Method Patents unless the person or the person's real party-in-interest or privy has been sued for infringement or has been charged with infringement under that patent. *See* AIA § 18(a)(1)(B). The Petitioner entities represent that they have been sued for infringing the '190 Patent in *Chart Trading Development, LLC v. Interactive Brokers LLC*, No. 6:15-cv-01135-JRG-JDL (E.D. Tex. Dec. 3, 2015), *Chart Trading Development, LLC v. CQG, Inc.*, No. 6:15-cv-01133-JRG-JDL (E.D. Tex. Dec. 3, 2015), *Chart Trading Development, LLC v. NinjaTrader Group, LLC*, No. 6:15-cv-01134-JRG-JDL (E.D. Tex. Dec. 3, 2015), *Chart Trading Development, LLC v. TradeStation Group, Inc.*, No. 6:15-cv-01136-JRG-JDL (E.D. Tex. Dec. 3, 2015). Pet. 25.

REAL PARTIES-IN-INTEREST

Petitioner identifies the following real parties-in-interest: Interactive Brokers LLC, CQG, Inc., CQG, LLC (f/k/a CQGT, LLC), NinjaTrader Group, LLC, NinjaTrader, LLC, TradeStation Group, Inc., TradeStation Securities, Inc., TradeStation Technologies, Inc., and IBFX, Inc. Pet. 24–25.

Patent Owner contends that the Petition is defective and should be denied, because Petitioner has not named certain “customer-defendants” in the pending litigations as real parties-in-interest in this proceeding. Prelim. Resp. 9–10 (citing Ex. 1019–1022). The burden of proof is on Patent Owner to show that an unnamed party is a real party-in-interest. *See* 157 Cong. Rec. S1375 (daily ed. March 8, 2011) (statement of Senator Kyl) (“The Office anticipates that patent owners will take the initiative in determining whether a petitioner is the real party in interest or privy of a party that is barred from instituting a proceeding with respect

to [a] patent.”). Patent Owner contends that in this case the “unique facts clearly establish that the customer-defendants are RPIs because they possess the requisite ‘continuing relationship’ and ‘identifiable on-going interest in a review,’ as required by the Board.” Prelim. Resp. 13 (citing *JP Morgan Chase & Co. v. Maxim Integrated Prods., Inc.*, Case CBM2014-00179, slip op. at 11 (Feb. 20, 2015) (Paper 11)). Patent Owner’s citation of *JP Morgan Chase* is inapposite, as in that case the panel rejected the patent owner’s contentions that PNC was a real party-in-interest because PNC did not exercise sufficient control over the Petition. *JP Morgan Chase*, slip op. at 12–13. In this case, Patent Owner has presented no evidence that the customer-defendants have exercised any control over this proceeding.

In addition, in *JP Morgan Chase* the panel noted:

a petitioner and a non-party’s status as co-defendants and co-members of a joint defense group is not alone sufficient to render the non-party a real party in interest. Trial Practice Guide, at 48,760; *see, e.g., Petroleum Geo-Servs. Inc. v. WesternGeco LLC*, Case IPR2014-00687, slip op. at 16 (PTAB Dec. 15, 2014) (Paper 33) (holding petitioner and non-party’s shared interest in invalidating patent at issue, “collaborat[ion] together, and invo[cation of the] common interest privilege with respect to sharing potentially invalidating prior art references” was insufficient to render non-party a real party in interest).

Id. at 13 (alterations in original). Patent Owner’s argument that “the customer-defendants are financially interested in the outcome of the litigation because a judgment of infringement and validity in favor of CTD may result in damages or an injunction against them” (Prelim. Resp. 15) is not only inconsistent with *JP Morgan Chase*, but effectively would classify all patent infringement defendants as real parties in interest.

Nevertheless, according to Patent Owner, the customer-defendants have an identifiable interest in this review, i.e., the customer-defendants benefitted from a stay of the litigation after, jointly with Petitioner, representing to the district court that “all Defendants agree to be bound by the AIA estoppel provision as to all patents presently asserted against them.” *Id.* at 12–13, 15–16 (emphasis omitted) (citing Exs. 2007, 2008, 2009). Patent Owner asserts that in making this representation to the district court, the customer-defendants “effectively admitted they are RPIs, i.e., that they desire review of the ’190 patent, have a financial interest in the outcome of this CBM, and agree to be bound by all estoppel provisions imposed by the AIA on a CBM petitioner.” *Id.* at 13. Patent Owner argues on the one hand that the customer-defendants have admitted to the court that they are estopped under the AIA to the same degree as Petitioner, but that Petitioner has not identified these customer-defendants as RPIs subject to estoppel before the patent office. *Id.* at 17. On the other hand, Patent Owner argues that, because the customer-defendants will be bound by the AIA estoppel associated with this CBM proceeding, which necessarily includes both district court and Patent Office estoppels, Petitioner is “judicially estopped” from arguing otherwise to this Board. *Id.* at 19.

Patent Owner conflates the issues of real party-in-interest and the scope of the estoppel agreed upon in the district court. The latter issue is not before this panel. One of the core functions of the real party-in-interest and privies requirement is to assure proper application of the statutory estoppel provisions, i.e., to protect patent owners from harassment via successive petitions by the same or related parties and to prevent parties from having a second bite at the apple. Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,759 (Aug. 14, 2012). We address that highly fact dependent question on a case by case basis. *Id.* The facts

presented in the Preliminary Response do not demonstrate that the relationship between the Petitioner and the customer-defendants is sufficiently close such that, in the absence of their voluntary estoppel stipulation in the district court, both the Petitioner and the customer-defendants should be bound by the trial outcome and associated estoppels. *Id.* There are multiple factors relevant to the question of whether a non-party may be recognized as a real party-in-interest or privy, among them whether the non-party has the actual measure of control or opportunity to control that reasonably might be expected between two formal co-parties. *Id.* Each customer-defendant's determination that its best interests lie in obtaining a litigation stay by agreeing to the application of all AIA estoppel provisions implicated by the outcome of this CBM proceeding does not demonstrate any customer-defendant has any measure of control or influence over Petitioner's conduct of this proceeding.

Although enforcing the agreed upon scope of estoppel may be an issue for the district court in the future, it is not an issue before this panel. The facts presented by Patent Owner do not persuade us that the customer-defendants have funded, directed, or controlled this proceeding in such a manner as to be real parties-in-interest.

ASSERTED GROUND OF UNPATENTABILITY

Petitioner contends that claims 1–42 of the '190 Patent do not recite patentable subject matter under 35 U.S.C. § 101. Pet. 26.

Petitioner also contends that claims 1–42 are unpatentable as obvious under 35 U.S.C. § 103(a) over the combination of the following references:

Reference	Exhibit No.	Designation
Published International Patent Application WO 01/16852 A2, published Mar. 8, 2001	Ex. 1016	Friesen
Published U.S. Patent Application US2002/0120551 A1, published Aug. 29, 2002	Ex. 1017	Jones
Published International Patent Application WO/01/46841 A2, published June 28, 2001	Ex. 1018	Kirwin

ORDINARY SKILL IN THE ART

Petitioner contends that one of ordinary skill in the art includes someone who, through education or practical experience, possesses the equivalent of a bachelor's degree in computer science, information science, or a related field and has at least two years of work experience developing or implementing user interfaces for electronic trading systems. Pet. 13. Patent Owner contends that a person of ordinary skill would have a bachelor's degree in computer science or equivalent experience, and at least three years of experience in designing and/or developing user interfaces, including experience designing and/or developing graphical user interfaces for electronic trading. Prelim. Resp. 22–23. We do not perceive the parties' assessments of the level of ordinary skill to be materially different. Notwithstanding the parties' contentions, we note that the claims of the '190 Patent and the description in the specification are drawn to a graphical display configured to receive an instruction from a user and do not delve deeply into computer implementations or appear to require extensive computer or programming knowledge. *See* Ex. 1001, Abstract, col. 10, l. 3–col. 12, l. 55.

Patent Owner contends that we should disregard the testimony of Petitioner's expert, Bernard S. Donefer, because he lacks requisite education and experience to satisfy either party's definition of a person of ordinary skill. Prelim. Resp. 23–29. Mr. Donefer testifies that his expertise is in software, technology, trading, exchanges, electronic trading and business practices in financial markets, has a B.A. in Economics, an M.B.A. in finance, 35 years of experience in software, technology, and financial services, has written computer programs on several different computer platforms in several different computer languages, has testified as an expert in several forums, and has spoken and written on related topics. Ex. 1002 ¶¶ 3–7.

Patent Owner supports its contentions concerning Mr. Donefer's qualifications with testimony from its expert, Dr. Nazaar Molokhia. Ex. 2001 (“Molokhia Decl.”) ¶ 16. Dr. Molokhia's testimony concerning Mr. Donefer's qualifications as an expert constitutes a genuine issue of material fact that will be viewed in the light most favorable to Petitioner at this stage of the proceeding for purposes of instituting a proceeding. 37 C.F.R. § 42.208(c).² We note, however, that there is no requirement imposed by the Federal Rules of Evidence that an expert's qualifications perfectly match the field of the patent at issue. *See SEB S.A. v. Montgomery Ward & Co.*, 594 F.3d 1360, 1373 (Fed. Cir. 2010). Thus, for purposes of deciding whether to institute a proceeding, we do not discount Mr. Donefer's testimony.

² Covered business method patent reviews are subject to the same procedures applicable to post grant review proceedings, except §§ 42.200, 42.201, 42.202, and 42.204. 37 C.F.R. § 42.300(a).

THE '190 PATENT (EXHIBIT 1001)

The '190 Patent discloses “systems and methods for providing an interactive graphical representation of a market for an electronic trading system that allows a user to, for example, place a trade directly from the graphical representation.” Ex. 1001, col. 1, ll. 54–58. The '190 Patent states that financial information used to create a graph may be information typically sorted in a tabular format, such as a spreadsheet. *Id.* at col. 5, ll. 11–12. According to the '190 Patent, graphs are easier to read and understand than tables and interactive graphs facilitate trading. *Id.* at col. 1, ll. 25–45; col. 4, ll. 51–58. The system in the '190 Patent can be implemented using a computer network in which a suitable workstation implements a graphical trading interface application and communicates with a server linked to a back office clearing center that causes transactions to be cleared and verified. *Id.* at col. 2, l. 53–col. 2, l. 50; Figs 1–2.

The graphical trading interface application may include an application program interface or the graphical trading interface application may be resident in the memory of a server. *Id.* at col. 3, ll. 51–55. The '190 Patent discloses that graphical trading interface application and application program interface may be an application that is discrete from the electronic trading application. *Id.* at col. 2, ll. 55–59. In addition, the only distribution to the user may be a graphical user interface (GUI) that allows the user to interact with the graphical trading interface application at the server. *Id.* at col. 2, ll. 59–61.

By manipulating an input device, a user can zoom into a portion of a graph having first and second axes representing two related parameters in connection with financial instrument curves shown in the graph. *Id.* at col. 5, ll. 23–25, col. 6, ll. 8–9. Zooming can be accomplished by selecting a particular vertical or horizontal column of fixed width or by specifying a desired width of the graph, for

example by entering a range of parameters into an overlay displayed on the graph. *Id.* at col. 6, ll. 9–48; Figs. 3–4. In response to zooming, the system displays a graphical trading interface that includes first and second symbols corresponding to specific parameters, such as bids and offers. *Id.* at col. 7, ll. 14–20; Fig. 5. In response to user actions, such as moving a cursor over a point, an information overlay may be displayed. *Id.* at col. 7, ll. 21–35; Fig. 6. The '190 Patent also discloses displaying a trading dialog box overlay in response to a user's selection of a portion of the graph to allow the user to place a trade directly from the graphical trading interface. *Id.* at col. 7, ll. 36–45; Fig. 7. The trading dialog box allows the user to enter parameters, such as a price and transaction size, to complete buy and sell transactions by selecting a button, and to close the dialog box. *Id.* at col. 7, ll. 45–65. The steps of the method are summarized in Figure 11. *Id.* at col. 9, ll. 45–61. Other forms of graphical trading interfaces may also be provided. *Id.* at col. 8, ll. 4–6; Figs. 8–10.

ILLUSTRATIVE CLAIM

1. A method for providing an interactive graphical representation of a market, the method comprising:
 - displaying a graph having a first axis and a second axis on a display of a workstation, wherein the graph includes a curve corresponding to a range of values of a financial instrument;
 - allowing a user to select a portion of the graph; and
 - in response to the user selection of the portion of the graph, displaying an interactive trading dialog box on the display of the workstation, the interactive trading dialog box being configured to receive an instruction from the user, the instruction comprising a selection of at least one of a bid, offer, hit, and lift.

CLAIM CONSTRUCTION

We interpret claims of an unexpired patent using the broadest reasonable construction in light of the specification of the patent in which they appear. *See* 37 C.F.R. § 42.300(b); *In re Cuozzo Speed Techs., LLC*, 136 S. Ct. 2131 (2016). In applying a broadest reasonable construction, claim terms generally are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *See In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007)

Curve

Petitioner proposes that we construe the term “curve” to include a continuous or discontinuous set of data points plotted on a graph as commonly used in the analysis of financial data. Pet. 26. Patent Owner contends that we should reject Petitioner’s proposed construction because it improperly relies on extrinsic evidence. Prelim. Resp. 36. Patent Owner argues that Petitioner attempts to broaden the scope of the term and that the specification depicts curves as continuous curves represented as data values joined together illustrating a trend. *Id.* Patent Owner contends that, if we construe “curve,” we should construe the term to mean a graphical representation of data values joined together on a graph. *Id.* at 37. Neither party cites to any definition of curve in the specification. The exemplary curves in the drawings represent plots on a graph of a variable on a first axis against a variable on a second axis. Ex. 1001, col. 5, ll. 22–49. The specification does not require the curve to be continuous or non-continuous, to illustrate any trend, to be joined, or to fit any mathematical function or relationship. Thus, we construe the term “curve” to *mean a graphical plot of data points corresponding to parameter values on one or more axes.*³

³ A graph can have one, two or more axes. *See* Ex. 1001, col. 7, ll. 7–13.

Fair Value Curve

Petitioner contends that “fair value curve” should be construed to mean any curve representing reasonable values, such as tradeable market process, according to a standard or metric appropriate to the underlying asset. Pet. 26–27. Patent Owner contends that “fair value curve” should be construed to mean “a curve representing the current market value of financial instruments across a range of dates.” Prelim. Resp. 37. The specification does not define a “fair value curve,” but states that “Curve 506 may represent the ‘fair value’ curve with respect to the current bids and offers in graph 500.” Ex. 1001 col. 7, ll. 16–18. The specification also identifies the curve as “the example shown” and does not limit the definition of “fair value” to market value across a range of dates. A fair value curve of a commodity could be graphed as market value against supply. Thus, we construe the term “fair value curve” to mean *a plot of data points representing market value against another parameter.*

Interactive Graphical Representation of a Market

Patent Owner proposes we construe the term “interactive graphical representation of a market” to mean “a graphical representation of a market that enables an exchange of input and output between a user and a computer.” Prelim. Resp. 31. As discussed in the specification of the ’190 Patent, a graphical representation of a market consists of information viewed on a graph, as opposed to information viewed as entries in a table. Ex. 1001, col. 1, ll. 26–45. Graphs are not interactive, as the trader is provided only with a representation of the current activity of market and is not able to enter a bid or offer or submit a hit or lift directly from the graph. *Id.* at col. 1, ll. 40–45. In view of this intrinsic evidence, we construe “interactive graphical representation of a market” to mean *a*

representation of current market activity that allows a user to place a trade directly from the graphical representation. *Id.* at col. 1, ll. 46–50.

Interactive Dialog Trading Box

Patent Owner proposes that we construe “interactive dialog trading box” to mean “a graphical user interface portion that appears as an overlay, such as a window, on a display terminal and enables an exchange of input and output between a user and a computer.” Prelim. Resp. 30–35. The specification refers to a trading interface dialog box overlay 700, as distinguished from a trading dialog box recited in the claims. Ex. 1001, col. 7, ll. 52–55. This difference in terminology indicates that the claim is not limited to being implemented as an overlay. Independent claims 1, 9, 17, and 30 also recite that the interactive trading dialog box is configured to receive an instruction from the user. Neither the claims nor the specification describe whether and how the instruction is communicated to a computer. The independent claims also do not limit where or how on the workstation display of the interactive trading dialog box is presented to the user. In view of the intrinsic evidence, we construe “interactive trading dialog box” to mean *a display on a workstation through which the user can provide an instruction.*

THE '190 PATENT IS NOT A PATENT FOR A TECHNOLOGICAL
INVENTION

A covered business method patent is “a patent that *claims* a method or corresponding apparatus for performing data processing” or other operations used in the practice, administration, or management of a financial product or service. 37 C.F.R. § 42.301(a). A covered business method patent “does not include patents for technological inventions.” *Id.* A technological invention is determined by considering whether the claimed subject matter as a whole recites a technical

feature that is novel and unobvious over the prior art, and solves a technical problem using a technical solution. 37 C.F.R. § 42.301(b).

Petitioner contends that the '190 Patent meets the criteria for covered business method patent review. Noting that claims 1 and 9 recite a curve corresponding to a range of values of a financial instrument and that many dependent claims recite financial terms, such as price, yield, maturity date, and fair value curve, Petitioner describes the invention described and claimed in the '190 Patent as fundamentally financial in nature. Pet. 15. Petitioner further contends that the claims of the '190 Patent are not drawn to a technological invention that is novel and non-obvious over the prior art. *Id.* at 17. Petitioner states that the claims of the '190 Patent generally are directed to chart-based trading in a computer environment and that the '190 Patent acknowledges the prevalent use of graphs in electronic trading in the prior art. *Id.* at 17–18. Thus, Petitioner argues that any feature that ostensibly might be considered technical lacks novelty over the prior art. *Id.* For example, Petitioner contends that none of the claimed workstation and graph, plotting financial values on axes of a graph, allowing a user to select a portion of graph, and displaying a trading dialog box constitutes a technical feature that is novel or non-obvious over the prior art. *Id.* at 19–20.

Petitioner also argues that '190 Patent is eligible for covered business method patent review because the claims do not solve a technical problem using a technical solution. *Id.* at 21–23. According to Petitioner, to the extent the claims recite making a trade from a graphical representation of data that would otherwise be accessed in a tabular format, the claims solve a business problem, i.e., what bids or offers to enter, or which existing bids are desirable to lift or hit. *Id.* at 22.

Patent Owner responds that Petitioner has not met its burden to prove the claims are not drawn to a technological invention. Prelim. Resp. 38. Patent Owner

characterizes the '190 Patent as directed to an improvement in graphical user interfaces, specifically a specialized GUI tool that allows a user to interact directly with a trading system and place trades directly from an interactive graph. *Id.* at 1. Patent Owner states that the claims are directed to a new type of electronic trading GUI, not to a type of trading. *Id.* at 9. Patent Owner contends that Petitioner does not consider the invention as a whole. *Id.* at 39–40. According to Patent Owner, Petitioner isolates features of claim 1, including the interactive dialog box, and ignores the critical nature of its interaction with other claim elements, e.g., displaying the interactive trading box on the display of the workstation and the interactive trading dialog box being configured to receive an instruction from the user. *Id.* Arguing that the workstation facilitates the interactive nature of the recited trading dialog box, Patent Owner contends that “the '190 Patent offers a key technological solution by leveraging the interactive nature of the GUI interface through the use of an interactive display of the trading dialog box based on a user selection of a portion of the displayed curve to permit direct access to commence trades.” *Id.* at 40.

Claim 1 as a whole is directed to providing an interactive graphical representation of a market, and thus recites operations used in the practice, administration, or management of a financial product or service. *See SAP Am. v. Versata Dev. Grp., Inc.*, Case CBM2012-00001, slip op. at 20–24 (PTAB Jan. 9, 2013) (Paper 36), stating that covered business method patents are to be broadly interpreted to encompass patents claiming activities that are financial in nature, incidental to financial activity, or complementary to a financial activity, and that limiting the term financial service to products or services of the financial industry runs contrary to the intent of §18(d)(1) of the AIA) (citing Transitional Program for Covered Business Method Patents—Definitions of Covered Business Method

Patent and Technological Invention; Final Rule, 77 Fed. Reg. 48,734, 48,734–36 (Aug. 14, 2012)).

The limitations of claim 1, taken as a whole, recite displaying a graph on a workstation display, allowing the user to select a portion of the graph and, in response, displaying an interactive trading box configured to receive an instruction from the user. As discussed above, Petitioner addressed each of these elements individually and in the context of the claim as a whole, e.g., arguing that by making a trade from a graphical representation of data that would otherwise be accessed in a tabular format, the claims solve a business problem, i.e., what bids or offers to enter, or which existing bids are desirable to lift or hit. Pet. 22.

Claim 1 is directed to displaying information in a format that is convenient for the user to provide an instruction. However, the '190 Patent does not identify any technical problem associated with converting information stored in a table to a more easily perceived graphical format, or claim any technical solution. Similarly, claim 1 does not recite a technical problem or solution associated with displaying a trading dialog box configured to receive an instruction from the user.

We are further guided by the following legislative history:

The definition of a “covered business method patent” includes “a method or corresponding apparatus.” The phrase “method or corresponding apparatus” is intended to encompass, but not be limited to, any type of claim contained in a patent, including, method claims, system claims, apparatus claims, *graphical user interface claims*, data structure claims—Lowry claims—and set of instructions on storage media claims—Beauregard claims. A patent qualifies as a covered business method patent regardless of the type or structure of claims contained in the patent. Clever drafting of patent applications should not allow a patent holder to avoid PTO review under this amendment. Any other result would elevate form over substance.

157 Cong. Rec. S1364 (daily ed. Mar. 8, 2011) (statement of Sen. Schumer) (emphasis added). The '190 Patent, which includes at least one claim drawn to an apparatus or method of presenting information on a graphical user interface, is directed to an operation used in the practice, administration, or management of a financial product or service and is not exempted from covered business method patent review as solving a technical problem using a technical solution. Thus, we conclude that the '190 Patent is eligible for covered business method patent review.

§101 SUBJECT MATTER ELIGIBILITY

Petitioner contends that the claims of the '190 Patent do not recite patent eligible subject matter under 35 U.S.C. § 101 because they are directed to an abstract idea that is not transformed into a patent eligible application. Pet. 28–39. A claim falls outside § 101 where (1) it is “directed to” a patent-ineligible concept, *i.e.*, a law of nature, natural phenomenon, or abstract idea, and (2), if so, the particular elements of the claim, considered “both individually and ‘as an ordered combination,’” do not add enough to “transform the nature of the claim’ into a patent-eligible application.” *Alice Corp. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2355 (2014); *see Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1297–98 (2012).

Applying the first step of the Alice analysis, Petitioner contends that independent claims 1, 9, 17, and 30 of the '190 Patent are directed to the abstract idea of using a graphical representation of a market to make trades. Pet. 31 (citing recitation in claims 1 and 9 of a graph including a curve corresponding to a range of values of a financial instrument used when placing a bid or offer, and recitations in claims 17 and 30 of a graph including symbols corresponding to a bid for a particular financial instrument and an offer for a particular instrument, used when

placing a bid or offer). According to Petitioner, the claims are drawn to an abstract idea because using a graphical representation of a market when making trades is a longstanding fundamental economic concept and the claims of the '190 Patent can be carried out manually using pencil and paper. *Id.* at 31–34. Addressing the limitations that recite displaying an interactive trading dialog box, Petitioner argues that a human could place an instruction to bid, offer, hit or lift without the need for an interactive trading dialog box by manually recording such an instruction, such that the paper performs the identical function of the claimed interactive trading dialog box. *Id.* at 33–34.

Applying the second step of the *Alice* analysis, Petitioner further contends that the generic computer components recited in the independent method claims 1 and 17, e.g., a display on a workstation, are purely conventional and do not provide the inventive concept to transform the abstract idea into a patentable eligible application. *Id.* at 34–36. Petitioner contends that limitations reciting the display of an interactive trading box on the display of a workstation are not transformational because they “amount to nothing more than an instruction to apply the abstract idea of chart-based trading using generic computer elements.” *Id.* at 35. According to Petitioner, the functions performed by the GUI and workstation are purely conventional, the display of an interactive dialog box is a routine, conventional practice, “[n]o inventive interrelationship or configuration of these conventional elements is recited, and no improvement to the computer art is recited or even disclosed in the '190 patent.” *Id.* at 35–36. Petitioner also argues that dependent method claims 2–5 and 18–21, which recite various axes and aspects of the curve, are drawn to the fundamental economic practice of chart-based trading (*id.* at 36–37); that dependent claims 6, 7, 22, 23, 25, and 27, which recite the location of the portion on the graph and allowing the user to select

portions and symbols on the graph, are not meaningful limitations that transform the abstract idea into patent eligible subject matter (*id.* at 37–38), and dependent claims 8, 24, 26, and 28, which recite that trading dialog box includes information relating to the selected portion of the graph and the selected symbols, are drawn to conventional functions that can be performed mentally (*id.* at 37–38). Petitioner also argues that a similar analysis applies to corresponding system claims of the '190 Patent. *Id.* at 39.

Patent Owner contends that Petitioner's analysis is superficial, ignoring key claim limitations, such as "in response to the user's selection of a portion of the graph, displaying an interactive trading dialog box on the display of the workstation," to argue that the claims are directed to nothing more than utilizing a graphical representation of a market when making trades. *Id.* at 46–47, 49. Patent Owner contends Petitioner ignores the court's guidance in *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016), where the Federal Circuit, noting that *Alice* does not mean that all improvements in computer related technology are inherently abstract, focused not on whether the claims involve an abstract idea, but on whether the claims are "directed to an improvement to computer functionality." Prelim. Resp. 42–43. To that end, Patent Owner argues that, as in *Enfish*, we need not proceed to the second step of the *Alice* analysis because the claims are not directed to mere utilization of a graphical representation of a market to make trades, but instead are directed to a graphical user interface that allows a user to place trades directly from the graph itself. *Id.* at 45. According to Patent Owner, the novelty is in providing a graphical representation of a market wherein the graph itself is an interactive trading interface—traders can still read a graph in a newspaper or on-line and make trades using a separate electronic trading interface. *Id.* at 46. Patent Owner further argues that recordation on paper does not perform

the same function as the claimed interactive trading dialog box, and that Petitioner fails to explain how writing on a paper bar chart would accomplish the claimed feature of “in response to the user selection of the portion of the graph, displaying an interactive trading box on the display of the workstation, the interactive trading dialog box being configured to receive an instruction from the user, the instruction comprising a selection of at least one of a bid, offer, hit, and lift.” *Id.* at 52–53.

In *Enfish*, the Federal Circuit relied on the distinction in *Alice*, 134 S. Ct. at 2354, between computer functionality improvements and uses of existing computers as tools in aid of processes focused on abstract ideas. *See Enfish*, 822 F.3d at 1335-36; *see also Electric Power Group LLC v. Alstom S.A.*, No. 2015-1778, 2016 WL 4073318, at *4 (Fed. Cir. Aug. 1, 2016). The *Enfish* court rejected the § 101 challenge at the first step of the *Alice* analysis because the claims at issue focused not on asserted advances in uses to which a computer could be put, but on a specific improvement—a particular database technique—in how computers could carry out one of their basic functions of storage and retrieval of data. *See Enfish*, 822 F.3d at 1335-36; *see also Electric Power Group*, 2016 WL 4073318, at *4. As we discussed in our analysis of the ’190 Patent’s eligibility for covered business method patent review, illustrative claim 1 (as well as claims 2–42) is not directed to how a computer carries out its basic function, but instead is focused on a display that presents information in a user friendly format and permits the user to provide an instruction via the display. As Petitioner points out, no improvement to the computer art is recited or even disclosed in the ’190 Patent. Pet. 35–36. Indeed, independent claims 1, 9, 17, and 30 all recite the display of an interactive trading box in response to a user selection of a portion of a graph and that the interactive trading box “is configured” to receive an instruction from the user. The claims do not recite, nor does the specification describe, features concerning the basic

computer functions associated with achieving such a configuration. Thus, for purposes of this Decision, we are persuaded that the focus of the claims is not on an improvement to computer functionality, but on independently abstract ideas that use computers as tools and we proceed to the second step of the *Alice* analysis.

As discussed above, the '190 Patent states that financial information used to create a graph may be information typically sorted in a tabular format, such as a spreadsheet. *Id.* at col. 5, ll. 11–12. The '190 Patent describes and claims displaying this information in a graphical format and allowing the user to select and zoom in on a portion of the graph or curve displayed on the graph to provide a display that is easier to comprehend and facilitates trading. *Id.* at col. 1, ll. 25–45; col. 4, ll. 51–58. Merely requiring the selection and manipulation of information to provide a humanly comprehensible amount of information useful to users, itself, does not transform the otherwise abstract processes of information collection and analysis. *See Electric Power Group*, at 4. Thus, the question is whether, taken as a whole, the claimed display of such information with the interactive trading dialog box through which the user can provide an instruction constitutes a transformation to patent eligible subject matter.

Patent Owner contends that Petitioner failed to show that the claims do not recite an inventive concept under step 2 of the *Alice* analysis because Petitioner argues only selected limitations and does not address the claims as a whole. Prelim. Resp. 55–58. In *Electric Power Group*, the court noted that result-focused, functional claim language has been a frequent feature of claims held ineligible in the area of using generic computer and network technology to carry out economic transactions. *Electric Power Group*, at *6. Taken as a whole, independent claims 1, 9, 17 and 30 recite, in result-focused functional language, displaying information on a graph and, in response to the user's selection of a portion of the graph,

displaying a trading dialog box “configured to” receive an instruction from the user. With the claims limited to an interactive trading dialog box “configured to” receive an instruction from the user, and given the absence of a description in the specification of technology underlying how the display is so configured, we conclude that nothing in the claims, understood in light of the specification, requires anything other than off the shelf, conventional computer network and display technology for gathering, sending, and presenting the desired information. *See id.* at *5. Nothing in the patent suggests that the displays needed for the claimed purpose are not readily available. *Id.*; *but see DDR Holdings, LLC v. Hotels.com*, 773 F.3d 1245, 1257 (Fed. Cir. 2014) (finding an inventive concept in modifying conventional mechanics behind a website display to produce a dual-source integrated hybrid display).

Even if we construe the term “interactive trading dialog box” to be limited to “a graphical user interface portion that appears as an overlay, such as a window and enables an exchange of input and output between a user and a computer,” as urged by Patent Owner (Prelim. Resp. 33), nothing in the ’190 Patent suggests that this functionality was not readily available on the filing date of the application for the ’190 Patent. Thus, on the present record, we are persuaded that independent claims 1, 9, 17, and 30 do not recite limitations concerning computer functionality for enabling the display to receive an instruction, but instead recite the abstract concept of receiving an instruction to execute a trade. For this reason, we determine that Petitioner has shown adequately that claims 1, 9, 17, and 30 are not patent eligible under 35 U.S.C. § 101. Although Patent Owner contends that Petitioner failed to address all of the claims of the ’190 Patent under step 1 of the *Alice* analysis (Prelim. Resp. 54–55), as discussed above, Petitioner has identified and discussed the various elements of the dependent claims. For purposes of this

Decision, we are persuaded that Petitioner has shown adequately that none of the limitations in the dependent claims transform the abstract concept underlying those claims to patent eligible subject matter and that claims 1–42 do not recite patent eligible subject matter under 35 U.S.C. § 101.

OBVIOUSNESS UNDER 35 U.S.C. § 103(a)

Petitioner contends that claim 1–42 of the '190 Patent are obvious over the combination of Friesen, Jones and Kirwin. Pet. 26. Petitioner cites Friesen as disclosing an electronic trading display in which, by dragging bid and offer tokens, a user selects a portion of a graph and a pop-up window appears that allows the user to adjust an order before submitting it. Pet. 40–41 (citing Ex. 1016, pp. 13–17, Figs 3A-3E, 4; Donefer Decl. ¶¶ 49–55). Although Petitioner contends that Friesen discloses the selecting element recited in the claims of the '190 Patent, Petitioner argues, that to the extent Friesen's drag and drop approach is deemed not to meet this limitation, the limitation is disclosed by the touch screen in Jones. *Id.* at 41 (citing Ex. 1017 ¶¶ 21, 34, 39, 51–59, Fig. 5C; Donefer Decl. ¶¶ 56–57). Petitioner also contends that Friesen discloses the interactive trading box recited in the claims of the '190 Patent. *Id.* Petitioner also argues that, to the extent that Friesen is considered not to disclose an interactive trading box that provides bid, offer, hit or lift instructions, as recited in the claims of the '190 Patent, this limitation is found specifically in Kirwin. *Id.* at 41 (citing Ex. 1018 at p. 8, ll. 3–5, p. 8. l. 31–p. 9, l. 17; p.9, ll. 26–34; Donefer Decl. ¶¶ 58–60). Petitioner maps each of the limitations of independent claims 1, 9, 17, and 30 to specific disclosures in Friesen, Jones and Kirwin. Pet. 43–60. Petitioner also describes how the dependent claims are disclosed by the combination of the references. *Id.* at 60–72.

According to Petitioner, a person of ordinary skill would have been motivated to combine Friesen, Jones, and Kirwin to achieve the interactive trading

system claimed in the '190 Patent. Pet. 72–75. Petitioner notes that Friesen, Jones, and Kirwin are all directed to an electronic trading interface in which trades are initiated by touching or clicking an interface element. *Id.* at 74. Mr. Donefer testifies that a person of ordinary skill would have recognized there are a limited number of ways to interact with a graph on a computer display and a person of ordinary skill would have understood that clicking on a graph, as in Jones, is an alternative to the drag and drop approach in Friesen that would have allowed a user to place trades more efficiently. *Id.* at 73–74. Explaining that dialog boxes were used widely at the time, Mr. Donefer also testifies that modifying Friesen’s dialog box to receive instructions for bids, offers, hits, and lifts would have been a logical modification, particularly when combined with Jones, because it would have given the user greater control over the transaction selection via a streamlined interface. *Id.* at 75 (citing Donefer Decl. ¶ 62). According to Petitioner, one of ordinary skill would have recognized the value of including GUI features that would improve the speed, accuracy, and efficiency of executing trades and the combination of the references is a combination of familiar elements according to known methods. *Id.* at 75.

Patent Owner acknowledges (1) that Friesen discloses a user interface for an electronic trading system that allows users to view data and place orders (Prelim. Resp. 61), (2) that Jones discloses combining known trading software with a touch screen to provide a quote, chart and trading screen that can be used conduct electronic trading (*id.* at 64), and (3) that Kirwin discloses a system for a configurable trading interface with a market cell that may be used to display one or more bids and/or offers in which, in order to place an order, a user may click anywhere on the bid or offer button to cause a dialog window to appear (*id.* at 66). Patent Owner argues that, because in Friesen a user drags a bid or offer token to a

position on the chart, Friesen does not disclose a pop-up window that provides the user a choice whereby a bid, offer, hit or lift can be selected, as recited in the claims of the '190 Patent. *Id.* at 63. As discussed above, however, Petitioner cites Kirwin as disclosing this feature. Pet. 41.

Patent Owner contends that “it would not have been obvious to combine the features of the *Kirwin* dialog box with the pop-up window of *Friesen* because doing so would only provide the *Friesen* system with redundant unnecessary features.” Prelim. Resp. 69. Patent Owner argues that Friesen already provides separate functionality for selecting whether to buy or sell off the graph, so modifying the pop-up window would render the off graph tokens redundant or add unnecessary buttons. *Id.* at 69–70. According to Patent Owner, Petitioner has not explained or offered evidence as to why or how a person of ordinary skill would make such a modification, but instead merely states that the functionality of Kirwin could be provided in Friesen. *Id.* at 70.

Petitioner, however, does not rely solely on the combination of Friesen and Kirwin. Petitioner cited Jones for disclosing selecting a portion of a graph by clicking a point on a touchscreen and Kirwin as disclosing the interactive trading dialog window. Pet. 41–42. Petitioner’s analysis is further illustrated, for example, in its claim chart for claim 1 in which the selecting element designated 1.2 references Friesen and Jones (*id.* at 48–49) and the interactive trading dialog box addressed as claim element 1.3 references the Friesen and Kirwin pop-ups as disclosing dialog boxes (*id.* at 50–51). Patent Owner argues that Petitioner takes Jones out of context because using Jones would wholly eliminate the drag and drop feature, which is the sole mechanism by which a user enters a bid or offer. Prelim. Resp. 65. However, as discussed above, Petitioner recognizes that there are a

limited number of ways of interacting with an electronic graph and that clicking on a point on a graph is a common alternative to a drop and drag approach. Pet. 73.

Patent Owner argues that this overall combination is improper because it is grounded in impermissible hindsight, i.e., Petitioner seeks to create a deficiency in Friesen by way of the combination with Jones and then to cure it with features of Kirwin in order to arrive at the claimed subject matter. Prelim. Resp. 72. Thus, there would have been no reason for a person of ordinary skill to replace the drag and drop approach in Friesen with the clickable approach in Jones, because the drag and drop approach allowed the user to select a point on the curve after already having selected the type of transaction.

As discussed above, Petitioner has demonstrated that both Friesen and Kirwin illustrate the use of dialog boxes after a user selects a point on the curve displayed on a graph. We observe that the difference between selecting the point on the curve with a click, as disclosed in Jones, and the drag and drop token, as disclosed in Friesen, is in the required content of the dialog box, i.e, the click approach in Jones requires the dialog box to allow the user to identify the type of transaction, whereas the type of transaction is inherently identified in Friesen's drag and drop approach.

There appears to be no dispute that electronic trading systems with graphical user interfaces displaying curves and dialog boxes were known to those of ordinary skill. As discussed above, Petitioner has shown that Friesen and Kirwin indicate that it was known to perform a transaction using a dialog box based on the point designated by the user. Pet. 40, 42. Performing a transaction using an electronic trading system with a graphical interface requires a mechanism for identifying the type of transaction. Petitioner's citation of Jones demonstrates that clicking on a curve is a common approach to designating a point on the curve. *Id.* at 41.

Designating that point by a click, as in Jones, requires that the dialog box allow the user to specify the type of transaction, a requirement that is not present in Friesen because the transaction type is already identified. The primary difference lies in when the transaction type is identified. We are persuaded that, in the context of known electronic trading systems, Petitioner has demonstrated that it was known to designate point on a graph by clicking on it and that it would have been obvious to include in the responsive dialog box a place for the user to enter the type of transaction to be performed. Pet. 41–42. Although the programming required for each alternative may be somewhat different, the '190 Patent claims are not drawn to such programming, nor are we persuaded that the principles of operation in either scenario are appreciably different.

In consideration of the above, we are persuaded that, for purposes of this Decision, Petitioner has demonstrated that claims 1–42 would have been obvious to one of ordinary skill in the art.

SUMMARY

For the reasons discussed above, we are persuaded that Petitioner has demonstrated that it is more likely than not that at least one of the challenged claims is unpatentable under 35 U.S.C. § 101 for failing to recite patentable eligible subject matter and unpatentable under 35 U.S.C. § 103(a) as obvious over the combination of Friesen, Jones and Kirwin. Any discussion of facts in this Decision is made only for the purposes of institution of a covered business method patent review and is not dispositive of any issue related to any ground on which we institute review. The Board's final determination will be based on the record as fully developed during trial.

ORDER

In consideration of the foregoing, it is hereby:

ORDERED that pursuant to 35 U.S.C. § 324(a) a covered business method patent review of the '190 Patent is hereby instituted, commencing on the entry date of this Order, and pursuant to 35 U.S.C. § 324(d) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial;

FURTHER ORDERED that the trial is limited to the following grounds:

Claim 1–42 as unpatentable under 35 U.S.C. § 101 for failing to recite patentable eligible subject matter; and

Claims 1–42 as unpatentable under 35 U.S.C. § 103(a) as obvious over the combination of Friesen, Jones and Kirwin;

FURTHER ORDERED that that the trial will be conducted in accordance with the accompanying Scheduling Order. In the event that an initial conference call has been requested or scheduled, the parties are directed to the Office Trial Practice Guide, 77 Fed. Reg. 48,756, 48,765–6 (Aug. 14, 2012), for guidance in preparing for the initial conference call, and should come prepared to discuss any proposed changes to the scheduling order entered herewith and any motions the parties anticipate filing during the trial.

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Patent 7,113,190 B2

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